The 33rd International Conference on Arabidopsis Research

Arabidopsis for SDGs

CHIBA, Japan
June 5-9
Makuhari Messe
WinRHIZO™
• Four Versions

• Basic, Regular & Pro
Automatic Analysis Systems for Washed Roots
Scan washed roots with Regent’s scanners and accessories.

See analysis results summarized on screen after scanning.

√ Root morphology in function of root diameter and color: length, area, volume and number of tips
√ Number of forks and crossings
√ Root overlap detection for accurate measurement
√ Topology, link and architecture with fractals
√ Developmental classification
** Available measurements and features vary according to WinRHIZO’s version.

Arabidopsis
Automatic Analysis System for Washed Roots and Seedlings grown in Petri Dish
Analyse seedlings and leaves:
Globally Individually

√ Leaf area of seedlings in Petri dish
√ Germination Count
√ Leaf area - leaf/hypocotyl distinction
√ Root morphology
√ Topology and developmental analysis

√ Leaf area, length and width of plant in soil

√ Surface area and automatic count of non-touching nodules
** Includes also all measurements and features of WinRHIZO Pro.

WinRHIZO™
Tron • Two Versions

• Tron & Tron MF
Software Programs for Interactive Analysis of Images of Roots in Soil and Rhizotron
Trace roots manually with a mouse or by touching the screen of all-in-one or tablet computers.

Monitor root growth by analysing Multiple Frames (images) of a root system taken at different times.

√ Root morphology in function of root diameter and color: length, area, volume and number of tips
√ Number of forks and crossings
√ Root overlap detection for accurate measurement
√ Topology, link and architecture with fractals
√ Developmental classification

• Available measurements and features vary according to WinRHIZO’s version.

We offer eight software product families for research on plants and trees. Discounts apply when buying more than one software program. Visit our website or Contact us for details!

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# SESSION OVERVIEW

## Monday, June 5, 2023

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## Tuesday, June 6, 2023

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<td>9:00-10:30</td>
<td>Plenary 1: From single cells to an organism</td>
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<td>11:00-12:30</td>
<td>Plenary 2: Interactions between organism Work shop 5</td>
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| 14:30-16:00| Concurrent 1: Advances in plant nutrition under changing environment  
Concurrent 2: The environmentally responsive plant epigenome  
Concurrent 3: New tools and applications in plant molecular genetics  
Concurrent 4: Cellular reprogramming in regeneration and development  
Concurrent 5: Organelle- organelle communication under stress  
Concurrent 6: Plant proteostasis: The dynamic proteome in plant cell signalling  
Concurrent 7: Arabidopsis and its translational research in the Global South  
Concurrent 8: Understanding circadian regulation in unpredictable environments  
Concurrent 9: Guard cell signaling and metabolism  
Concurrent 10: Development and environmental responses: What are kept and what are lost over the evolutionary history of land plants  
Concurrent 11: Role of biomolecular condensates in abiotic stress signaling  
Concurrent 12: Translation regulation in plants  |
| 16:30-18:00| Concurrent 13: Integration of Arabidopsis and research in plant biotic interactions  
Concurrent 14: Stress-induced signaling peptides  
Concurrent 15: Arabidopsis relatives from laboratories to natural fields  
Concurrent 16: Plant epigenetic and chromatin dynamics  
Concurrent 17: Hidden message of RNAs for environmental responses  
Concurrent 18: Making contacts: Membrane contact sites between plant organelles  |
| 18:00-20:00| Poster discussion                                  |
11:00-12:30 Concurrent 19: Temporal regulation of environmental responses, growth, and development
Concurrent 20: Interdisciplinary approaches applied to plasmodesmata research
Concurrent 21: Molecular signaling in plant-insect interactions
Concurrent 22: Molecular condensation for reproductive and biotic stress regulation: From cell biology to biophysical mechanism
Concurrent 23: A systems perspective: Omics Integration and modeling
Concurrent 24: Transposable elements, epigenetics, and environmental adaptation

14:30-16:00 Plenary 3: Sustainable society and plants
16:30-18:00 Plenary 4: Functional metabolomics
18:00-20:00 Poster Discussion

Thursday, June 8, 2023
9:00-10:00 Workshop 6-10
10:30-12:00 Concurrent 25: The road recovery: Elucidating stress recovery pathways and reversing stress effects
Concurrent 26: Receptor kinase signaling in development
Concurrent 27: Chemical priming as a sustainable tool for improved productivity under stress conditions
Concurrent 28: Cross-kingdom RNA communications and innovative disease solutions
Concurrent 29: Visualizing the dynamic of the circadian clock
12:45-14:00 Workshop 11
14:00-15:30 Concurrent 30: Living on the edge: Adaptation of Arabidopsis extremophyte relatives to harsh environments
Concurrent 31: Short and long range signaling by RNA
Concurrent 32: Mechanisms and functions of endocytosis in plants
Concurrent 33: Front-line of plant genome engineering
Workshop 12 MASC: Arabidopsis for SDGs/4th Decadal Vision
16:00-17:30 Plenary 5: Evolution and ecology
18:00-22:30 Banquet

Friday, June 9, 2023
9:00-10:30 Plenary 6: Integration of environmental cues
11:00-11:45 Keynote: 3
11:45-12:00 Closing
Meeting information

Contact

If you have any questions, please contact:

Corporate 3rd Office, Kinki Nippon Tourist Co., Ltd
General inquiries: secretariat@icar2023.org
Abstract submission: icar2023-abst@or.knt.co.jp
Registration: icar2023-rgst@or.knt.co.jp

Registration desk Opening hours

The registration and information booth will be open from:
June 5th: 1:00 pm- 7:00 pm
June 6th: 8:00 am- 18:00 pm
June 7th: 8:00 am- 18:00 pm
June 8th: 8:00 am- 17:00 pm
June 9th: 8:00 am- 12:00 noon

Meeting Venue

Makuhari Messe
International Conference hall
2-1, Nakase, Mihama-ku, Chiba-city, 261-8550 Japan

- Approx. 5 minutes on foot from Kaihimmakuhari Station on the JR Keiyō Line
  (approx. 30 minutes on the rapid train from Tokyo Station)
  *Approx. 20 minutes on foot from Makuharitoyosuna Station on the JR Keiyō Line

- Approx. 17 minutes by bus for Makuhari Messe Chuo from Makuharihongō Station on the JR Sōbu Line or Keisei Line

Banquet

“YAKATABUNE” Traditional Cruising Japanese Style
Website: http://yakatabune-tokyo.com/index.html

- Date: June 8 (Thu) From 19:00 ~ (2.5 hour)
- Bus will depart at 18:00 from Makuhari Messe to “YAKATABUNE”.
  *Please make your own way home for return.
- Boarding place of “YAKATABUNE”: Kasaibashi Boat Pier
- Disembarkation place: Harumi Asashio Boat Pier
Local Access

With world-class transportation networks such as trains, subways, and buses allows easy access to your destination to any part of Japan. Multilingual signage and digital apps are available for easy navigation. IC passes such as SUICA and PASMO allow hop on and off trains and buses with ease.

Makuhari Messe is only 30 minutes away from Central Tokyo.
Layout of the venue

Poster Session

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**ICAR2023 Code of Conduct.**

The Multinational Arabidopsis Steering Committee (MASC) and the organisers of ICAR2023 are committed to ensuring that ICAR conferences are a welcoming and inclusive space for sharing of ideas, knowledge exchange and for developing collaborative opportunities for everyone who attends.

To this end, ICAR2023 will provide a safe environment that promotes equal opportunity and treatment for all participants and that is free of harassment and discrimination.

This code of conduct applies to all registered attendees, speakers, exhibitors, staff, contractors, volunteers, and guests; and it applies both within the ICAR2023 conference venue, within the online-platform and in associated events and locations where ICAR2023 conference delegates are present.

Download full Code of Conduct from MASC website.
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Foundations

Host City and Venue
[Keynote 01] Transcriptional regulatory network of plant abiotic stress responses
Kazuko Yamaguchi-Shinozaki (Tokyo University of Agriculture)
Chair: Motoaki Seki (RIKEN CSRS)
Mon. Jun 5, 2023 4:00 PM - 4:45 PM  Makuhari Messe 2F(Room 1+2)
This session is sponsored by RIKEN BRC and RIKEN CSRS.

*Kazuko Yamaguchi-Shinozaki1,2, Kazuo Shinozaki3 (1. Tokyo University of Agriculture, Japan, 2. The University of Tokyo, Japan, 3. RIKEN CSRS, Japan)
4:00 PM - 4:45 PM
Keynote 02 | Keynote 02 | Keynote 02

[Keynote 02] Regulation of Arabidopsis leaf growth and applications in crops
Dirk Inzé (VIB Center for Plant Systems Biology)
Chair: Keiko Sugimoto (RIKEN CSRS)
Mon. Jun 5, 2023 4:45 PM - 5:30 PM  Makuhari Messe 2F(Room 1+2)
This session is sponsored by RIKEN BRC and RIKEN CSRS.

[Keynote_02] Regulation of Arabidopsis leaf growth and applications in crops
*Dirk Inzé1,2 (1. VIB Center for Plant Systems Biology, 2. UGent)
4:45 PM - 5:30 PM
[Keynote 03] Deconstructing Plant Processes: Cell by Cell
Joseph R. Ecker (Salk Institute for Biological Studies)
Chair: Tetsuya Higashiyama (University of Tokyo, Japan)
Fri. Jun 9, 2023 11:00 AM - 11:45 AM Makuhari Messe 2F (Room 1+2)
This session is sponsored by RIKEN BRC and RIKEN CSRS.

[Keynote_03] Deconstructing Plant Processes: Cell by Cell
*Joseph Ecker1,2, Travis Lee1,2, Tatsuya Nobori1, Natanella Illouz-Eliaz1, Joseph Swift1, Jiaying Xu1, Bruce Jow2, Joseph Nery1 (1. Salk Institute for Biological Studies, 2. Howard Hughes Medical Institute)
11:00 AM - 11:45 AM
From single cells to an organism

【 Plenary 01-01】 Anja Geitmann(McGill University)
【 Plenary 01-02】 Kalika Prasad(Indian Institute of Science Education and Research)
【 Plenary 01-03】 Bert De Rybel(Ghent University)
Chair: Keiji Nakajima(Nara Institute of Science and Technology), Ikram Blilou(King Abdullah University of Science and Technology), Ken Birnbaum(New York University)
Tue. Jun 6, 2023 9:00 AM - 10:30 AM  Makuhari Messe 2F(Room 1)
This session is sponsored by MEXT Grant-in-Aid for Scientific Research on Innovative Areas "Periodicity and Its Modulation in Plants".

Fast and invasive cell growth requires resilient cell wall assembly
Karuna Kapoor1, *Anja Geitmann1 (1. McGill University, Montreal, Canada)
9:00 AM - 9:30 AM

Mechanical conflict and cell polarity in de novo shoot initiation
*Kalika Prasad1 (1. Department of Biology, Indian Institute of Science Education and Research, Pune, 411008 INDIA)
9:30 AM - 10:00 AM

Understanding vascular development using chemical and single cell biology
BaoJun Yang1,2, Yanbiao Sun1,2, Akshay Gokulendran Nair1,2, Claudia Von der Mark1,2, Thomas Depuydt1,2, Klaas Vandepoele1,2, *Bert De Rybel1,2 (1. VIB Centre for Plant Systems Biology, 2. Ghent University, Department of Plant Biotechnology and Bioinformatics)
10:00 AM - 10:30 AM
Plenary | Plenary | Plenary

[Plenary 02] Interactions between organisms
【Plenary 02-01】Eunyoung Chae (National University of Singapore)
【Plenary 02-02】Kee Hoon Sohn(Seoul National University)
【Plenary 02-03】Xiufang Xin(John Innes Centre)
Chair:Satoko Yoshida(Nara Institute of Science and Technology), Yasuhiro Kadota(RIKEN Center for Sustainable Resource Science (CSRS)), Kei Hiruma(The University of Tokyo)
Tue. Jun 6, 2023 11:00 AM - 12:30 PM  Makuhari Messe 2F(Room 1)
This session is sponsored by SUMITOMO CHEMICAL Co.,Ltd..

[Plenary 02-01] Leveraging DANGEROUS MIX Autoimmunity to Understand Host-Microbe Interactions
*Eunyoung Chae1 (1. National University of Singapore)
11:00 AM - 11:30 AM
Overlapping and distinct pathogen effector recognition specificities conferred by independently evolved NLR proteins in plants
Ye Jin Ahn1, Haseong Kim2, Sera Choi1, Carolina Mazo-Molina3, Maxim Prokchorchik1 , Ning Zhang3, Boyoung Kim6, Hyunggon Mang1, Hayeon Yoon1, Cecile Segonzac2,6, Gregory B Martin3, Alex Schultink4, *Kee Hoon Sohn1,2,5 (1. Department of Life Sciences, Pohang University of Science and Technology, Pohang 37673, Republic of Korea, 2. Plant Immunity Research Center, Seoul National University, Seoul 08826, Republic of Korea, 3. Boyce Thompson Institute for Plant Research, Cornell University, Ithaca, NY 14853, USA, 4. Fortiphyte Inc., Berkeley CA, USA, 5. Department of Agricultural Biotechnology, Seoul National University, Seoul 08826, Republic of Korea, 6. Department of Agriculture, Forestry and Bioresources, Seoul National University, Seoul 14 08826, Republic of Korea)
11:30 AM - 12:00 PM

[Plenary 02-02] Understanding environmental influence on plant-pathogen interactions
*Xiufang Xin1, Yezhou Hu1, Yanxia Ding1, Lingya Yao1, Zeyu Jiang1, Minhang Yuan1 (1. Center for Excellence in Molecular Plant Sciences, Institute of Plant Physiology and Ecology, Chinese Academy of Sciences; CEPAMS, Chinese Academy of Sciences-John Innes Center joint program)
12:00 PM - 12:30 PM
[Plenary 03] Sustainable society and plants

【 Plenary 03-01】 Gabriela Auge (CONICET / University of Buenos Aires)
【 Plenary 03-02】 Kim Johnson(La Trobe Institute for Agriculture &Food (LIAF))
【 Plenary 03-03】 Steven Runo(Kenyatta University)
Chair: Minako Ueda(Graduate School of Life Sciences, Tohoku University), Taku Demura(Nara Institute of Science and Technolgy), Miyo Terao-Morita(National Institute for Basic Biology)
Wed. Jun 7, 2023 2:30 PM - 4:00 PM  Makuhari Messe 2F(Room 1)
This session is sponsored by RIKEN CSRS.

[Plenary_03-01] Plant environmental memory: adaptive plasticity in the context of climate change
*Gabriela Auge1 (1. Consejo Nacional de Investigaciones Científicas y Tecnológicas (CONICET))
2:30 PM -  3:00 PM

[Plenary_03-02] Investigating the role of Wall-associated kinases (WAKs) during secondary wall development
*Kim Johnson1,4, Yingxuan Ma2,1, John Humphries1, Antony Bacic1,4, Guiqin Qu3 (1. La Trobe University, Australia, 2. Nanjing Forestry University, China, 3. China Agricultural University, Beijing, China, 4. Zhejiang Agriculture and Forestry University, China)
3:00 PM -  3:30 PM

[Plenary_03-03] The parasitic plant (Striga) and sorghum arms race
*Steven Maina Runo1 (1. Kenyatta University)
3:30 PM -  4:00 PM
[Plenary 04] Functional metabolomics

【Plenary 04-01】Asaph Aharoni (Weizmann Institute of Science)
【Plenary 04-02】Sibongile Mafu(University of Massachusetts Amherst)
【Plenary 04-03】Masami Yokota Hirai(RIKEN)
Chair:Mami Yamazaki(Graduate School of Pharmaceutical Sciences, Chiba University), Miyako Kusano(University of Tsukuba), Yuki Nakamura(RIKEN Center for Sustainable Resource Science)
Wed. Jun 7, 2023 4:30 PM - 6:00 PM  Makuhari Messe 2F(Room 1)
This session is sponsored by RIKEN CSRS.

[Plenary_04-01] How do Plants Evolve Specialized Metabolites and Pathways?
*Asaph Aharoni1 (1. Department of Plant &Environmental Sciences, Weizmann Institute of Science, Israel)
4:30 PM - 5:00 PM

[Plenary_04-02] Dissecting gene-metabolite relationships in the legume terpenome
*Sibongile Mafu1 (1. University of Massachusetts Amherst)
5:00 PM - 5:30 PM

[Plenary_04-03] Exploring plant metabolite functions beyond the conventional view
*Masami Yokota Hirai1,2 (1. RIKEN Center for Sustainable Resource Science, Japan, 2. Nagoya University, Japan)
5:30 PM - 6:00 PM
[Plenary 05] Evolution and ecology

【Plenary 05-01】Filip Kolář (Charles University)
【Plenary 05-02】Cheng-Ruei Lee (National Taiwan University)
【Plenary 05-03】Edwige Moyroud (University of Cambridge)

Chair: Takashi Tsuchimatsu (University of Tokyo), Eriko Sasaki (Kyushu University), Vincent Castric (CNRS - University of Lille)
Thu. Jun 8, 2023 4:00 PM - 5:30 PM  Makuhari Messe 2F(Room 1)
This session is sponsored by Plant & Cell Physiology, the official journal of JSPP.

[Plenary_05-01] Adaptation in natural populations of outcrossing Arabidopsis species
*Filip Kolář Kolář1 (1. Charles University)
4:00 PM - 4:30 PM

[Plenary_05-02] The Mendelian and polygenic bases of weedy Arabidopsis thaliana evolution
Cheng-Yu Lo1, *Cheng-Ruei Lee1 (1. National Taiwan University, Taiwan)
4:30 PM - 5:00 PM

[Plenary_05-03] All bullseyes great and small: Eco-Evo-Devo of petal patterning in Hibiscus
*Edwige Moyroud1, May T. S. Yeo1, Alice L.M. Fairnie1, Lucie Riglet1, Joseph F Walker1,2, Elena Salvi1, Stefano Gatti1, Valentina Travaglia1,3 (1. University of Cambridge, United Kingdom, 2. University of Illinois at Chicago, USA, 3. University of Copenhagen, Denmark)
5:00 PM - 5:30 PM
Plenary 06 | Plenary 06 | Plenary 06

[Plenary 06] Integration of environmental cues

【 Plenary 06-01】José M. Estevez (UNAB/Fundación Instituto Leloir)
【 Plenary 06-02】Debora Gasperini (Leibniz Institute of Plant Biochemistry (IPB))
【 Plenary 06-03】Yoshikatsu Matsubayashi (Nagoya university)
Chair: Jian-Kang Zhu (Southern University of Science and Technology), Shu-Hsing Wu (Institute of Plant and Microbial Biology, Academia Sinica, Taiwan), Tomonao Matsushita (Graduate School of Science, Kyoto University)
Fri. Jun 9, 2023 9:00 AM - 10:30 AM Makuhari Messe 2F(Room 1+2)
This session is sponsored by MEXT Grants-in-Aid for Scientific Research (KAKENHI) , Plant Resilience under Fluctuating Environment.

[Plenary 06-01] "To GROW or not to GROW": molecular mechanism of cell elongation at low temperature in single plant cells.
*José M. Estevez1,2,3 (1. Centro de Biotecnología Vegetal, Facultad de Ciencias de la Vida, Universidad Andres Bello, Santiago, Chile, 2. Fundación Instituto Leloir-IIBBA, 3. ANID - Millennium Science Initiative Program - Millennium Institute for Integrative Biology (iBio) and Millennium Nucleus for the Development of Super Adaptable Plants (MN-SAP), Santiago, Chile.)
9:00 AM - 9:30 AM

[Plenary 06-02] Integrating osmotic potential with Jasmonate-mediated plant acclimation
*Debora Gasperini1 (1. Leibniz Institute of Plant Biochemistry (IPB), Halle, Germany)
9:30 AM - 10:00 AM

[Plenary 06-03] Peptide signal-mediated adaptation to spatially and temporally fluctuating environments in plants
*Yoshikatsu Matsubayashi1 (1. Nagoya University)
10:00 AM - 10:30 AM
[Concurrent 01] Advances in plant nutrition under changing environment

Plants have evolved highly effective transport, sensing and signaling systems to ensure acquisition of sufficient minerals for growth and development. This session aims to share new results on newly identified genes/regulatory pathways or metabolites involved in the regulation of ion homeostasis in plants. These include, but are not limited to: (i) effects of limitation or excess of various macro- and microelements on plant growth capacity; (ii) effects of components of global climate changes (drought, CO2, heat, etc.) on the regulation of ions transport and assimilation.

Chair: Hatem Rouached (Michigan State University), Benoit Lacombe (CNRS)
Tue. Jun 6, 2023 2:30 PM - 3:54 PM  Makuhari Messe 2F(Room 1)

[Concurrent_01-01] Plant growth stimulation by elevated CO2 depends on phosphorus homeostasis in chloroplasts
*Hatem ROUACHED1,2,3 (1. Michigan State University, 2. The Plant Resilience Institute, 3. Department of Plant, Soil and Microbial Sciences)
2:30 PM - 2:37 PM

[Concurrent_01-02] Nutritional interactions in plants (N x P) and new type of GWAS providing full epistatic maps with a gene resolution.
*Gabriel KROUK1 (1. CNRS)
2:38 PM - 2:48 PM

[Concurrent_01-03] Plasticity of root permeability for nutrient acquisition
*Marie Barberon1 (1. University of Geneva, Switzerland)
2:49 PM - 3:01 PM

[Concurrent_01-04] BUZZ: An essential gene in post-initiation root hair growth and root architecture in response to nitrate
3:02 PM - 3:14 PM

[Concurrent_01-05] Live transcription imaging of plant Pi starvation response
*Laurent Nussaume1, Sahar Hani1, Pascale David1, Neelima Boora1, Thierry Desnos1, Edouard Bertrand2 (1. Institute of Biosciences and Biotechnologies of Aix-Marseille, CEA-CNRS-Université Aix Marseille UMR 7265 , FRANCE, 2. Institute of Human Genetics - CNRS UMR9002, FRANCE)
3:15 PM - 3:27 PM

[Concurrent_01-06] Nitrogen signaling mechanisms modulating root gravitropism: involvement of flowering repressor and peptide hormone signaling
Katerina S. Lay-Pruitt1, Takao Araya1,2, Nadia Bouain1, Rashed Abualia3, Ricardo F.H. Giehl2, Eva Benková3, Nicolas von Wirén3, *Hideki Takahashi1 (1. Michigan State University, USA, 2. Leibniz Institute of Plant Genetics and Crop Plant Research, Germany, 3. Institute of Science and Technology)
[Concurrent_01-07] 【Short Talk】Histone chaperone NAP1 proteins are involved in plant growth under nitrogen deficient conditions in Arabidopsis thaliana
*Jie Linnan1, Miho Sanagi1, Yongming Luo1, Haruna Maeda1, Yoichiro Fukao2, Yukako Chiba1, Shuichi Yanagisawa3, Junji Yamaguchi1, Junpei Takagi1, Takeo Sato1 (1. Hokkaido University, 2. Ritsumeikan University, 3. The University of Tokyo)

3:39 PM - 3:46 PM

[Concurrent_01-08] 【Short Talk】The genetic diversity provided by natural Arabidopsis accessions to identify potentially adaptive differences in root morphology and soil resource capture
Christopher I Vincent1, Taraka Ramji Moturu2, Thomas Drouet de la Thibauderie2, Silvana Porco2, Florence Reyé2, Hugues De Gernier3,4, Takehiro Kamiya5, Natsuko Kobayashi5, Keitaro Tanoi5, Malcolm Bennett6, Dirk Inzé3,4, Mark Aarts7, Arthur Korte8, *Christian RM Hermans2 (1. University of Florida, USA, 2. Université libre de Bruxelles, Belgium, 3. Ghent University, Belgium, 4. VIB Center for Plant Systems Biology, Belgium, 5. University of Tokyo, Japan, 6. University of Nottingham, United Kingdom, 7. Wageningen University, the Netherlands, 8. University of Würzburg, Germany)

3:47 PM - 3:54 PM
**Concurrent 02** The environmentally responsive plant epigenome

The environmental responsiveness of the plant epigenome is an emerging and fascinating research area. To shed new light on the underlying mechanisms, our speaker list covers exciting topics ranging from immediate impacts of stress over vernalization to technologies capturing epigenome dynamics.

Chair: Hong Qiao (University of Texas at Austin), Mark Zander (Rutgers, State University of New Jersey)

Tue. Jun 6, 2023 2:30 PM - 4:00 PM Makuhari Messe 2F(Room 2)

**[Concurrent_02-01] Jasmonate signaling through the lens of epigenomics**
*Mark Zander1, Aanchal Choudhary1, Moonia Ammari1, Hyuk Sung Yoon1* (1. Waksman Institute of Microbiology, Rutgers State University of New Jersey)

2:32 PM - 2:48 PM

**[Concurrent_02-02] (Re)programming Cell Identity and Function in Response to intrinsic and extrinsic cues**
Tomasz Bieluszewski1, Sandhan Prakash1, *Doris Wagner1* (1. University of Pennsylvania)

2:49 PM - 3:05 PM

**[Concurrent_02-03] A DNA element to remember ‘winter cold’ in Arabidopsis**
Zheng GAO1, Yaxiao LI, *Yuehui HE1* (1. Peking University)

3:06 PM - 3:22 PM

**[Concurrent_02-04] TANDEM ZINC-FINGER/PLUS3 integrates light and temperature signalling in plant nuclear hubs.**
*Eirini Kaiserli1, Anna Zioutopoulou1, Elisa Vellutini1, Giorgio Perrella1,2, Weiwei Fang1, Tiantian Xu1, Micaela Milan1* (1. School of Molecular Biosciences, College of Medical, Veterinary and Life Sciences, University of Glasgow, Scotland, UK, 2. Department of Bioscience University of Milan, Italy)

3:23 PM - 3:39 PM

**[Concurrent_02-05]【 Short Talk】Sensory plastids in growth- and defense-related epigenetic phenotype adjustment**
*Ha Eun Jeh1, Jesús Beltrán1,4, Roberys Sanchez1, Xiaodong Yang1,5, Isaac Dopp1, Yashitola Wamboldt1,2, Hardik Kundariya1, Alenka Hafner1, Sally AMackenzie1* (1. Pennsylvania State University, PA, USA, 2. University of Nebraska, Lincoln, NE, USA, 3. MatMaCorp, Lincoln, NE, USA, 4. University of California, Riverside, CA, USA, 5.Yangzhou University, Yangzhou, China)

3:40 PM - 3:49 PM

**[Concurrent_02-06]【Short Talk】Epidermal Cell Type-Specific Chromatin Dynamics Underlying Arabidopsis Heat Stress Memory**
*Daniel Slane1,2, Kenneth W Berendzen3, Yoshihiro Yoshitake4, Christopher Grefen5, Takayuki Kohchi4, Takuya Sakamoto2,6, Sachihiro Matsunaga1* (1. Department of Integrated Biosciences, Graduate School of Frontier Sciences, The University of Tokyo, 5-1-5 Kashiwanoha, Kashiwa, Chiba, 277-8562, Japan, 2. Department of Applied Biological Science, Faculty of Science and Technology, Tokyo University of Science, 2641 Yamazaki, Noda, Chiba 278-
8510, Japan, 3. Center for Plant Molecular Biology, University of Tübingen, Auf der Morgenstelle 32, Tübingen, 72076, Germany, 4. Graduate School of Biostudies, Kyoto University, Kyoto, 606-8502, Japan, 5. Faculty of Biology and Biotechnology, Molecular and Cellular Botany, University of Bochum, Universitätsstraße 150, 44780 Bochum, Germany, 6. Department of Science, Faculty of Science, Kanagawa University, 3-27-1, Rokkakubashi, Kanagawa-ku, Yokohama, Kanagawa, 221-8586, Japan

3:50 PM - 3:59 PM
[Concurrent 03] New tools and applications in plant molecular genetics

The session will focus on developing new genetic and biotechnological discoveries in plant biology. This year’s outstanding achievements in CRISPR biology (e.g., cell-type-specific genome editing, genome-scale sgRNA libraries), imaging mass spectrometry, TF interactomics, Cryo-electron microscopy of membrane proteins, flux metabolomics, plant phenomics, root micro-fluidics, super-resolution microscopy, and single-cell methylation, spatial transcriptomics and more have gained significant success worldwide. The session will allow scientists to present their most advanced discoveries and discuss the cutting technologies transforming plant science.

Chair: Eilon Shani (Tel Aviv University)
Tue. Jun 6, 2023 2:30 PM - 4:00 PM  Makuhari Messe 2F(Room 3)
This session is sponsored by Plant Physiology.

[Concurrent_03-01] Identifying Transcriptional Activation Domains
*Lucia Strader¹, Nicholas Morffy¹, Clean Miller¹, Lisa Van den Broeck², Max Staller³, Rosangela Sozzani² (1. Duke University, 2. North Carolina State University, 3. University of California Berkeley)
2:32 PM - 2:47 PM

[Concurrent_03-02] Natural and artificial regulation of plant cell states
*Ryan Lister¹ (1. University of Western Australia)
2:48 PM - 3:03 PM

[Concurrent_03-03] Time to sow: In planta CRISPR screens are ready
*Thomas Benjamin Jacobs¹,², Ward Develtere¹,², Marie Pfeiffer¹,², Ward Decaestecker¹,², Debbie Rombaut¹,², Tom Ruttink³, Moritz K. Nowack¹,² (1. Department of Plant Biotechnology and Bioinformatics, Ghent University, Ghent, Belgium, 2. VIB Center for Plant Systems Biology, Ghent, Belgium, 3. ILVO, Flanders Research Institute for Agriculture, Fisheries and Food, Plant Sciences Unit, Melle, Belgium)
3:04 PM - 3:19 PM

[Concurrent_03-04] 【Short Talk】 Location, location, location: a system-wide assessment of subcellular protein localization in Arabidopsis roots by mass-spectrometry
*Monique van Schie¹, Mark Roosjen¹, Dolf Weijers¹ (1. Wageningen University, the Netherlands)
3:20 PM - 3:32 PM

[Concurrent_03-05] 【Short Talk】 A single-nucleus transcriptome atlas of seed-to-seed development in Arabidopsis
*Travis Lee¹,²,³, Tatsuya Noborit¹,², Natanella Illouz-Eliaz¹,², Bruce Jow¹,², Joseph Nery¹,², Joseph Ecker¹,²,³ (1. Plant Biology Laboratory, Salk Institute for Biological Studies, La Jolla, CA 92037, 2. Genomic Analysis Laboratory, Salk Institute for Biological Studies, La Jolla, CA 92037, 3. Howard Hughes Medical Institute, Salk Institute for Biological Studies, La Jolla, CA 92037)
3:33 PM - 3:45 PM

[Concurrent_03-06] Multi-Knock – a multi-targeted genome-scale CRISPR toolbox to overcome functional redundancy in plants

*Eilon Shani¹ (1. Tel Aviv University, Israel)

3:46 PM - 3:58 PM
[Concurrent 04] Cellular reprogramming in regeneration and development

At the heart of plants’ developmental plasticity is the broad ability of their cells to undergo rapid and coordinated changes in cell identity and function. This is manifested during post-embryonic formation of new organs and in their ability to repair damaged organs and tissues. The session will focus on the parallels and convergences in cellular reprogramming mechanisms during development and regeneration.

Chair: Idan Efroni (The Hebrew University), Alexis Maizel (Heidelberg University), Momoko Ikeuchi (Nara Institute of Science and Technology)

Tue. Jun 6, 2023 2:30 PM - 4:00 PM Makuhari Messe 2F(Room 4)

[Concurrent_04-01] Specific regulation on diverse regenerative responses in Arabidopsis
*Momoko Ikeuchi1 (1. Nara Institute of Science and Technology)
2:32 PM - 2:48 PM

[Concurrent_04-02] Born Again: The Early Stages of Plant Cell Reprogramming
*Kenneth David Birnbaum1, Bruno Guillotin1, Laura Lee1, Ramin Rahni1, Graeme Vissers1, Alyaa Hessin1 (1. New York University)
2:49 PM - 3:05 PM

[Concurrent_04-03] A molecular framework for regeneration competency in plants
*Abdul Kareem1, Charles Melnyk1 (1. Swedish University of Agricultural Sciences, Uppsala, Sweden)
3:06 PM - 3:22 PM

[Concurrent_04-04] 【 Short Talk】Transcriptional Regulation of Cell-cell Movement During Root Tip Regeneration
*Itay Cohen1, Idan Efroni1 (1. Hebrew University of Jerusalem)
3:23 PM - 3:34 PM

[Concurrent_04-05] 【 Short Talk】It’s All in the Timing: Enhancing Regeneration Efficiency Using Morphogenic Factors
*Bastiaan Bargmann1, Kelsey Reed1 (1. Virginia Tech)
3:35 PM - 3:46 PM

[Concurrent_04-06] 【 Short Talk】Leaf epidermal patterning and fate determination
*Chin-Min Kimmy Ho1 (1. Institute of plant and microbial biology, Academia Sinica)
3:47 PM - 3:58 PM
[Concurrent 05] Organelle-organelle communication under stress

Organelles coordinate the complex intracellular metabolism in eukaryotic cells by imposing a physical barrier to sequester metabolites and macromolecules. The intricate organization of organelle-organelle communication under biotic and abiotic stresses is a recently emerging research topic and highly relevant to understanding the plant’s responses to the changing environment. In this concurrent session, we will highlight the recent findings in a broad range of inter-organellar communication pathways under various stresses.

Chair: Eunsook Park (University of Wyoming), Inge De Clercq (VIB Center for Plant Systems Biology, Ghent University)

Tue. Jun 6, 2023 2:30 PM - 4:00 PM  Makuhari Messe 3F(Room 5)

[Concurrent_05-01] Chloroplast-nuclear communication in plant immunity
*Eunsook Park1, Seungmee Jung1, Jongchan Woo1, Ashley Park1, Solhee In1 (1. Department of Molecular Biology, University of Wyoming, USA)
2:32 PM - 2:42 PM

[Concurrent_05-02] Energy Metabolism vs. Moonlighting: A Balancing Act To Prevent Oxidative Stress
*Jennifer Selinski1 (1. Christian-Albrechts University Kiel)
2:43 PM - 2:58 PM

[Concurrent_05-03] Investigating how chloroplast-initiated intracellular signals control intercellular trafficking mediated by plasmodesmata in *Nicotiana benthamiana*
*Andrea Alejandra Zanini1, Mohammad Fazle Azim1, Tessa Burch-Smith1 (1. Donald Danforth Plant Science Center)
2:59 PM - 3:14 PM

[Concurrent_05-04] 【 Short Talk】 Light-induced chloroplast biogenesis: photobodies control alternative promoter selection as a mechanism of nucleus-chloroplast communication
Jaehyung Lee1, Sandhya Senthilkumar1, Scott Perkins1, Heejin Yoo1, *Chan Yul Yoo1 (1. School of Biological Sciences, University of Utah, Salt Lake City, UT, 84112, USA)
3:15 PM - 3:25 PM

[Concurrent_05-05] 【 Short Talk】 405nm Photostimulation of the Endoplasmic Reticulum-Chloroplast Contact Site in *Arabidopsis* Hypocotyls Causes Rapid Cytoskeletal Depolymerization, Elevated Cytoplasmic Calcium, and Elevated Organellar ROS
*Sara Maynard1, Lawrence R Griffing1 (1. Texas A&M University)
3:26 PM - 3:36 PM

[Concurrent_05-06] 【 Short Talk】 Functional characterization of *Arabidopsis thaliana* Synaptotagmin1 domains using Tricalbin3 chimeras in *Saccharomyces cerevisiae*.  
*Francisco Benitez-Fuente1, Javier Collado2, Vito Amorim-Silva1, Ruben Fernandez-Busnadiego2, Miguel Angel Botella1 (1. Departamento de Biologia Molecular y Bioquimica, Instituto de Hortofruticultura Subtropical y Mediterranea “La Mayora”, Universidad de Malaga-CSIC, Malaga 29071, Spain,
2. Institute of Neuropathology, University Medical Center Goettingen, Goettingen 37099, Germany
3:37 PM - 3:47 PM

[Concurrent_05-07] Elucidating organelle-organelle and organelle-to-nucleus signaling pathways during plant stress responses
*Inge De Clercq1,2, Jonas De Backer1,2, Xiaopeng Luo1,2, Laura Antuña Hörlein1,2, Elena Sanchez Martín-Fontecha1,2, Siel Goethals1,2 (1. Department of Plant Biotechnology and Bioinformatics, Ghent University, Ghent, Belgium., 2. Vlaams Instituut voor Biotechnologie (VIB)-Center for Plant Systems Biology, Ghent, Belgium.)
3:48 PM - 3:58 PM
[Concurrent 06] Plant proteostasis: The dynamic proteome in plant cell signalling

This ICAR session has a dual purpose in highlighting recent discoveries in plant Proteostasis as well as the tools that have been made available through the Plant Proteostasis community to enable new researchers to explore the role of proteostasis in diverse aspects of plant development and response to environment.

Chair: Uli Bechtold (Durham University), Ari Sadanandom (Durham University)

Tue. Jun 6, 2023 2:30 PM - 4:00 PM  Makuhari Messe 3F(Room 6)

[Concurrent_06-01] SUMOcode: Deciphering how SUMOylation enables plants to adapt to their environment.
*Ari Sadanandom Sadanandom1, Kathryn Lilley3, Malcolm Bennett2, Andrew Jones4, Miguel DeLucas1, Anthony Bishopp2, Rahul Bhosale2, Leah Band2, Darren Wells2, Jonathan Atkinson3, Sumesh Kakunath1, Dipan Roy1, Shraboni Ghosh1, Lisa Clark1, Kawinnat Sue-Ob4, Jason Banda2 (1. University of Durham, 2. University of Nottingham, 3. University of Cambridge, 4. University of Liverpool)

2:32 PM - 2:48 PM

[Concurrent_06-02] Regulation of proteostasis and activation of Ca\(^{2+}\) channels by two distinct receptor kinases in maintaining immune integrity
*Libo Shan1 (1. Texas A&M University)

2:49 PM - 3:05 PM

[Concurrent_06-03] Proximity labeling proteomics identified an inner nuclear membrane protein degradation system in plants
*Yangnan Gu1 (1. University of California, Berkeley)

3:06 PM - 3:22 PM

[Concurrent_06-04] Regulation of the homeostasis of immune signalling proteins through proteasome-mediated degradation
*Xin Li1 (1. University of British Columbia)

3:23 PM - 3:39 PM

[Concurrent_06-05] 【 Short Talk 】 Identification of interacting factors of the TARANI/ Ubiquitin-specific protease 14 (UBP14) in Arabidopsis thaliana
*Anjana S Hegde1, Dr. Utpal Nath1 (1. Department of Microbiology and Cell Biology, Indian Institute of Science, Bengaluru, India)

3:40 PM - 3:49 PM

[Concurrent_06-06] 【 Short Talk 】 Molecular mechanism for peroxisomal protein transport via the ubiquitin system
*Shoji Mano1,2, Shino Goto-Yamada3, Yasuko Hayashi4, Kazumi Hikino1, Masatake Kanai1, Mikio Nishimura5 (1. National Institute for Basic Biology, Japan, 2. The Graduate University for Advanced Studies, Japan, 3. Jagiellonian University, Poland, 4. Niigata University, Japan, 5. Konan University, Japan)
3:50 PM - 3:59 PM
Arabidopsis research globally has provided invaluable tools to understand the plant world at different biological scales. A sizable proportion of that research is carried out by researchers in the Global South (i.e. countries located around the tropics and the Southern hemisphere), even though these countries face many political and budget limitations for scientific endeavours. This symposium aims to highlight the work of researchers from the Global South, oftentimes under-represented in international conferences, to bring a more diverse perspective to the meeting.

Chair: Gabriela Auge (CONICET - iB3, University of Buenos Aires), José Estevez (Fundación Instituto Leloir - CONICET, Argentina / Universidad Andrés Bello, Chile)

Tue. Jun 6, 2023 4:30 PM - 6:00 PM Makuhari Messe 2F (Room 1)

This session is sponsored by The Plant Cell.

[Concurrent 07-01] The power of haploid genetics in plants - Lessons from *Arabidopsis thaliana*
*Ravi Maruthachalam¹, Ramesh Bondada¹, Mohit Pradip Rajabhoj¹, Sudev Sankar¹, Saravanakumar Somasundaram¹, Mohan Premanand Marimuthu³, Mohammed Afsal Badarudeen¹, Vaishak Kanjirakol Puthiyaveedu¹, Anju P Shanmukhan², Mohammed Aiyaz², Kalika Prasad² (1. Indian Institute of Science Education and Research(IISER), Thiruvananthapuram, 2. Indian Institute of Science Education and Research(IISER), Pune, 3. University of California, Davis)
4:32 PM - 4:47 PM

[Concurrent 07-02] Plants to humans: Arabidopsis for translational research
*Sridevi Sureshkumar¹ (1. Monash University, Clayton, Australia)
4:48 PM - 5:03 PM

[Concurrent 07-03] TOC1 is a direct regulator of the Arabidopsis defence response against necrotrophic pathogens
Shannon Leigh-Sparks¹, Laura Roden², *Robert Ingle¹ (1. University of Cape Town, 2. University of Coventry)
5:04 PM - 5:19 PM

[Concurrent 07-04] 【Short Talk】ROLE OF THE ARABIDOPSIS AtbZIP63 TRANSCRIPTION FACTOR STABILITY IN ENERGY MANAGEMENT
*Pamela Carlson¹, Luis Felipe Correa da Silva², João Guilherme Portugal Vieira¹, Raphael de Araújo Campos¹, Thyleyn Engel de Jesus¹, Nubia Barbosa Eloy², Cleverson Carlos Matioli³, Michel Vincentz¹ (1. University of Campinas, 2. University of São Paulo, 3. UNIVERSIDADE NOVA DE LISBOA)
5:20 PM - 5:29 PM

[Concurrent 07-05] 【Short Talk】NLP7 is a central integrator of transcription networks in nitrogen signaling and drought stress
Nathan Johnson³, Tomás C Moyano¹, Viviana Araus², Jonathan Canan³, Ji Huang⁴, Carly Shanks⁴, Samantha Frangos⁴, Ariel Herrera¹, Francisca Blanco-Herrera¹,², Gloria M Coruzzi⁴, Elena A Vidal¹,², *Jose M Alvarez¹,² (1. Centro de Biotecnologia Vegetal, Facultad de Ciencias de la Vida, Universidad Andres Bello, Santiago 8370186, Chile, 2. ANID-Millennium Science Initiative–Millennium Institute for Integrative Biology (iBIO), Santiago 7500565, Chile, 3. Centro de Genómica y Bioinformática, Facultad de Ciencias, Universidad Mayor, 8580745 Santiago, Chile., 4. Center for Genomics and Systems Biology, New York University, New York, NY 10003)

5:30 PM - 5:39 PM
【Short Talk】A B-Box protein suppresses flowering in Arabidopsis through multi-level regulation of the photoperiod pathway
*Rahul Puthan Valappil¹, Yadukrishnan Premachandran¹, Sourav Datta¹ (1. Plant Cell and Developmental Biology Laboratory, Indian Institute of Science Education and Research (IISER) Bhopal, Madhya Pradesh - 462066, India)

5:40 PM - 5:49 PM
【Short Talk】What did the grasses gain by losing PEAPOD?
Evolution and conserved functionality of organ size and shape regulator PEAPOD
*Ruth Cookson¹, Somrutai Winichayakul¹, Hong Xue¹, Kim Richardson¹, Roger Moraga², Aurelie Laugraud², Ambarish Biswas², Greg Bryan¹, Nick Roberts¹ (1. Plant Biotechnology, Grasslands Research Centre, AgResearch Ltd., Palmerston North, New Zealand, 2. Bioinformatics and Statistics, Grasslands Research Centre, AgResearch Ltd., Palmerston North, New Zealand)
5:50 PM - 5:59 PM
**[Concurrent 08] Understanding circadian regulation in unpredictable environments**

Circadian clocks provide a temporal structure within plants, which contributes their responses to the fluctuating environment. Understanding how the circadian clock adapts plant physiology and development to environmental fluctuations forms a crucial part of forecasting the responses of plants— including crops— to an increasingly unpredictable climate.

Chair: Antony Dodd (John Innes Centre), Tokitaka Oyama (Kyoto University)

Tue. Jun 6, 2023 4:30 PM - 6:00 PM Makuhari Messe 2F(Room 2)

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**[Concurrent_08-01] Integration of circadian and environmental cues**

*Antony Dodd*¹ (John Innes Centre)

4:32 PM - 4:46 PM

**[Concurrent_08-02] Behaviors of cell-autonomous and non-cell-autonomous circadian rhythms in the plant body**

*Tokitaka Oyama*¹ (Kyoto University, Graduate School of Science)

4:47 PM - 5:01 PM

**[Concurrent_08-03] A spatial model of the plant clock reveals design principles for coordinated timing under noisy environments**

*James Locke*¹ (Sainsbury Laboratory, University of Cambridge)

5:02 PM - 5:16 PM

**[Concurrent_08-04] Gene expression noise reduction for a robust circadian clock in Arabidopsis**

*Shu-Hsing Wu*¹, Ho-Wei Wu¹, Erickson Fajiculay², Jing-Fen Wu¹, Ching-Cher Yan², Chao-Ping Hsu² (Institute of Plant and Microbial Biology, Academia Sinica, Taiwan, 2. Institute of Chemistry, Academia Sinica, Taiwan)

5:17 PM - 5:31 PM

**[Concurrent_08-05] Molecular mechanisms underlying light-induced resetting of the circadian clock in the green alga Chlamydomonas**

*Takuya Matsuo*¹ (Kitasato University, Japan)

5:32 PM - 5:46 PM

**[Concurrent_08-06] 短講 Quantity regulation of TOC1 and PRR5 for temperature compensation in the Arabidopsis circadian clock**

*Akari Maeda*¹, Hiromi Matsuo¹, Norihito Nakamichi¹ (Nagoya university, Japan)

5:47 PM - 5:57 PM
[Concurrent 09] Guard cell signalling and metabolism

Over the past few years, it has become evident that guard cell signalling and membrane ion transport are tightly coordinated with the metabolic changes occurring within the guard cells. How this intricate network is regulated at the molecular level is a fascinating question with global influence. In our session, we will discuss some of the most recent breakthrough discoveries on this topic.

Chair: Diana Santelia (ETH Zurich), Toshinori Kinoshita (Nagoya University)

Tue. Jun 6, 2023 4:30 PM - 6:00 PM  Makuhari Messe 2F(Room 3)

[Concurrent_09-01] Light regulation of stomatal movement and plasma membrane H+-ATPase in guard cells
*Toshinori Kinoshita¹ (1. ITbM, Nagoya University)
4:32 PM - 4:40 PM

[Concurrent_09-02] Sugars are mesophyll messengers regulating stomatal opening under red light
*Yotam Zait¹,², Mengmeng Zhu², Masami Hirai³, Sixue Chen⁴, Eigo Ando³, Toshinori Kinoshita ¹, Sarah M. Assmann² (1. Hebrew University of Jerusalem, 2. Dept. of Biology, Penn State University, 3. Nagoya University, 4. Dept. of Biology, University of Mississippi, 5. RIKEN Center for Sustainable Resource Science)
4:41 PM - 5:06 PM

[Concurrent_09-03] Hydrogen peroxide promotes stomatal development and opening through inducing the nuclear localization of KIN10
*Mingyi Bai¹, Wen Shi¹, Lingyan Wang¹, Lianmei Yao¹, Chao Han¹ (1. The Key Laboratory of Plant Development and Environmental Adaptation Biology, Ministry of Education, School of Life Sciences, Shandong University, Qingdao, 266237, China.)
5:07 PM - 5:32 PM

[Concurrent_09-04] 【Short Talk】 Investigating the Role of Carbohydrate Metabolism in Bacterial-Triggered Stomatal Movements Using the Model System Arabidopsis thaliana and Pseudomonas syringae pv tomato
*Lucia Piro¹ (1. ETH Zurich)
5:33 PM - 5:41 PM

[Concurrent_09-05] 【Short Talk】 Phosphorylation of WD-repeat protein WDR by phototropins is essential for starch degradation to promote stomatal opening
*Shota Yamauchi¹, Naoyuki Sugiyama², Yutaka Kodama³, Luca Distefano⁴, Haruki Fuji³, Mika Nomoto⁶,⁷, Yasuomi Tada⁶,⁷, Kazuhiro Hotta⁸, Diana Santelia⁴, Ken-ichiro Shimazaki⁹, Atsushi Takemiya¹ (1. Department of Biology, Graduate School of Sciences and Technology for Innovation, Yamaguchi University, Yamaguchi, Japan, 2. Department of Molecular & Cellular BioAnalysis, Graduate School of Pharmaceutical Sciences, Kyoto University, Kyoto, Japan, 3. Center for Bioscience Research and Education, Utsunomiya University, Tochigi, Japan, 4. Institute of Integrative Biology,
ETH Zürich, Zürich, Switzerland, 5. Department of Electrical and Electronic Engineering, Graduate School of Science and Technology, Meijo University, Nagoya, Aichi, Japan, 6. Center for Gene Research, Nagoya University, Nagoya, Japan, 7. Division of Biological Science, Graduate School of Science, Nagoya University, Aichi, Japan, 8. Department of Electrical and Electronic Engineering, Faculty of Science and Technology, Meijo University, Nagoya, Aichi, Japan, 9. Department of Biology, Faculty of Science, Kyushu University, Fukuoka, Japan)

5:42 PM - 5:50 PM

【Short Talk】Stomatal CO₂/bicarbonate Sensor Consists of Two Interacting Protein Kinases HT1 and MPK4/12 in Arabidopsis

*Yohei Takahashi¹,², Krystal C Bosmans¹, Po-Kai Hsu¹, Karnelia Paul¹, Christian Seitz¹, Chung-Yueh Yeh³, Yuh-Shuh Wang³, Dmitry Yarmolinsky³, Maija Sierla⁴, Triin Vahisalu⁴, J. Andrew McCammon¹, Jaakko Kangasjarvi⁴, Li Zhang¹, Hannes Kollist⁴, Thien Trac¹, Julian I Schroeder¹ (1. University of California San Diego, USA, 2. Nagoya University, Japan, 3. University of Tartu, Estonia, 4. University of Helsinki, Finland)

5:51 PM - 5:59 PM
[Concurrent 10] Development and environmental responses: What are kept and what are lost over the evolutionary history of land plants

Developmental strategies for adaptations to ever-changing environment have been diversified during the long history of land plant evolution. This session focuses on developmental processes and stress responses commonly present or different between the bryophyte models and Arabidopsis, and discusses how the complexity, specificity, and divergence have evolved.

Chair: Daisuke Urano (Temasek Life Sciences Laboratory), Kimitsune Ishizaki (Kobe University)

Tue. Jun 6, 2023 4:30 PM - 6:00 PM  Makuhari Messe 2F(Room 4)

This session is sponsored by The Botanical Society of Japan (Journal of Plant Research) and Institute of Plant and Microbial Biology, Academia Sinica.

[Concurrent_10-01] Adapting to Adversity: Evolutionary Insights into G-protein Networks and Stress Readiness in Land Plants

*Ting-Ying Wu¹, Shalini Krishnamoorthi², Kulaporn Boonyaves³, Isam Al-Darabshah⁴, Richalynn Leong⁵, Alan M Jones³, Kimitsune Ishizaki⁴, Kang-Ling Liao⁵, Daisuke Urano² (¹. IPMB, AS, Taiwan, 2. Temasek Life Sciences Laboratory, Singapore, Singapore, 3. Departments of Biology and Pharmacology, University of North Carolina, Chapel Hill, NC, USA, 4. Graduate School of Science, Kobe University, Kobe, Hyogo 657-8501, Japan, 5. Department of Mathematics, University of Manitoba, Winnipeg, MB, Canada, 6. Department of Biology, Faculty of Science, Mahidol University, Thailand)

4:31 PM - 4:49 PM

[Concurrent_10-02] Reproductive strategy control by a Marchantia GRAS transcriptional regulator

David Hoey¹, Philip Carella¹,², *Sebastian Schornack¹ (¹. University of Cambridge, Sainsbury Laboratory, Cambridge, UK, 2. John Innes Centre, Norwich, UK)

4:50 PM - 5:08 PM

[Concurrent_10-03] Functional evolution of thermospermine in land plants

Anna Solé-Gil¹, Yuuki Sakai², Cristina Urbez³, Kimitsune Ishizaki², Barbara A Ambrose³, *Miguel A Blázquez³, Javier Agustí¹ (¹. IBMCP (CSIC-U Politècnica de València), Spain, 2. Graduate School of Science, Kobe University, Japan, 3. The New York Botanical Garden, USA)

5:09 PM - 5:27 PM

[Concurrent_10-04] Cross-stress gene expression atlas of Marchantia polymorpha reveals the hierarchy and regulatory principles of abiotic stress responses

*Marek Mutwil Mutwil¹, Qiao Wen Tan¹, Peng Ken Lim¹, Chen Zhong, Asher Pasha, Nicholas Provart, Marius Arend, Zoran Nikoloski (¹. Nanyang Technological University)

5:28 PM - 5:46 PM
【Short Talk】Analysis of stem cell-promoting CLE peptide signaling in the shoot apical meristems of land plants
*Yuki Hirakawa, Go Takahashi, Tomohiro Kiyosue (1. Gakushuin University, Japan)
5:47 PM - 5:59 PM
[Concurrent 11] Role of biomolecular condensates in abiotic stress signaling

The session focuses on the role of biomolecular condensates in abiotic stress response. Abstracts related to BMC, formation mechanism, composition of BMC under abiotic stress are very welcome.

Chair: Monika Chodasiewicz (King Abdullah University of Science and Technology (KAUST)), Emilio Gutierrez-Beltran (University of Sevilla)

Tue. Jun 6, 2023 4:30 PM - 6:00 PM  Makuhari Messe 3F(Room 5)

[Concurrent_11-01] Functional idling in membrane-bound condensates
*Panagiotis N Moschou (1. University of Crete) 4:35 PM - 4:55 PM

[Concurrent_11-02] Uncovering the function of FLOE1, a phase separating and prion-like hydration sensor protein involved in seed germination
*Sterling Field, Yanniv Dorone, Seung Y. Rhee (1. Carnegie Institution for Science, Stanford, CA 94305, USA) 4:56 PM - 5:16 PM

[Concurrent_11-03] 【 Short Talk】 Control of meiosis under heat stress

[Concurrent_11-04] 【 Short Talk】 Heat-regulated phosphorylation of TOT43 is a switch for stress granule association to contribute to heat tolerance in Arabidopsis
*Shao-Li Yang, Cassio Flavio Fonseca De Lima, Tingting Zhu, Brigitte Van de Cotte, Lam Dai Vu, Ive De Smet (1. Department of Plant Biotechnology and Bioinformatics, Ghent University, Ghent, Belgium, 2. VIB Center for Plant Systems Biology, Ghent, Belgium) 5:31 PM - 5:44 PM

[Concurrent_11-05] 【 Short Talk】 Characterization of Arabidopsis ECT family in stress tolerance and stress granules assembly
*Nicolas Figueroa Fuentealba, Laura Arribas-Hernandez, Peter Brodersen, Monika Chodasiewicz (1. King Abdullah University of Science and Technology (KAUST), Saudi Arabia, 2. University of Copenhagen, Denmark) 5:45 PM - 5:58 PM
Translation regulation in plants

Translation is an integral component of the Central Dogma of molecular biology. Although its general mechanism is relatively well understood, little is known about the selective translation of specific mRNAs and its regulation. The emergence of technologies that allow in-depth study of translation resulted in new plant-specific translation mechanisms being unveiled and translationally-regulated mRNAs have been found to be key in the plant’s adaptational responses. Recent examples have demonstrated the biological significance of translational regulation in plants and its potential in the generation of new, powerful biotechnological tools.

Chair: Catharina Merchante (Universidad de Málaga), Gemma Sans-Coll (Universidad de Málaga), Jose Antonio Duarte-Conde (Universidad de Málaga)

Tue. Jun 6, 2023 4:30 PM - 6:00 PM  Makuhari Messe 3F(Room 6)

This session is sponsored by Agricultural Biotechnology Research Center, Academia Sinica.

[Concurrent_12-01] Uncovering the Hidden Message of mRNAs: The Exploration of Alternative Translation Initiation Sites
*Ming-Jung Liu^1 (1. Academia Sinica, Taiwan)
4:32 PM - 4:44 PM

[Concurrent_12-02] Diel and Circadian Dynamics of Translation in Arabidopsis via Ribosome Profiling
*Michael Ting^1,2, Reimo Zoschke^1, Michael J Haydon^2 (1. Max Planck Institute of Molecular Plant Physiology, Potsdam Germany, 2. The University of Melbourne, Melbourne Australia)
4:45 PM - 4:57 PM

[Concurrent_12-03] Dynamic regulation of translation upon pathogen infection
*Jinlong Wang^1, Xing Zhang^1, George H. Greene^2,1, Guoyong Xu^3,1, Xinning Dong^1 (1. Duke University, USA, 2. Upstream Biotechnology Inc., UAS, 3. Wuhan University, USA)
4:58 PM - 5:10 PM

[Concurrent_12-04]【 Short Talk 】NMD and translation of intergenic splicing-mediated polycistronic transcripts
*Yukio Kurihara^1,3, Yuko Makita^2,3, Masaharu Kawauchi^3, Tomoko Kuriyama^3, Minami Matsui^3 (1. The University of Tokyo, Japan, 2. Maebashi Institute of Technology, Japan, 3. RIKEN CSRS, Japan)
5:11 PM - 5:22 PM

[Concurrent_12-05]【 Short Talk 】Plant miRNA-target 3’-end pairing affects miRNA-mediated translational repression
*Ho-Ming Chen^1 (1. Academia Sinica, Taiwan)
5:23 PM - 5:34 PM

[Concurrent_12-06]【 Short Talk 】Deciphering the role of specialized ribosomes in plants’ translation efficiency
*Jose Antonio Duarte-Conde^1, Gemma Sans-Coll^1, Catharina Merchante^1 (1. Instituto de Hortofruticultura Subtropical y Mediterránea, Universidad de Málaga-Consejo Superior de Investigaciones Científicas (IHS-M-UMA-CSIC))
5:35 PM - 5:46 PM

[Concurrent_12-07] 【Short Talk】 Translation-coupled Epigenetic Regulation of Transposable Elements in Plants

*Zhen Lei\textsuperscript{1,2}, Ling Wang\textsuperscript{1,2}, Hui Li\textsuperscript{1,2}, Jungnam Cho\textsuperscript{1,2,3} (1. CAS Center for Excellence in Molecular Plant Sciences, 2. University of Chinese Academy of Sciences, 3. CAS-JIC Centre of Excellence for Plant and Microbial Science)

5:47 PM - 5:58 PM
[Concurrent 13] Integration of Arabidopsis and crop research in plant biotic interactions

This session will present and discuss comparative and integrative studies on Arabidopsis and crop plants in different areas of plant biotic interactions. We hope this helps to stimulate a new way of thinking, elucidate new molecular principles and develop solutions for SDGs, in the research field and beyond.

Chair: Yusuke Saijo (Nara Institute of Science and Technology), Kenichi Tsuda (Huazhong Agricultural University)

Wed. Jun 7, 2023 9:00 AM - 10:30 AM Makuhari Messe 2F(Room 1)

[Concurrent_13-01] Mitigation of plant growth-defense trade-off through damage-associated Pep peptides and receptors under phosphate deficiency

Natsuki Tsuchida¹, Masako Fuji¹, Shota Kido¹, Masahiro Nagayasu¹, Tae-Hong Lee¹, Taiga Ishihara¹, Kentaro Okada¹, Taishi Hirase¹, Asahi Adachi¹, Takumi Murakami², Masanao Sato³, Miki Fujita⁴, Yuri Tajima¹, Kei Hiruma¹, Shigetaka Yasuda¹, *Yusuke Saijo¹ (1. Nara Institute of Science and Technology, Japan, 2. National Institute of Genetics, Japan, 3. Hokkaido University, Japan, 4. RIKEN CSRS, Japan)

9:01 AM - 9:16 AM

[Concurrent_13-02] Interactions between plants and root microbiome in rice and Arabidopsis

*Yang Bai¹ (1. Institute of Genetics and Developmental Biology)

9:17 AM - 9:32 AM

[Concurrent_13-03] RCR1, a pericycle-expressed ion channel, safe-guards the stele and confers broadspectrum resistance to clubroot

*Wei Wang¹, Li Qin¹, Wenjing Zhang¹, Linhui Tang¹, Xiaoqing Dong¹, Pei Miao¹, Meng Shen¹, Huilong Du¹, Ke Wang¹, Xiao Yun Zhang¹, Min Su¹, Hongwei Lu¹, Chang Li¹, Hangyuan Cheng¹, Qiang Gao¹, Xiaojuan Zhang¹, Chengzhi Liang¹, Jian-min Zhou¹, Yu-hang Chen¹ (1. Institute of Genetics and Developmental Biology, Chinese Academy of Sciences)

9:33 AM - 9:47 AM

[Concurrent_13-04]【 Short Talk】 Microbiome colonization leads to emergent plant phenotypes at elevated temperature.

*Hannah M. McMillan¹, Sheng Yang He¹,² (1. Department of Biology, Duke University, Durham, NC 27708, USA, 2. Howard Hughes Medical Institute)

9:48 AM - 10:00 AM

[Concurrent_13-05]【 Short Talk】 Drought Recovery Induced Immunity Confers Pathogen Resistance

*Natanella Illouz-Eliaz¹, Kathryn Lande¹, Jingting Yu¹, Joseph R Ecker¹ (1. Salk Institute)

10:01 AM - 10:13 AM

[Concurrent_13-06] Plant immunity and microbiota tame potentially harmful commensal bacteria

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Miaomiao Ding\textsuperscript{1}, Frederickson Entila\textsuperscript{2}, Qingyun Zhang\textsuperscript{1}, *Kenichi Tsuda\textsuperscript{1,2} (1. State Key Laboratory of Agricultural Microbiology, Hubei Hongshan Laboratory, Hubei Key Lab of Plant Pathology, College of Plant Science and Technology, Huazhong Agricultural University, China, 2. Department of Plant Microbe Interactions, Max Planck Institute for Plant Breeding Research, Germany)  
10:14 AM - 10:29 AM
[Concurrent 14] Stress-induced signalling peptides

The workshop focuses on plant peptides and receptors, other components of signalling pathways and downstream signalling events in plant development, adaptation, and in particular plant response to the environment.

Chair: Nijat Imin (Western Sydney University), Cyril Zipfel (University of Zurich)

Wed. Jun 7, 2023 9:00 AM - 10:30 AM  Makuhari Messe 2F(Room 2)
10:01 AM - 10:10 AM  
[Concurrent_14-06] 【Short Talk】 An Evolutionarily Conserved Long-distance Migrating Peptide Regulates Lignin Biosynthesis Pathway and Plant Immunity  
Chang-Hung Chen¹², Pin-Chien Liou¹², Kuan-Hao Huang¹, Ying-Chung Jimmy Lin², Ying-Lan Chen¹ (1. Department of Biotechnology and Bioindustry Sciences, College of Bioscience and Biotechnology, National Cheng Kung University, Tainan, Taiwan, 2. Department of Life Sciences and Institute of Plant Biology, College of Life Science, National Taiwan University, Taipei, Taiwan)  

10:11 AM - 10:20 AM  
[Concurrent_14-07] 【Short Talk】 The phytocytokine AtCAPE9 and its receptor AtCAPER1 functions on plant systemic stomatal immunity  
*Chi-Hsin Chang¹²³, Kai-Tan Cheng¹, Fan-Wei Lin¹, Yet-Ran Chen¹ (1. Agricultural Biotechnology Research Center, Academia Sinica, Taiwan, 2. Molecular and Biological Agricultural Sciences, Taiwan International Graduate Program, Academia Sinica, Taiwan, 3. Graduate Institute of Biotechnology, National Chung Hsing University, Taiwan)  

10:21 AM - 10:30 AM
[Concurrent 15] Arabidopsis relatives from laboratories to natural fields
The phenotype of wild-type and mutants in natural fields is often distinct from that in regulated laboratory conditions. Recently, Arabidopsis and its relatives are emerging as model systems to understand gene function in naturally fluctuating environments, which is coined in natura. The workshop will welcome researchers from diverse disciplines including long-term regular monitoring of gene expression, epigenome and phenome in natura, predicting plant responses to global climate changes, ecological networks of diverse herbivores and pathogens, laboratory experiments capturing natural complexity such as the food web.
Chair: Kentaro K. Shimizu (University of Zurich), Hiroshi Kudoh (Kyoto University)
Wed. Jun 7, 2023 9:00 AM - 10:30 AM  Makuhari Messe 2F(Room 3)
This session is sponsored by Center for Ecological Research, Kyoto University and Kihara Institute for Biological Research, Yokohama City University.

[Concurrent_15-01] A keystone genes underlies the persistence of an experimental food web
*Matthew Barbour1,2, Daniel Kliewenstein3, Jordi Bascompte2 (1. Université de Sherbrooke, 2. University of Zurich, 3. University of California Davis)
9:03 AM - 9:22 AM

[Concurrent_15-02] Seasonality of virus-host interactions between Turnip mosaic virus and Arabidopsis halleri during the long-term infection in a natural environment
*Mie N. Honjo1, Mari Kamitani1,2, Hiroshi Kudoh1 (1. Center for Ecological Research, Kyoto University, Japan, 2. CiRA Foundation, Kyoto University, Japan)
9:23 AM - 9:42 AM

[Concurrent_15-03] Keystone pairs of Arabidopsis accessions increase plant resistance to field herbivory
*Yasuhiro Sato1,2, Rie Shimizu-Inatsugi1, Kazuya Takeda2, Atsushi J. Nagano2,3,4, Kentaro K. Shimizu1,4 (1. University of Zurich, 2. Ryukoku University, 3. Keio University, 4. Yokohama City University)
9:43 AM - 10:02 AM

[Concurrent_15-04] 【 Short Talk】 Rapid evolution in Arabidopsis thaliana in global field experiments in the pan-genomic era
*Xing Wu1, Yunru Peng1, Lucas Czech1, Tati Bellagio2,1, Meixi Lin1, Francois Vasseur4, Niek Scheepens3, Moises Exposito-Alonso1,2 (1. Carnegie Institution for Science, USA, 2. Stanford University, USA, 3. Goethe University, Germany, 4. University of Tübingen, Germany)
10:03 AM - 10:14 AM

[Concurrent_15-05] 【 Short Talk】 Time-series field phenotyping system PlantServation using machine learning revealed seasonal pigment fluctuation trends in diploid and polyploid
Arabidopsis
10:15 AM - 10:26 AM
[Concurrent 16] Plant epigenetics and chromatin dynamics

Chromatin modifications have emerged as an important regulatory mechanism for versatile biological processes. Although the DNA in each nucleus of an individual is essentially identical, the manner in which it is interpreted by the cell is dependent on its spatial and environmental context. Research incorporating innovative methods to unravel these mechanisms as well as those that incorporate the study of histone and DNA modifications, transcription factor dynamics, small RNAs, and chromatin structure will be featured within this session.

Chair: Robert Schmitz (University of Georgia), Xuehua Zhong (Washington University, St. Louis)
Wed. Jun 7, 2023 9:00 AM - 10:30 AM  Makuhari Messe 2F(Room 4)

[Concurrent_16-01] Molecular basis of non-CG methylation landscape in plants
* Xuehua Zhong1 (1. Washington University in St. Louis )
9:01 AM - 9:15 AM

[Concurrent_16-02] Dynamic regulatory mechanism of H3K27me3 demethylase REF6 responding to environment
Jiaping Zhu1, Yan Yan1, Kaixuan He1, Ying Liu1, Falong Lu1, Xian Deng1,*
Xiaofeng Cao¹ (1. Institute of Genetics and Developmental Biology, Chinese Academy of Sciences,)
9:16 AM - 9:30 AM

[Concurrent_16-03] Crosstalk among epigenetic marks during establishment of heterochromatin
*Taiko Kim To¹2, Shoko Oda¹, Tetsuji Kakutani¹ (1. The University of Tokyo, School of Science, Japan, 2. Tokyo Institute of Technology, School of Life Science and Technology, Japan)
9:31 AM - 9:45 AM

[Concurrent_16-04] An evolutionary epigenetic clock in plants
Nan Yao2, Zhilin Zhang3, Lei Yu3, Rashmi Hazarika¹, Chengyou Yu¹, Hosung Jang2, Lisa Smith4, Jurriaan Ton5, Liang Liu6, Jay Stachowicz6, Thorsten Reusch6, Robert Schmitz²,*Frank Johannes1 (1. Plant Epigenomics, Technical University of Munich, Freising, Germany, 2. Department of Genetics, University of Georgia, Athens, USA, 3. Marine Evolutionary Ecology, GEOMAR Helmholtz Centre for Ocean Research Kiel, Kiel, Germany, 4. School of Biosciences, University of Sheffield, UK, 5. Department of Statistics, University of Georgia, Athens, USA, 6. Department of Evolution and Ecology, University of California, Davis, USA)
9:46 AM - 10:00 AM

[Concurrent_16-05] 【Short Talk】 Distinct chromatin signatures in the Arabidopsis male gametophyte
*Zhe Wu¹, Danling Zhu¹, Yi Wen¹, Xi Chen¹ (1. School of Life Sciences, Southern University of Science and Technology, China)
10:01 AM - 10:10 AM

[Concurrent_16-06] 【Short Talk】 Erasure of Epigenetic Memory in Arabidopsis Flowering Control
*Toshiro Ito¹, Nana Otsuka¹, Makoto Shirakawa¹ (1. Nara Institute of...
[Concurrent_16-07]  【Short Talk】 Temporal expression of *BLADE-ON-PETIOLE 1* and 2 in successive leaves define the shape of their lamina

*Mingli Xu*, Tieqiang Hu, Darren Manuela (1. University of South Carolina, USA)

10:21 AM - 10:30 AM
[Concurrent 17] Hidden messages of RNAs for environmental responses

How do the regulatory networks between environmental factors and RNA molecules trigger plant physiological and stress responses? This concurrent session will feature the recent advances in RNA sequences- and structure-based strategies for regulating gene expression. How plant mRNAs produce novel proteins, how non-coding RNAs and RNA-binding proteins regulate RNA fates, and how RNA functionalities are diversified both at genome-wide and single-molecule levels will be discussed.

Chair: Ming-Jung Liu (Academia Sinica, Taiwan), Misato Ohtani (University of Tokyo, Japan)

Wed. Jun 7, 2023 9:00 AM - 10:30 AM Makuhari Messe 3F (Room 5)

This session is sponsored by Plant Molecular Biology (Springer).

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[Concurrent_17-01] Long non coding RNAs modulate the transcriptome by modifying alternative splicing regulations in Arabidopsis

*Martin Crespi1, Michel Heidecker1, Aurelie Christ1, Richard Rigo1, Thomas Blein1, Moussa Benhamed1, Celine Charon1, Federico Ariel2, Jeremie Bazin1 (1. Institute of Plant Sciences Paris Saclay IPS2, CNRS, INRA, Universities Paris-Saclay, Evry and Paris- Cité, 91192 Gif sur Yvette, France, 2. Instituto de Agrobiotecnología del Litoral, CONICET, FBCB, Universidad Nacional del Litoral, Santa Fe, Argentina)

9:02 AM - 9:15 AM

[Concurrent_17-02] Plants can sense and respond to environmental stress via pre-mRNA splicing regulation

*Misato Ohtani1,2,3, Hirokazu Takahashi2, Natsu Takayanagi3, Kodai Ishibashi1, Toshihiro Arae1 (1. The University of Tokyo, Japan, 2. Nara Institute of Science and Technology, Japan, 3. RIKEN, Japan)

9:16 AM - 9:29 AM

[Concurrent_17-03] RNA structure, a hidden regulator in living cells

*YILIANG DING1 (1. JOHN INNES CENTRE)

9:30 AM - 9:43 AM

[Concurrent_17-04] Prevalent Unannotated ORFs Revealed by Improved Super-Resolution Ribosome Profiling

Hsinyen Larry Wu1, Qiaoyun Ai1, Rita Teixeira1, Gaoyuan Song2, J. Mitch Elmore2, Christian Montes2, Justin Walley2, *Polly Hsu1 (1. Michigan State University, 2. Iowa State University)

9:44 AM - 9:57 AM

[Concurrent_17-05] Ribosomal RNA turnover and cellular homeostasis

*Gustavo MacIntosh1, Ang-Yu Liu1, Zakayo Kazibwe1, Brice Floyd1, Diane Bassham1 (1. Iowa State University)

9:58 AM - 10:11 AM

[Concurrent_17-06] 【 Short Talk】 Arabidopsis DXO1, a decapping enzyme for NAD-capped RNAs, activates RNMT1 to methylate the mRNA guanosine cap

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[Concurrent_17-07] 【Short Talk】 siRNAs derived from nitrate reductases, NIA1 and NIA2, play vital roles in growth and stress adaptation

*Yan Yan1, Yinpeng Xie1, Qian Gao1, Yajie Pan1, Xianli Tang1, Wei Yan1, Hongwei Guo1 (1. Institute of Plant and Food Science, Department of Biology, Southern University of Science and Technology, Shenzhen, 518055, China)

10:20 AM - 10:27 AM
[Concurrent 18] Making contacts: Membrane contact sites between plant organelles

Membrane contact sites (MCSs) are defined as areas of close apposition and tethering between the membranes of two organelles but crucially, the membranes do not fuse. These sites function as specific microdomains for the bi-directional exchange of molecular cargo and are linked to the propagation of intracellular signals enabling a coordinated cellular response to internal and external cues. This session will bring together plant cell biologists researching the molecular mechanisms of MCS tethers using new experimental tools and imaging techniques, with plant physiologists and pathologists interested in the wider role of MCSs in developmental and stress signalling.

Chair: Joe McKenna (University of Warwick), Emily Breeze (University of Warwick)

Wed. Jun 7, 2023 9:00 AM - 10:30 AM Makuhari Messe 3F(Room 6)

[Concurrent_18-01] Near-UV light signaling at the chloroplast-endoplasmic reticulum-plasma membrane contact site.

*Lawrence Griffing1, Sara Maynard1 (1. Texas A&M University, Biology Department, 3258 TAMU, College Station, USA 77843)
9:02 AM - 9:20 AM

[Concurrent_18-02] Plant endoplasmic reticulum-membrane contact sites and selective autophagy

*Pengwei Wang1,2,3 (1. College of Horticulture & Forestry Sciences, Huazhong Agricultural University, Wuhan, China, 2. National Key Laboratory for Germplasm Innovation & Utilization of Horticultural Crops, Huazhong Agricultural University, Wuhan, China, 3. Hubei Hongshan Laboratory, Wuhan, China)
9:21 AM - 9:39 AM

[Concurrent_18-03] Lipid transport at chloroplast-mitochondria contact sites in Arabidopsis thaliana

Matteo Arrighi1,2, Paul Montmayeur1, Sébastien Leterme1, Catherine Albrieux1, Sabine Brugières3, Marianne Tardif1, Myriam Ferro1, Yohann Coutté1, Juliette Jouhet1, *Morgane Michaud1 (1. Univ. Grenoble Alpes, CNRS, UGA, INRAE, CEA, LPCV, 2. Present adress: Univ. of Geneva, 3. Univ. Grenoble Alpes, INSERM, CEA, UMR BioSanté U1292, CNRS, CEA)
9:40 AM - 9:58 AM

[Concurrent_18-04] Structure and functions of plant synaptotagmins

*Miguel A Botella1 (1. Instituto de Hortofruticultura Subtropical y Mediterránea UMA-CSIC)
9:59 AM - 10:17 AM

[Concurrent_18-05] 【Short Talk】SEED LIPID DROPLET PROTEIN 1 and 2 and LD-PLASMA MEMBRANE ADAPTOR form a lipid droplet-plasma membrane contact site that might play a role under stress

*Janis Dabisch1, Till Ischebeck1 (1. Uni Münster)
10:18 AM - 10:23 AM
[Concurrent_18-06]【Short Talk】The role of DGK1 and DGK2 in Membrane Contact Sites and Stress Tolerance
*Selene Garcia-Hernandez1, Noemi Ruiz-Lopez1, Miguel A. Botella Mesa1 (1. Instituto de Hortofruticultura Subtropical y Mediterránea, Universidad de Málaga-Consejo Superior de Investigaciones Científicas (IHSM-UMA-CSIC))
10:24 AM - 10:29 AM
Temporal regulation of environmental responses, growth, and development

Plant cells respond to the same types of stimuli differently depending on when (time of the day, season, developmental ages, etc.), how often (frequency, gradual changes, and stochasticity), and how long (duration – secs, mins, hours, days, etc. - and kinetics) they were given. In this session, we will discuss plant responses (from cellular to developmental) that are impacted by environmental stress and regulated by time in different scales and context.

Chair: Takato Imaizumi (University of Washington), Dawn Nagel (University of California, Riverside)

Wed. Jun 7, 2023 11:00 AM - 12:30 PM  Makuhari Messe 2F(Room 1)

This session is sponsored by MEXT Grants-in-Aid for Scientific Research (KAKENHI) , Plant Resilience under Fluctuating Environment.

[Concurrent_19-01] The induction of florigen FLOWERING LOCUS T gene is controlled by phytochrome A high-irradiance response and external coincidence mechanism under natural long-day conditions

*Takato Imaizumi1 (1. University of Washington)

11:02 AM - 11:17 AM

[Concurrent_19-02] Cold tolerance of membranes is a matter of timing and metabolic state – not just a saturation story

*Rebecca Roston1, Zachery Shomo1, Allison C Barnes1,2, Sunil K Kenchanmane Raju1,3, James C Schnable1 (1. University of Nebraska-Lincoln, USA, 2. North Carolina State University, USA, 3. New York University, USA)

11:18 AM - 11:33 AM

[Concurrent_19-03] Circadian effects in seconds, minutes, hours, weeks and months.

Gareth Steed1, Laura Taylor1, Dora Ramirez1, Gabby Pingarron-Cardenas1, Basi Teng1, Jorge Gonclaves1, James Locke1, *Alex Webb1 (1. University of Cambridge)

11:34 AM - 11:49 AM

[Concurrent_19-04]【 Short Talk】 Phloem cells - from single cell transcriptomics to development and function

*Jiyun Kim1, Diana Weidauer1, Shahrazad Majari Kasmaei1, Marcela Renger1, Wolf B. Frommer1,2 (1. Institute for Molecular Physiology, Heinrich-Heine-University Düsseldorf, Düsseldorf 40225, Germany, 2. Institute of Transformative Bio-Molecules (WPI-ITbM), Nagoya University, Chikusa, Nagoya 464-8601, Japan)

11:50 AM - 11:59 AM

[Concurrent_19-05]【 Short Talk】 Nitrogen-responsive SnRK1-FBH4 module affects flowering time and metabolism in Arabidopsis

*Miho Sanagi1, Akio Kubo1, Van Quoc Giang1, Filip Rolland2, Junpei Takagi1, Takeo Sato1 (1. Hokkaido University, Japan, 2. KU Leuven, Belgium)
12:00 PM - 12:09 PM
[Concurrent_19-06] 【Short Talk】 Rational approaches to synchronizing germination in seed populations
*Liam Walker¹, Iain G. Johnston², George W. Bassel¹ (1. School of Life Sciences, University of Warwick, 2. Department of Mathematics, University of Bergen)

12:10 PM - 12:19 PM
*Andrea Ramirez Ramirez¹, Prashanth Ramachandran¹, José Dinneny¹ (1. Stanford University)

12:20 PM - 12:29 PM
Concurrent | Concurrent | Concurrent 19-24

[Concurrent 20] Interdisciplinary approaches applied to plasmodesmata research

Plasmodesmata provide a route for the transport of signalling proteins and RNAs, metabolites and hormones to coordinate cellular functions within tissues and across distant organs. This session aims to uncover the broad range of interdisciplinary approaches that have been recently applied to understand plasmodesmata formation and function. We will hear from researchers combining genetic and bioorthogonal chemistry approaches, and physico mechanical models to dissect plasmodesmata function as well as developing new devices and using interfamly grafts and bryophytes to follow Plasmodesmata development and their role in multicellularity. We will also discuss the potential of engineering this mechanism to improve crops in a changing environment.

Chair: Yoselin Benitez-Alfonso (Centre for Plant Sciences. University of Leeds)

Wed. Jun 7, 2023 11:00 AM - 12:30 PM Makuhari Messe 2F (Room 2)

[Concurrent_20-01] Plasmodesmata walls: a study of the mechanical and structural properties that control their biological function

*Yoselin Benitez-Alfonso¹, Pallavi Kumari¹,², Lazar Novakovic¹, Richa Yeshvekar¹, Simon Connell² (1. Centre for Plant Sciences. University of Leeds, UK, 2. Bragg Centre for Material Research. School of Physics and Astronomy. University of Leeds, UK)

11:01 AM - 11:15 AM

[Concurrent_20-02] The development of a microfluidic chip for entrapping tobacco BY-2 cells has enabled the analysis of plasmodesmata permeability using cultured cells in real-time.

*Ken-ichi Kurotani¹, Kazunori Shimizu²,³, Yaichi Kawakatsu¹, Masahiro Kikkawa², Ryo Tabata³,⁴, Daisuke Kurihara⁵,⁶, Hiroyuki Honda², Michitaka Notaguchi¹,³,⁴,⁵ (1. Nagoya University, Bioscience and Biotechnology Center, Japan, 2. Nagoya University, Department of Biomolecular Engineering, Graduate School of Engineering, Japan, 3. Nagoya University, Institute for Advanced Research, Japan, 4. Nagoya University, Graduate School of Bioagricultural Sciences, Japan, 5. Nagoya University, Institute of Transformative Bio-Molecules (ITbM), Japan, 6. Nagoya University, Institute for Advanced Research (IAR), Japan)

11:16 AM - 11:30 AM

[Concurrent_20-03] Regulation of brassinosteroid homeostasis in the Arabidopsis root

*Jenny Russinova¹,² (1. Department of Plant Biotechnology and Bioinformatics, Ghent University, 9052 Ghent, Belgium, 2. Center for Plant Systems Biology, VIB, 9052 Ghent, Belgium)

11:31 AM - 11:45 AM

[Concurrent_20-04] Environmental fluctuation and regulation of intercellular communication in the moss, Physcomitrium patens

*Tomomichi Fujita¹, Munenori Kitagawa¹,², Takumi Tomoi¹,³, Kensuke Kawade⁵,⁴, Chiyo Jinno¹ (1. Hokkaido University, 2. Huazhong Agricultural University, 3. Fukuoka University, Japan, 4. National Institute of Genetics, Japan, 5. National Institute of Genetics, Japan, 6. National Institute of Genetics, Japan)

11:46 AM - 12:00 PM
[Concurrent_20-05]【Short Talk】A long-distance top-down movement of a transcription factor regulating the root phloem development
*Ji-Young Lee¹, Hyoujin Kim¹, Jongsung Park¹, Heewon Shin¹, Sooyoun Kim¹
(1. Seoul National University)
12:01 PM - 12:10 PM

[Concurrent_20-06]【Short Talk】A novel mechanism for plasmodesmata mediated cell-cell communication in plants
*Marija Smokvarska¹, Jessica Perez Sancho¹, Marie Glavier¹, Ziqiang Li¹, Magali Grison¹, Laetitia Fouillen¹, Patrick Moreau¹, Matthieu Platre², Yaowei Yang³, Yongming Luo³, Wolfgang Busch², Eugenia Russinova³, Emmanuelle Bayer¹ (1. Laboratoire de Biogenèse Membranaire, UMR5200, CNRS, Université de Bordeaux, Villenave d'Ornon, France, 2. Salk Institute for Biological Studies, La Jolla, California, 3. Department of Plant Biotechnology and Bioinformatics, Ghent University, Ghent, Belgium. Center for Plant Systems Biology, VIB, Ghent, Belgium)
12:11 PM - 12:20 PM

[Concurrent_20-07]【Short Talk】Cellular adaptations for long-distance transport through the phloem sieve tube
*Lothar Kalmbach¹, Yka Helariutta (1. University of Lausanne, Department of Plant Molecular Biology)
12:21 PM - 12:30 PM
**[Concurrent 21] Molecular signaling in plant-insect interactions**

Molecular signaling in plant defense against herbivory is an emerging area of study with identity of receptors, channels and early signaling genes that connects it to jasmonate pathway relatively unknown. The regulation of phytohormone and glucosinolate pathway by various signaling components are also unexplored. The session will cover the latest discoveries in the field.

**Chair:** Jyothilakshmi Vadassery (National Institute of Plant Genome Research (NIPGR)), Gen-Ichiro Arimura (Tokyo University of Science)

**Wed. Jun 7, 2023 11:00 AM - 12:30 PM  Makuhari Messe 2F(Room 3)**

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**[Concurrent_21-01] Geographic, Ecological and Transcriptional Forces Shaping Glucosinolate Defense Metabolite Variation**

*Daniel Kliebenstein*¹ (1. University of California, Davis)

11:01 AM - 11:17 AM

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**[Concurrent_21-02] Plant defense system in arabidopsis- *Spodoptera* interactions**

*Gen-ichiro Arimura*, Yoshitake Desaki (1. Tokyo University of Science)

11:18 AM - 11:34 AM

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**[Concurrent_21-03] Hunting for insect secreted proteins that modulate plant immunity: *Spodoptera litura*- Arabidopsis interaction as a model system**

Vinod Prajapati¹, Paramita Bera¹, Sameer Dixit¹, Vishakh Vijayan¹

*Jyothilakshmi Vadassery* (1. National Institute of Plant Genome Research (NIPGR), Delhi)

11:35 AM - 11:51 AM

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**[Concurrent_21-04] Damage-activated proteolysis as a potential key player in the plant wound response**

*Simon Staël* (1. Swedish University of Agricultural Sciences)

11:52 AM - 12:08 PM

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**[Concurrent_21-05] 【 Short Talk 】 CIRCADIAN CLOCK-ASSOCIATED1 (CCA1) controls resistance to aphid by altering indole glucosinolate production**

*Keyan Zhu Salzman*¹, Jiaxin Lei¹ (1. Texas A&M University)

12:09 PM - 12:18 PM

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**[Concurrent_21-06] 【 Short Talk 】 Is Ca²⁺-induced activation of Arabidopsis lipoxygenase 2 involved in green leaf volatile burst?**

*Kenji Matsui*, Moena Tanaka, Kano Yamanaka, Mone Ohtaguro, Satoshi Mochizuki (1. Yamaguchi University, Japan, 2. RIBS Okayama, Japan)

12:19 PM - 12:28 PM
Molecular condensation for reproductive and biotic stress regulation: From cell biology to biophysical mechanism

Biomolecular condensation (BMC) has emerged as a critical regulatory mechanism that dynamically tunes the constituents and biophysical properties of signaling complexes during plant response to diverse developmental and environmental cues. This session focuses on BMC-mediated signaling research that integrates advanced imaging, biochemical, biophysical, and mathematical approaches to understand the spatiotemporal regulation of plant immune responses and reproduction.

Chair: Yansong Miao (Nanyang Technological University, Singapore), Yangnan Gu (University of California Berkeley)

Wed. Jun 7, 2023 11:00 AM - 12:30 PM  Makuhari Messe 2F(Room 4)

Molecular Condensation at Host-Pathogen Interface for Plant Immunity
*YANSONG MIAO1 (1. Nanyang Technological University SInGapore)
11:00 AM - 11:13 AM

Formation of NPR1 condensates promotes cell survival during the plant immune response
*Xinnian Dong1, Raul Zavaliev1, Rajinikanth Mohan1, Tianyuan Chen1 (1. Howard Hughes Medical Institute and Duke University)
11:14 AM - 11:34 AM

Dynamic proteostasis and protein condensation in malectin-like receptor kinase-mediated activation of an intracellular immune receptor
*Ping He1, Jun Liu1, Fausto Andres Ortiz-Morea1, Libo Shan1 (1. Texas A&M University)
11:35 AM - 11:50 AM

Phenolic acid-induced stress granule formation mediates plant interspecific competition
Zhouli Xie1,2, Shuai Zhao1,2, Ying Li1,2, Yuhua Deng1, Yabo Shi1, Xiaoyuan Chen1, Yue Li1, Haiwei Li3,4, Changtian Chen1,2,5, Xingwei Wang1, Enhui Liu3,4, Yuchen Tu1, Peng Shi1,2, Jinjin Tong1,2, Emilio Gutierrez-Beltran6,7, Peter Bozhkov6, Weiqiang Qian1,2, Mian Zhou3,4,5, *Wei Wang1,2,5 (1. Peking University, China, 2. Center for Life Sciences, China, 3. Capital Normal University, China, 4. Beijing Key Laboratory of Plant Gene Resources and Biotechnology for Carbon Reduction and Environmental Improvement, China, 5. Iowa State University, USA, 6. Swedish University of Agricultural Sciences and Linnean Center for Plant Biology, Sweden, 7. Universidad de Sevilla, Spain)
11:51 AM - 12:06 PM

The compaction of flowering plant sperm through chromatin phase separation
Toby Buttress2, Shengbo He2, Liang Wang3,4, Shaoli Zhou2, Gerhard Saalbach2, Martin Vickers3, Guohong Li3, Pilong Li3, *Xiaqiu Feng1,2 (1. Institute of Science and Technology, Austria, 2. John Innes Centre, UK, 3. Tsinghua
University, China, 4. Institute of Biophysics, Chinese Academy of Science, China)
12:07 PM - 12:22 PM
[Concurrent_22-06] 【Short Talk】 AGO2 condensates behavior after bacterial inoculation
*Moriaki Saito1, Po Hu1, Hailing Jin1 (1. Department of Microbiology and Plant Pathology, Center for Plant Cell Biology, Institute for Integrative Genome Biology, University of California, Riverside, USA)
12:23 PM - 12:30 PM
[Concurrent 23] A systems perspective: Omics integration and modeling

The characterization and quantification of interconnections among molecules is fundamental to providing a systemic view about how plants integrate, attenuate, and respond to developmental and environmental cues. Complementary, predictive modeling of gene regulatory networks, phosphorylation cascades, hormone signaling, or metabolic pathways are powerful approaches to guide new hypotheses and base future experiments. This session will focus on studies that aim to integrate -omics datasets, unravel molecular networks, and elaborate predictive models to address functional questions in Arabidopsis.

Chair: Lisa Van den Broeck (North Carolina State University), Antoni Garcia (Centre for research in agricultural Genomics)

Wed. Jun 7, 2023 11:00 AM - 12:30 PM  Makuhari Messe 3F(Room 5)
This session is sponsored by Cambridge University Press (Quantitative Plant Biology Journal, co-published with John Innes Centre).


*Klaas Vandepoele1, Li Liu1, Michel Heidecker2, Thomas Depuydt1, Nicolas Manosalva Perez1, Martin Crespi2, Thomas Blein2  (1. VIB-UGent Center for Plant Systems Biology, Belgium, 2. Université Paris-Saclay, CNRS, INRAE, Université Evry, France)
11:03 AM - 11:18 AM

[Concurrent_23-02] A quantitative model of carbon partitioning during plant cold acclimation

*Anastasia Kitashova1, Stephan Adler2, Andreas Richter3, Svenja Eberlein1, Dejan Dziubek1, Edda Klipp2, Thomas Nägele1  (1. Plant Evolutionary Cell Biology, Faculty of Biology, Ludwig Maximilian University of Munich, Germany, 2. Theoretical Biophysics, Institute of Biology, Humboldt University of Berlin, Germany, 3. Institute for Biosciences, Physiology of Plant Metabolism, University of Rostock, Germany)
11:19 AM - 11:34 AM

[Concurrent_23-03] Modelling hormone transport within the Arabidopsis root

*Krystian Kiradjiev1, Leah Band1, Eilon Shani2, Hussam Nour-Eldin3, Jenia Binenbaum4, Nikolai Wulff3  (1. University of Nottingham, 2. University of Tel Aviv, 3. University of Copenhagen, 4. University of Cambridge)
11:35 AM - 11:50 AM

[Concurrent_23-04] Understanding the Molecular Mechanisms Underlying FERONIA Receptor Kinase-mediated Signalling Using Multiomics Approach

*Hongqing Guo Guo1, Jie Tang1, Ping Wang1, Trevor M Nolan2, Justin W Walley1, Philip N Benfey2, Yanhai Yin1, Hongqing Guo1  (1. Iowa State University, 2.
Duke University)
11:51 AM - 12:06 PM

[Concurrent_23-05] 【 Short Talk 】 New elements of cis-regulatory code of plant genes revealed by deep learning models
Fritz Frobang Peleke², Simon Maria Zumkeller¹, *Jedrzej Szymanski Szymanski¹,² (1. Forschungszentrum Juelich, CEPLAS, BioSC, Institute of Bio- and Geosciences, IBG4 Bioinformatic, 52428 Juelich, Germany, 2. Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Corrensstraße 3, D-06466 Seeland, OT Gatersleben, Germany)
12:07 PM - 12:17 PM

[Concurrent_23-06] 【 Short Talk 】 Assessing the impacts of genetic defects on starch metabolism in Arabidopsis plants using the carbon homeostasis model
*Shuichi Kudo¹, Anthony Artins², Carolina C. M. Bello³, Camila Caldana², Akiko Satake¹ (1. Kyushu Univ., Japan, 2. Max Planck Inst. of Mol. Plant Physiol., German)
12:18 PM - 12:28 PM
[Concurrent 24] Transposable elements, epigenetics, and environmental adaptation

This concurrent session will cover multiple aspects of epigenetic regulation and its role in environmental adaptation: DNA methylation, chromatin modifications, transposon control, reproduction, transgenerational epigenetics, and population epigenomics.

Chair: Leandro Quadrana (Institut of Plant Science Paris-Saclay (IPS2)), Eriko Sasaki (Kyushu University)

Wed. Jun 7, 2023 11:00 AM - 12:30 PM  Makuhari Messe 3F(Room 6)

[Concurrent_24-01] The genetic basis of non-CG transposon methylation variation in Arabidopsis thaliana
*Eriko Sasaki1, Magnus Nordborg2 (1. Kyushu University, 2. Gregor Mendel Institute of Molecular Plant Biology)
11:01 AM - 11:13 AM

[Concurrent_24-02] Transposable element sequences and their epigenetic control in plants: engines of rapid adaptation?
*Pierre Baduel1, Louna De Oliveira1, Grégoire Bohl-Viallefond1, Mounia El Messaoudi1, Vincent Colot1 (1. Institut de Biologie de l’École Normale Supérieure (IBENS))
11:14 AM - 11:26 AM

[Concurrent_24-03] Novel mechanism of transposon repression by histone deacetylases
*Hidetaka Ito1, Xiaoying Niu1, Yoko Ikeda2, Hidetoshi Saze3, Reiko Kanehira1, Xin Sun1 (1. Hokkaido University, Japan, 2. IPSR, Japan, 3. OIST, Japan)
11:27 AM - 11:39 AM

[Concurrent_24-04] Targeted integrations of retrotransposons into centromeric regions in Arabidopsis
*Sayuri Tsukahara1, Akira Kawabe2, Kae Kato3, Leandro Quadrana4, Basile Ladue4,1, Tetsuji Kakutani1 (1. The University of Tokyo, Japan, 2. Kyoto Sangyo University, Japan, 3. National Institute of Genetics, Japan, 4. Institute of Plant Sciences Paris-Saclay, France)
11:40 AM - 11:52 AM

[Concurrent_24-05] Targeted Transposition in Arabidopsis
*Richard Keith Slotkin1,2, Peng Liu1, Seth A. Edwards1,2, Pratheek Pandesha1,3, Ryan Swanson1,2, Yu-Hung Hung1, Gerald Trey Klaas1, C. Nathan Hancock4 (1. Danforth Plant Science Center &University of Missouri, 2. Division of Biological Sciences, University of Missouri-Columbia, 3. Department of Biology, Washington University in St. Louis, 4. University of South Carolina-Aiken)
11:53 AM - 12:05 PM

[Concurrent_24-06] Unique aspects of transposable element silencing in duckweeds (lemnaceae)
*Arturo Marí-Ordóñez1, Rodolphe Dombey1, Daniel Buendia-Avila1, Veronica Barragan-Borrero1, Rana Elias1, Arturo Ponce-Mane4 (1. Gregor Mendel Institute (GMI))
12:06 PM - 12:18 PM
[Concurrent_24-07] 【Short Talk】RNA deadenylation pathway suppresses transposable elements in Arabidopsis
*Ling Wang1,2, Hui Li1,2, Mengxiao Yan3, Jun Yang1,3, Jungnam Cho1,2,4 (1. CAS Center for Excellence in Molecular Plant Sciences / Institute of Plant Physiology and Ecology, 2. University of Chinese Academy of Science, 3. Shanghai Key Laboratory of Plant Functional Genomics and Resources, Shanghai Chenshan Botanical Garden, 4. CAS-JIC Centre for Excellence in Plant and Microbial Science)

12:19 PM - 12:24 PM
[Concurrent_24-08] 【Short Talk】Gene-transposon transcripts can be epigenetically regulated and impact gene response to stress conditions in Arabidopsis thaliana
*Jeremy Berthelier1, Leonardo Furci1, Shuta Asai2, Munissa Sadykova1, Tomoe Shimazaki1, Ken Shirasu2, Hidetoshi Saze1 (1. Plant Epigenetics Unit, Okinawa Institute of Science and Technology (OIST), Okinawa, Japan, 2. Center for Sustainable Resource Science, RIKEN, Yokohama, Japan)

12:25 PM - 12:30 PM
[Concurrent 25] The road to recovery: Elucidating stress recovery pathways and reversing stress effects

Plants manifest a plethora of responses from the molecular to the phenotypic level when exposed to different environments. For example, plants under water deprivation often develop smaller and darker leaves than their well-watered counterparts. Extensive empirical work has shown that gene expression is a key determinant of the physiological and developmental responses of plants to environmental cues. Further, the return to homeostasis following environmental challenges can be associated with processes distinct from the stressor proper, yet are of equal importance for plant survival. In this session, we will focus on the frontier between stress tolerance and recovery to understand mechanisms affecting reproducibility and yield after encountering stress. Although some studies consider stress recovery, it is mostly presented as a control that stressful conditions have relieved. In order to reshape a plant’s ability to cope with stress and recovery responses and to enhance plant performance under fluctuating environments there is a need to gain a greater understanding of the margin between the stress, differences in response to various stress severities, and stress recovery as a process that can be studied and improved.

Chair: Natanella Iiolluz-Elias (Salk Institute), Travis Lee (Salk Institute)
Thu. Jun 8, 2023 10:30 AM - 11:59 AM Makuhari Messe 2F (Room 1)

[Concurrent_25-01] Conflicts in phenotypic natural selection constrain adaptation to climate change in Arabidopsis thaliana
Megan Ruffley1, Laura Leventhal1,2, Shannon Hateley1, Sue Rhee1, *Moi Exposito-Alonso1,2 (1. Carnegie Institution for Science, 2. Stanford University)
10:35 AM - 10:55 AM

[Concurrent_25-02] Molecular and evolutionary basis of selective autophagy-mediated heat stress recovery in plants
*Yasin Dagdas1 (1. Gregor Mendel Institute)
10:56 AM - 11:16 AM

[Concurrent_25-03] Leveraging ecological specialization to understand plant drought tolerance strategies and their genetic modulation: a focus on ecological divergent Arabidopsis species
*Juliette de Meaux1 (1. University of Cologne)
11:17 AM - 11:37 AM

[Concurrent_25-04] Short Talk Transcription factor and chromatin-based heat memory in plants
*Nobutoshi Yamaguchi1 (1. Nara Institute of Science and Technology)
11:38 AM - 11:48 AM

[Concurrent_25-05] Short Talk Response of Arabidopsis thaliana to flooding with physical flow

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11:49 AM - 11:59 AM
[Concurrent 26] Receptor kinase signaling in development

In recent years, receptor kinase pathways have gained prominence in developmental processes. This session features the latest developments in their characterization in phenomena as diverse as polarity, cell division orientation or regeneration.

Chair: Christian Hardtke (University of Lausanne), Jamie Van Norman (UC Riverside)
Thu. Jun 8, 2023 10:30 AM - 12:00 PM  Makuhari Messe 2F (Room 2)

[Concurrent_26-01] Which side are you on? Linking polarized receptor kinases to root cell division control
*Jaimie M. Van Norman1, R.M. Imtiaz Karim Rony1, Roya Campos1, Jason Goff1
(1. University of California, Riverside)
10:31 AM - 10:50 AM

[Concurrent_26-02] Beyond stem cells: Novel roles for CLE peptide signaling in shoot apical meristems and the environmental control of plant growth.
*Zachary Nimchuk1,2 (1. Department of Biology, University of North Carolina at Chapel Hill., 2. Curriculum in Genetics and Molecular Biology, University of North Carolina at Chapel Hill.)
10:51 AM - 11:10 AM

[Concurrent_26-03] CLE-BAM/CIK signaling in root vascular patterning
*Pingping Qian1, Tatsuo Kakimoto1 (1. Osaka University)
11:11 AM - 11:30 AM

[Concurrent_26-04] 【Short Talk】 Coordinating root system architecture: the intersection of CEP and Cytokinin hormone pathways in Arabidopsis
*Michael Taleski1, Kelly Chapman1, Ondřej Novák4, Thomas Schmülling3, Manuel Frank2, Michael Djordjevic1 (1. ANU, Australia, 2. Aarhus University, Denmark, 3. Freie Universität Berlin, Germany, 4. The Czech Academy of Sciences, Czech Republic)
11:31 AM - 11:40 AM

[Concurrent_26-05] 【Short Talk】 Stomata-derived intercellular signaling that directs mesophyll air space formation
*Yuki Yoshida1, Shinichiro Sawa1 (1. Kumamoto University, Japan)
11:41 AM - 11:50 AM

[Concurrent_26-06] 【Short Talk】 A phosphoinositide hub connects CLE peptide signaling and polar auxin efflux regulation
*Qian Wang1, A. Cecilia Aliaga Fandino1, Moritz Graeff1, Thomas A. DeFalco2,3, Cyril Zipfel2, Christian S. Hardtke1 (1. Department of Plant Molecular Biology, University of Lausanne, CH-1015 Lausanne, Switzerland, 2. Institute of Plant and Microbial Biology, University of Zurich, Zurich-Basel Plant Science Center, CH-8008 Zurich, Switzerland, 3. Department of Biology, Western University, London, Canada)
11:51 AM - 12:00 PM
[Concurrent 27] Chemical priming as a sustainable tool for improved productivity under stress conditions

Chemical biology could contribute towards crop improvement while improving farmers’ income and ultimately contributing towards good health and sustainable agricultural practices. This could also help achieve sustainable development goals (SDGs) such as SDG1: No Poverty (Through improving farmers’ income) SDG2: Zero hunger (Through enhanced crop production) SDG3: Good Health and Well-being (Through improved nutritional quality) The session would provide an opportunity to share the latest trends in the chemical biology of plants.

Chair: Vassilis Fotopoulos (The Cyprus University of Technology), Khurram Bashir (Lahore University of Management Sciences)
Thu. Jun 8, 2023 10:30 AM - 12:00 PM  Makuhari Messe 2F(Room 3)
This session is sponsored by Plant Molecular Biology (Springer).

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[Concurrent_27-01] Signalling and epigenetic maintenance of plant immune memory by chemical priming agents.
*Jurriaan Ton1, David Pascual-Pardo1, Adam Hannan Parker1, Roland Schwarzenbacher1, Chia-Nan Tao1, Louis Tirot1, Sam Wilkinson1, Mustafa Yassin1, Peijun Zhang1 (1. University of Sheffield, School of Biosciences) 10:31 AM - 10:46 AM

[Concurrent_27-02] Employment of functionalized nanoparticles and polymers towards climate-smart crops
*Vasileios Fotopoulos1 (1. Cyprus University of Technology) 10:47 AM - 11:02 AM

[Concurrent_27-03] Ethanol-mediated chemical priming to mitigate drought stress in plants
*Khurram Bashir Bashir1,2, Sultana Rasheed2, Daisuke Todaka2, Kaori Sako2,3, Maho Tanaka2, Satoshi Takahashi2, Shunsuke Watanabe2, Eigo Ando4,5, Kwang-Chul Shin6, Miki Fujita7,8, Yoshiki Habu7,8, Kanako Kawaura9, Jun Kikuchi2,4, Kazuki Saito2, Masami Yokota Hirai2,4, Mitsunori Seo2, Kazuo Shinozaki2, Toshinori Kinoshita2, Motoaki Seki2,6 (1. Lahore University of Management Sciences, 2. RIKEN, Kanagawa, 230-0045, Japan, 3. Kindai University, Nara, 631-8505, Japan, 4. Nagoya Univ., Aichi, 464-8602, Japan, 5. The University of Tokyo, Tokyo, 113-0033, Japan, 6. Yokohama City Univ., Kanagawa, 244-0813, Japan, 7. University of Tsukuba, Ibaraki, 305-8577, Japan, 8. NARO, Ibaraki, 305-8602, Japan) 11:03 AM - 11:18 AM

[Concurrent_27-04] Screening chemicals regulating ion channels and modulating plant growth mechanism
*Nobuyuki Uozumi1, Kanane Sato1, Shunya Saito1, Yasuhiro Ishimaru1 (1. Tohoku University, Japan) 11:19 AM - 11:30 AM
[Concurrent_27-05] VDAL, a new protein biostimulant from Verticillium dahliae and its applications in Agriculture  
*Zhizhong Gong¹, Junsheng Qi¹ (1. China Agricultural University, Beijing, China)  
11:31 AM - 11:42 AM

[Concurrent_27-06] 【Short Talk】Chemical biology study of jasmonate signaling by development of a biased agonist derived from stereoisomers of coronatine  
*Kengo Hayashi¹, Nobuki Kato¹, Khurram Bashir²,³, Haruna Nomoto¹, Misuzu Nakayama¹, Andrea Chini⁴, Satoshi Takahashi², Hiroaki Saito⁵, Raku Watanabe⁶, Yousuke Takaoka¹, Maho Tanaka², Atsushi J. Nagano⁷,⁸, Motoaki Seki², Roberto Solano⁴, Minoru Ueda¹⁶ (1. Graduate School of Science, Tohoku University, Japan, 2. RIKEN, Japan, 3. Syed Babar Ali School of Science and Engineering, Lahore University of Management Sciences, Pakistan, 4. Department of Plant Molecular Genetics, Centro Nacional de Biotecnología, Consejo Superior de Investigaciones Científicas, Spain, 5. Faculty of Pharmaceutical Sciences, Hokuriku University, Japan, 6. Graduate School of Life Science, Tohoku University, Japan, 7. Faculty of Agriculture, Ryukoku University, Japan, 8. Institute for Advanced Biosciences, Keio University, Japan.)  
11:43 AM - 11:51 AM

[Concurrent_27-07] 【Short Talk】Identification of new targets for improving abiotic stress tolerance in plants  
*Maria del Rosario Gonzalez Bermudez¹, Irene Garcia-Maquillon¹, Jorge Lozano-Juste¹ (1. Instituto de Biologia Molecular y Celular de Plantas (IBMCP-UPV-CSIC), Universitat Politècnica de València (UPV), Consejo Superior de Investigaciones Científicas (CSIC), 46022, Spain.)  
11:52 AM - 12:00 PM
[Concurrent 28] Cross-kingdom RNA communications and innovative Eco-friendly disease control solutions

Cross-kingdom RNA communications between plants and interaction organisms is a newly emerging field. Understanding the molecular mechanisms and regulatory pathways underlying the RNA communications will help us design RNA-based new generation of plant protection solutions that are more effective and environmentally friendly.

Chair: Hailing Jin (University of California, Riverside)
Thu. Jun 8, 2023 10:30 AM - 12:00 PM Makuhari Messe 2F (Room 4)
Click here for Zoom

[Concurrent_28-01] Cross-kingdom RNA trafficking between plants and fungal pathogens
*Hailing Jin1, Shumei Wang1, Baoye He1, Qiang Cai2, Obed Ramírez-Sánchez3, Cei Abreu-Goodger4, Paul Birch5, Huaitong Wu1 (1. University of California, Riverside, USA, 2. State Key Laboratory of Hybrid Rice, College of Life Science, Wuhan University, Wuhan, China, 3. National Laboratory of Genomics for Biodiversity (Langebio), Cinvestav, Irapuato, 36821 Guanajuato, Mexico, 4. Institute of Ecology and Evolution, School of Biological Sciences, The University of Edinburgh, Edinburgh EH9 3FL, United Kingdom, 5. Division of Plant Sciences, School of Life Science, University of Dundee at James Hutton Institute, Invergowrie, Dundee DD2 5DA, United Kingdom)
10:32 AM - 10:52 AM

[Concurrent_28-02] Extracellular vesicles: Emerging Players in Plant Defense Against Pathogens
*Qiang Cai1 (1. Wuhan University, China)
10:53 AM - 11:13 AM

[Concurrent_28-03] Extracellular small RNAs direct gene silencing in a plant-interacting bacterium
Antinéa Ravet1, Jérôme Zervudacki2, Meenu Singla-Rastogi1, Magali Charvin1, Odon Thiebeauld2, Alvaro L Perez-Quintero1, Antonio Emidio Fortunato2, Adrien Candat1, Venugopal Mendu1, *Lionel Navarro1 (1. Institut de Biologie de l’École normale supérieure (IBENS), 75005 Paris, France, 2IRT, 75005 Paris, France)
11:14 AM - 11:34 AM

[Concurrent_28-04] 【Short Talk】 Proof of concept: circular antisense RNAs (caRNAs) as a new mode of action for RNA-based plant protection
*Timo Schlemmer1, Aline Koch1, Albrecht Bindereif2 (1. University of Regensburg, Regensburg, 2. Justus-Liebig-University, Gießen)
11:35 AM - 11:45 AM

[Concurrent_28-05] 【Short Talk】 Expanding the horizons of plant RNA research using single molecule FISH
*Susan Duncan1, Yiliang Ding1 (1. John Innes Centre)
11:46 AM - 11:56 AM
[Concurrent 29] Visualizing the dynamics of the circadian clock

Plant circadian clocks continuously adjust their rhythm in accordance with the ever-changing environments at different temporal and spatial levels. The advance in techniques and imaging systems along with the development of algorithms allow us to visualize the circadian clock interacting with environments at a whole plant to single-cell levels.

Chair: Chin-Mei Lee (National Taiwan University), Huang-Lung Tsai (National Taiwan University)
Thu. Jun 8, 2023 10:30 AM - 11:52 AM  Makuhari Messe 3F (Room S)
This session is sponsored by Institute of Plant and Microbial Biology, Academia Sinica.

[Concurrent_29-01] Investigating the dynamic regulation of stress-responsive genes in plants.
*Dawn Nagel1 (1. University of California, Riverside)  
10:31 AM - 10:46 AM

[Concurrent_29-02] Characterization of the long-distance circadian communication through micro-grafting techniques
*Nozomu Takahashi1,2, Kyoei Uemoto1,3, Fumito Mori4, Shota Yamauchi5, Haruki Egashira1, Yumi Kunimoto1, Takashi Araki1, Atsushi Takemiya1, Hiroshi Ito6, Hikari Ikeda1, Taiga Uchikawa1, Yohei Kondo6, Masaaki Watahiki7, Akane Kubota1, Motomu Endo1 (1. Nara Institute of Science and Technology, Japan, 2. JST PRESTO, Japan, 3. Kyoto University, Japan, 4. Kyushu University, Japan, 5. Yamaguchi University, Japan, 6. National Institutes of Natural Sciences, Japan, 7. Hokkaido University, Japan) 
10:47 AM - 11:02 AM

[Concurrent_29-03] 【Short Talk】Microfocus X-ray CT Analysis of Arabidopsis Petioles for Leaf Movement
*Maika Hayashi1, Tadashi Kunieda1, Ryo Kumaga1, Makito Haruta1, Yoshito Otake1, Hirokazu Kato1, Hiroyuki Shimada1, Taku Demura1 (1. NAIST, Japan, 2. Univ. of Yamanashi, Japan) 
11:03 AM - 11:15 AM

[Concurrent_29-04] 【Short Talk】Identification of LWD1-interacting proteins reveals novel regulators for Arabidopsis circadian clock
*Chun-Kai Huang1, Shu-Hsing Wu1 (1. Institute of Plant and Microbial Biology, Academia Sinica, Taiwan, ROC) 
11:16 AM - 11:28 AM

[Concurrent_29-05] 【Short Talk】ROS around the clock: Superoxide as a metabolic signal affecting circadian rhythms and growth
*Mike Haydon1 (1. University of Melbourne) 
11:29 AM - 11:41 AM

[Concurrent_29-06] 【Short Talk】Long-distance circadian coordination via a phloem-delivered mobile transcript
*András Székely1, Eleftheria Saplaoura1, Dorothee Staiger2, Friedrich Kragler3 (1. Max Planck Institute of Molecular Plant Physiology, 2. Bielefeld)
[Concurrent 30] Living on the edge: Adaptation of Arabidopsis extremophyte relatives to harsh environments

Extremophytes, plants that inhabit harsh environments, represent novel genetic resources underexplored for their adaptations to multiple environmental stresses. Specifically, extremophytes that are closely related to Arabidopsis are ideal models for comparative multi-level analyses. This session will focus on systems biology research of Arabidopsis extremophyte relatives from physiological through molecular, “omics”, evolutionary, and ecological studies to elucidate mechanisms allowing these intriguing plants to survive the most extreme environments on the planet.

Chair: Maheshi Dassanayake (Louisiana State University), Simon Barak (Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev)

Thu. Jun 8, 2023 2:00 PM - 3:30 PM  Makuhari Messe 2F(Room 2)

[Concurrent_30-01] A counterintuitive conundrum: Salt inhibition of halophytic seed germination
Yana Kazachkova¹, He Junyi¹, Alexandre Marques¹, Inna Khozin-Goldberg¹, Aaron Fait¹, *Simon Barak¹ (1. Ben-Gurion University of the Negev)
2:01 PM - 2:15 PM

[Concurrent_30-02] Role and Functional Differences of HIGH-AFFINITY K⁺ TRANSPORTER1 (HKT1)-Type Transporters in Plants under Salt Stress
*Dae-Jin Yun¹ (1. Konkuk University, Korea)
2:16 PM - 2:30 PM

[Concurrent_30-03] Exploring plant adaptations to aquatic environments: A study of Rorippa aquatica, an amphibious plant living at the edge of the water
*Seisuke Kimura¹,² (1. Faculty of Life Sciences, Kyoto Sangyo University, Japan, 2. Center for Plant Sciences, Kyoto Sangyo University, Japan)
2:31 PM - 2:45 PM

[Concurrent_30-04] Discovering how evolutionary innovations in growth regulation contribute to plant stress tolerance
*Prashanth Ramachandran¹, Andrea Ramirez¹, Evelyn Alferez¹, José Dinneny¹ (1. Stanford University)
2:46 PM - 3:00 PM

[Concurrent_30-05]【 Short Talk 】Enhanced Salt Tolerance by an Antarctic moss gene
*NoA Bae¹, Jun Hyuck Lee², Hyoungseok Lee², Byeong-ha Lee³ (1. Sogang university, Korea, 2. Korea Polar Research Institute, Korea)
3:01 PM - 3:10 PM

[Concurrent_30-06]【 Short Talk 】Altitudinal genetic differentiation in the leaf wax-mediated flowering bud protection against frost in an early-spring flowering herb, Arabidopsis halleri
*Hiroshi Kudoh¹, Genki Yumoto¹, Biva Aryal¹,², Mie N. Honjo¹, Yuko Sasaki-Sekimoto³, Wataru Shinhara⁴, Hiroyuki Ohta³ (1. Kyoto University, Japan, 2. Tribhuvan University, Nepal, 3. Tokyo Institute of Technology, Japan, 4.)
Kagawa University, Japan)

3:11 PM - 3:20 PM

[Concurrent_30-07]【 Short Talk】 Seasonal dynamics of epigenome in a natural population of *Arabidopsis halleri*

*Haruki Nishio*¹,², Tasuku Ito³, Mie N. Honjo², Tomoaki Muranaka⁴, Naoko Emura⁴, Hanako Shimizu², Hiroshi Kimura⁵, Taiko Kim To⁶,⁷, Tetsuji Kakutani⁶,⁷, Hiroshi Kudoh² (¹. Shiga Univ., Japan, ². Kyoto Univ., Japan, ³. Institute of Science and Technology Austria, ⁴. Kagoshima Univ., Japan, ⁵. Tokyo Institute of Technology, Japan, ⁶. Tokyo Univ., Japan, ⁷. NIG, Japan)

3:21 PM - 3:30 PM
Concurrent 31 | Short and long range signaling by RNA

Plant development, physiology and defense are controlled by several classes of mobile RNAs that move both cell-to-cell, through plasmodesmata, and into the phloem for systemic movement. Mobile mRNAs control meristem, leaf and tuber development, among other processes. Small RNA silencing signals and miRNAs also move systemically through plasmodesmata and the phloem, for example, to control nutrient homeostasis. The workshop will present new findings in this exciting emerging area of plant biology research.

Chair: Dave Jackson (Cold Spring Harbor Laboratory), Margaret Frank (Cornell University), Fritz Kragler (Max Planck Institute of Molecular Plant Physiology), Michitaka Notaguchi (Nagoya University)

Thu. Jun 8, 2023 2:00 PM - 3:30 PM  Makuhari Messe 2F(Room 3)

Click here for Zoom

[Concurrent_31-01] Deciphering signals from the noise in the mRNA mobileome using comparative Solanaceae genomics
*Margaret Hannah Frank1, Michelle Heeney1 (1. Cornell University)
2:02 PM - 2:16 PM

[Concurrent_31-02] An RNA exosome subunit promotes cell-to-cell trafficking of a homeobox mRNA via plasmodesmata
*Munenori Kitagawa1, Peipei Wu2, Rachappa Balkunde3, Patrick Cunniff2, David Jackson2 (1. Huazhong Agricultural University, China, 2. Cold Spring Harbor Laboratory, USA, 3. Bayer Crop Science LLC, USA)
2:17 PM - 2:31 PM

[Concurrent_31-03] Investigation of mRNAs that move long-distance
*Michitaka Notaguchi1,2 (1. Kyoto University, Japan, 2. Nagoya University, Japan)
2:32 PM - 2:46 PM

[Concurrent_31-04] Lost in translation? The long-distance travel of messenger RNAs
*Friedrich Kragler1 (1. Max-Planck-Institute of Molecular Plant Physiology)
2:47 PM - 3:01 PM

[Concurrent_31-05] 【 Short Talk 】 Arabidopsis cyclophilins direct intracellular transport of mobile mRNA via organelle hitchhiking
*Tien-Shin Yu1, Kai-Ren Luo1, Nien-Chen Huang1, Yu-Hsin Chang1,2, Yu-Wen Jan1 (1. Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan, 2. Institute of Plant Biology, National Taiwan University, Taipei, Taiwan)
3:02 PM - 3:10 PM

[Concurrent_31-06] 【 Short Talk 】 A cell wall-modifying enzyme controls symplastic movement of RNA silencing in aerial Arabidopsis tissues
*Florence Brioudes1, Florian Brioudes1, André Imboden1, Lazar Novaković2, Yoselin Benitez-Alfonso2, Olivier Voinnet1 (1. Swiss Federal Institute of Technology (ETH-Zürich), Switzerland, 2. Centre for Plant Science, School of Biology, University of Leeds, United Kingdom)
3:11 PM - 3:19 PM
【Short Talk】Dose-dependent long-distance movement of microRNA399 duplex regulates phosphate homeostasis in Arabidopsis
*Chih-Pin Chiang¹, Jia-Ling Li¹, Tzyy-Jen Chiou¹ (1. Agricultural Biotechnology Research Center, Academia Sinica, Taiwan)
3:20 PM - 3:28 PM
[Concurrent 32] Mechanisms and functions of endocytosis in plants
Plant endocytosis underlies a plethora of biological processes including nutrient uptake, signal transduction, development, polarity and tropic growth, immunity and responses to abiotic stress. However, the molecular machinery of endocytosis, its regulation and exact biological impacts are only beginning to be understood in plants. This session will cover the following topics (1) Molecular mechanisms of endocytosis in plants; (2) Endocytosis and plant polarity, development and nutrient uptake; (3) Endocytosis and plant-pathogen interactions; (4) Endocytosis and cell wall biogenesis; (5) Crosstalk between endocytosis, exocytosis and autophagy
Chair: Jenny Russinova (VIB-UGent Center for Plant Systems Biology), Takashi Ueda (NIBB)
Thu. Jun 8, 2023 2:00 PM - 3:30 PM  Makuhari Messe 2F(Room 4)
This session is sponsored by MEXT Grant-in-Aid for Scientific Research on Innovative Areas "Periodicity and Its Modulation in Plants".

[Concurrent_32-01] Mechanistic insight into plant endocytosis
*Daniel Van Damme1,2 (1. Ghent University Department of Plant Biotechnology and Bioinformatics, Ghent, Belgium, 2. VIB Center for Plant Systems Biology, Ghent, Belgium)
2:02 PM - 2:20 PM

[Concurrent_32-02]【 Short Talk】Mechanisms underlying polar membrane targeting of SOSEKI protein
*Andriy Volkov1, Dolf Weijers1 (1. Laboratory of Biochemistry, Wageningen University, Netherlands)
2:21 PM - 2:30 PM

[Concurrent_32-03] A novel reciprocal regulation mechanism for SH3P2 in crosstalk between endocytosis and autophagy
Kai-Ching Law1, Lanlan Feng1, Hongbo Li2, Caiji Gao2, *Xiaohong Zhuang1 (1. Centre for Cell & Developmental Biology and State Key Laboratory of Agrobiotechnology, School of Life Sciences, The Chinese University of Hong Kong, Hong Kong, China, 2. Guangdong Provincial Key Laboratory of Biotechnology for Plant Development, School of Life Sciences, South China Normal University, Guangzhou, China)
2:31 PM - 2:49 PM

[Concurrent_32-04]【 Short Talk】Brassinosteroid receptor BRI1 deubiquitination by UBP12/UBP13 fine-tunes plant growth
*Yongming Luo1,2,3, Junpei Takagi3, Lucas Alves Neubes Claus1,2, Chao Zhang5,6, Shigetaka Yasuda3, Yoko Hasegawa4, Junji Yamaguchi3, Libo Shan5,6, Eugenia Russinova1,2, Takeo Sato3 (1. Department of Plant Biotechnology and Bioinformatics, Ghent University, Belgium, 2. Center for Plant Systems Biology, VIB, Belgium, 3. Faculty of Science, Hokkaido University, Japan, 4. Graduate School of Science, Hokkaido University, Japan, 5. Department of Plant Pathology & Microbiology, Texas A&M University, USA, 6. Department of Biochemistry & Biophysics, Texas A&M University, USA)
2:50 PM - 2:59 PM
[Concurrent_32-05] Understanding the Evolution of Endosomal Sorting Mechanisms in Plants
Elizabeth Berryman¹, Ethan Weiner¹, Ariadna Gonzalez Solis¹, Felix Frey², Charles Hamilton², Andela Saric², *Marisa Otegui Otegui¹ (1. University of Wisconsin-Madison, USA, 2. Institute of Science and Technology, Austria)
3:00 PM - 3:18 PM

[Concurrent_32-06] 【Short Talk】Ca²⁺-induced removal of inner vegetative plasma membrane in Arabidopsis sperm cells
*Naoya Sugii¹, Daichi Susaki¹, Kazuo Ebine²,³, Tetsu Kinoshita¹, Daisuke Maruyama¹ (1. KIBR, Yokohama City Univ., 2. Div. Cellular Dynamics, NIBB, 3. Sch. Life Sci., SOKENDAI)
3:19 PM - 3:28 PM
Concurrent 33 | Concurrent 30-33 | MASC WS

[Concurrent 33] Front-line of plant genome engineering

Genome engineering is revolutionizing life sciences and plant biotechnology that seek to develop new technologies for the precise manipulation of genes and genomes in vivo. In addition to its use for advancing our understanding of basic biology, genome engineering has numerous applications for improving agronomically traits. In this session, we will present and discuss recent advances in nuclear and organelle genome engineering approaches, novel tools and delivery system.

Chair: Daisuke Miki (Center of Excellence for Molecular Plant Sciences, Chinese Academy of Sciences), Masaki Endo (National Agriculture and Food Research Organization (NARO)), Yuriko Osakabe (School of Life Science and Technology, Tokyo Institute of Technology)

Thu. Jun 8, 2023 2:00 PM - 3:30 PM Makuhari Messe 3F (Room 5)

[Concurrent_33-01] Genome engineering for plastid and mitochondria
*Shin-ichi Arimura¹, Chang Zhou¹, Issei Nakazato¹ (1. University of Tokyo)
2:01 PM - 2:18 PM

[Concurrent_33-02] Towards versatile plant gene editing systems: the wisker-based direct delivery method and small-size Cas protein
*Shigeo S. Sugano¹ (1. National Institute of Advanced Industrial Science and Technology (AIST))
2:19 PM - 2:36 PM

[Concurrent_33-03] CRISPR/Cas-meditated Chromosome and Tissue Engineering in Arabidopsis
*Holger Puchta¹ (1. Karlsruhe Institute of Technology)
2:37 PM - 2:54 PM

[Concurrent_33-04] Gene editing in Arabidopsis using RNA viruses
*Daniel Voytas¹ (1. University of Minnesota)
2:55 PM - 3:12 PM

[Concurrent_33-05] 【Short Talk】 Insights into tRNA-like structures (TLS) as motifs facilitating long-distance transport of mRNAs
*Eleftheria Saplaoura¹, Lei Yang¹, Frank Machin¹, Shuangfeng Wang¹, Friedrich Kragler¹ (1. Max Planck Institute for Molecular Plant Physiology)
3:13 PM - 3:21 PM

[Concurrent_33-06] 【Short Talk】 Single-cell targeted chemical or genetic boosting of genome editing in maize
*Ling Meng¹ (1. KWS Group)
3:22 PM - 3:29 PM
[Workshop 01] Integration of engineering, plant sciences, and agricultural research for translational research

This workshop focuses on the integration of engineering and biology for plant improvement. Networks of scientists that conduct basic and applied research are critical for advancing this field. The workshop aims to cover data acquisition, data integration, and data mining while promoting knowledge transfer and skill sharing. Biotech-enabled plant advances incorporating whole-plant structure and physiology will be essential to solve global agriculture problems.

Chair: Ross Sozzani (NCSU), Lucia Strader (Duke)
Mon. Jun 5, 2023 2:00 PM - 3:00 PM Makuhari Messe 2F (Room 3)

[Workshop_01-01] Integrating Engineering, Plant Sciences, and Agricultural Research for Translational Research: An Introduction to the Workshop and Case Study Presentation
*Ross Sozzani\(^1\) (1. North Carolina State University)
2:03 PM - 2:18 PM

[Workshop_01-02] Multi-scale modeling approaches for understanding plant and agronomic systems across biological scales
*Cranos Williams\(^1\) (1. North Carolina State University)
2:19 PM - 2:34 PM

[Workshop_01-03] The nexus of plant peptide-receptor modules and environmental adaptation
*Akie Shimotohno\(^1\) (1. Nagoya University, Japan)
2:35 PM - 2:50 PM
[Workshop 02] Coordinating and utilizing the rapidly growing collection of independently assembled Arabidopsis genomes

Advances in long-read sequencing technology have made it possible to complement the Arabidopsis reference genome with hundreds of independently assembled genomes. For these data to be useful to the community they need to be integrated with previously existing resources from the 1001 Genomes Project. We will discuss how this can be accomplished, and what we can learn from complete genome information on species-wide scale.

Chair: Magnus Nordborg (Gregor Mendel Institute, Austrian Academy of Sciences), Detlef Weigel (Max Planck Institute for Biology, Tübingen)
Mon. Jun 5, 2023 2:00 PM - 3:00 PM Makuhari Messe 2F(Room 4)

[Workshop_02-01] Rapid cycles of satellite homogenization and retrotransposon invasion drive Arabidopsis pancentromere evolution

*Ian Henderson1, Piotr Wlodzimierz1, Fernando Rabanal2, Robin Burns1, Matthew Naish1, Elias Primetis1, Alison Scott4, Terezie Mandakova5, Nicola Goringe1, Andrew Tock1, Max Collenberg2, Miriam Mielke2, Gautam Shirsekar2, Carlos Alonso-Blanco3, Fabrice Roux1, Martin Lysak2, Polina Novikova4, Magnus Nordborg6, Alexandros Bousios3, Detlef Weigel2 (1. Department of Plant Sciences, University of Cambridge, 2. Department of Molecular Biology, Max Planck Institute for Biology, Tübingen, Germany, 3. School of Life Sciences, University of Sussex, Brighton, United Kingdom, 4. Department of Chromosome Biology, Max Planck Institute for Plant Breeding Research, Cologne, Germany, 5. Central European Institute of Technology, Masaryk University, Brno 625 00, Czech Republic, 6. Gregor Mendel Institute, Vienna, Austrian Academy of Sciences, Vienna BioCenter, Dr. Bohr-Gasse 3, 1030, Vienna, Austria, 7. LIPME, INRAE, CNRS, Université de Toulouse, Castanet-Tolosan, France, 8. Departamento de Genética Molecular de Plantas, Centro Nacional de Biotecnología, Consejo Superior de Investigaciones Científicas, Madrid, Spain)
2:01 PM - 2:10 PM

[Workshop_02-02] The pan-genome and local adaptation of Arabidopsis thaliana

*Jianquan Liu1,2, Minghui Kang1,2, Haolin Wu3, Wenyu Liu1, Mingjia Zhu1, Yu Han2, Wei Liu4, Chunlin Chen2, Kangqun Yin2, Yusen Zhao2, Zhen Yan2, Huanhuan Liu2, Shangling Lou1,2, Yanjun Zan3 (1. State Key Laboratory of Grassland Agro-ecosystem, College of Ecology, Lanzhou University, Lanzhou, 730000, China, 2. Key Laboratory of Bio-resource and Eco-environment of Ministry of Education, College of Life Sciences, Sichuan University, Chengdu, 610065, China, 3. Key Laboratory of Tobacco Improvement and Biotechnology, Tobacco Research Institute, Chinese Academy of Agricultural Sciences, Qingdao, 266000, China)
2:11 PM - 2:20 PM

[Workshop_02-03] Assembling and Annotating Arabidopsis Genomes to Model Protein Abundance

*Richard Mott1, Mark Bailey2, Ziming Zhong3, Yong-In Kim3, Bryony Parker2,
[Workshop_02-04] The Actual Mobilome of Arabidopsis thaliana  
*Anna Igolkina1, Magnus Nordborg1 (1. GMI - Gregor Mendel Institute of Molecular Plant Biology)  
2:21 PM - 2:30 PM

[Workshop_02-05] Benchmarking graph building pipeline on plant genome assemblies  
*Zhigui Bao1,2, Sebastian Vorbrugg1, Sanwen Huang2, Detlef Weigel1 (1. Max Planck Institute for Biology Tübingen, 2. Agricultural Genomics Institute at Shenzhen, Chinese Academy of Agricultural Sciences)  
2:31 PM - 2:40 PM

[Workshop_02-06] Challenges of annotating complex genes in the Arabidopsis long read genome collection  
*Luisa Teasdale1, Gautam Shirsekar1, Max Collenberg1, Kevin Murray1, Adrian Contreras-Garrido1, Leon Van Ess1, Justina Juettner1, Christa Lanz1, Joffrey Fitz1, Hajk-Georg Drost1, Detlef Weigel1 (1. Max Planck Institute - Department of Biology)  
2:51 PM - 3:00 PM
[Workshop 03] Systems biology of plant-microbes interactions
A systems perspective on mechanisms of pathogen infection and plants’ responses to such biotic stresses can lead to significant advances in plant biology and agriculture in general. This session will highlight exciting new discoveries being made in plant-pathogen interactions by leveraging functional genomics and systems biology approaches in the model system Arabidopsis and agronomically important crop plants. We will seek topics pertinent to plant receptor networks to perceive diverse pathogens, transcriptional gene regulatory networks at different scales (e.g. tissue/single cell), mechanisms of pathogen manipulation of host plants, and systemic outcomes of infection.
Chair: Shahid Mukhtar (University of Alabama at Birmingham)
Mon. Jun 5, 2023 2:00 PM - 3:00 PM  Makuhari Messe 3F(Room 5)

[Workshop_03-01] Spatial and systems biology of plant-microbe interactions
*Shahid M Mukhtar¹ (1. University of Alabama at Birmingham)
2:02 PM - 2:15 PM

[Workshop_03-02] MAMP and DAMP signalling contributes resistance to Fusarium graminearum in Arabidopsis
*Gopal Subramaniam¹,², Maryam Nourimand¹, Nimrat Manes¹, Elizabeth Brauer¹
(1. Agriculture and Agri-Food Canada, Canada, 2. Carleton University, Canada)
2:16 PM - 2:29 PM

[Workshop_03-03] Attraction of Herbivores for Survival from Virulent Pathogens in Arabidopsis
*Kazuha Mori¹, Mika Nomoto¹,², Liu Zhang³, Hiroshi Mori⁴, Shinya Ariyasu⁴, Susumu Uehara¹,², Osami Shoji⁴, Akiko Maruyama³, Yasuomi Tada¹,²
(1. Department of Biological Science, Graduate School of Science, Nagoya University, Japan, 2. Center for Gene Research, Nagoya University, Japan, 3. Department of Bioscience and Biotechnology Faculty of Agriculture, Kyushu University, Japan, 4. Department of Chemistry, Graduate School of Science, Nagoya University, Japan)
2:30 PM - 2:43 PM

[Workshop_03-04] Functional or NAT? RNA control of receptor expression
Hemal Bhasin¹, Hasna Khan¹, *Adam Mott¹ (1. University of Toronto - Scarborough)
2:44 PM - 2:57 PM

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[Workshop 04] Molecular dialogues in reproductive development
The workshop will cover different aspects of molecular dialogues controlling reproduction in plants.
Chair: Julia Santiago (University of Lausanne), Tetsuya Higashiyama (University of Tokyo, Japan)
Mon. Jun 5, 2023 2:00 PM - 3:00 PM  Makuhari Messe 3F(Room 6)
This session is sponsored by MEXT Grants-in-Aid for Scientific Research (KAKENHI), Innovative Plant Reproductive Systems and JSPS Grants-in-Aid for Scientific Research (KAKENHI), International Leading Research "Key-Molecule-Network in Plant Reproduction".

[Workshop_04-01] Cell wall recognition and patterning by a sensor complex coordinates cell wall architecture and drives pollen tube expansion.
*Julia Santiago¹, Steven Moussu¹, Hyung Kyung Lee¹, Kalina Haas², Caroline Broyart¹, Ursina Rathgeb¹, Estelle Bonnin³, Niko Geldner¹, Bernard Catala³, Herman Hofte² (1. University of Lausanne, 2. Institut Jean-Pierre Bourgin (IJPB), 3. INRAE, Nantes)
2:01 PM - 2:19 PM

[Workshop_04-02] Turning up the volume on intercellular communication during pollen tube reception.
*Sharon Kessler¹, Sienna Ogawa¹, Yan Ju¹ (1. Purdue University)
2:20 PM - 2:38 PM

[Workshop_04-03] Multiple roles of aspartic endopeptidases ECS1 and ECS2 in fertilization
*Meng-xiang Sun¹, Xuecheng Zhang¹, Ce Shi³, Tianhe Cheng¹, Wei Wang¹, Xiaorong Huang¹ (1. Wuhan University, China)
2:39 PM - 2:57 PM
Workshop | Workshop | Workshop 05

[Workshop 05] Science as stories: From data to presentations. The untold story of your research

The aim of the workshop is to learn how to prepare scientific presentations that convey a clear message and maximize the output of your research. Our framework combines storytelling with how the brain process oral information along with images. We will dissect the anatomy of a presentation and discuss what makes it memorable.

Chair: Belén Moro (Centre for Research in Agricultural Genomics (CRAG))
Tue. Jun 6, 2023 1:15 PM - 2:15 PM Makuhari Messe 2F(Room 1)

[Workshop_05] Science as Stories: From data to presentations. The untold story of your research.

*Belén Moro*¹ (1. Centre for Research in Agricultural Genomics (CRAG))
1:15 PM - 2:15 PM
[Workshop 06] Single cell technologies and its diversity of applications

The fast development of single cell technology is revolutionizing the field of omics study. In the past few years, plant biologists have successfully adopted single cell technology and generated multiple plant cell atlases. These datasets allow us to capture the transcriptomic diversity in different cell types and help us understand cellular heterogeneity, as well as the basis of cell identity and cell fate transitions. For this session, we would like to focus on the most recent advances in the application of single cell technologies.

Chair: Ao Liu (HHMI-Stanford University), Bruno Guillotin (NYU-Center of Genomics and Systems Biology)

Thu. Jun 8, 2023 9:00 AM - 10:00 AM  Makuhari Messe 2F(Room 1)

[Workshop_06-01] Origin and diversification of the cell types of the flower
*Luke Nikolov1 (1. Indiana University)
9:02 AM - 9:15 AM

[Workshop_06-02] Constructing an Arabidopsis Embryonic Expression Atlas using snRNA-seq
*Ping Kao1 (1. Graduate School of Life Sciences, Tohoku University, Japan)
9:16 AM - 9:29 AM

[Workshop_06-03] Cell Cycle Dynamics During Plant Cell Reprogramming
*Laura Rose Lee1, Kenneth Birnbaum1 (1. New York University)
9:30 AM - 9:43 AM

[Workshop_06-04] Time-resolved single-cell and spatial gene regulatory atlas of plants under pathogen attack
*Tatsuya Nobori1,2, Alexander Monell3, Travis A Lee1,2, Joseph R Ecker1,2 (1. Salk Institute, 2. HHMI, 3. UCSD)
9:44 AM - 9:57 AM
Workshop 07 - Watching and quantifying biochemical processes in intact plants

The understanding of signaling and metabolic processes in multicellular organisms requires knowledge of the spatial dynamics of small molecules and the activities of enzymes, transporters and other proteins in vivo, as well as biophysical parameters inside cells and across tissues. Genetically encoded sensors are engineered fluorescent proteins that have been developed for a wide range of small molecules, such as ions and metabolites, or to report biophysical processes, such as transmembrane voltage or tension.

Chair: Cheng-Hsun Ho (ABRC, Academia Sinica)

Thu. Jun 8, 2023 9:00 AM - 10:00 AM  Makuhari Messe 2F(Room 2)

This session is sponsored by Agricultural Biotechnology Research Center, Academia Sinica.

[Workshop_07-01] Live show of nitrate dynamics in root nd development of Arabidopsis
*Ho Cheng-Hsun (1. ABRC, Academia Sinica, Taiwan)
9:02 AM - 9:17 AM

[Workshop_07-02] Towards Soil-on-a-Chip — structured micro-environments for root science
Christian-Frederic Kaiser, Marjorie Guichard, Milan Župunski, Mayuri Sadoine, Guido Grossmann (1. Heinrich-Heine-University Duesseldorf, Institute of Cell and Interaction Biology, Germany, 2. Cluster of Excellence in Plant Sciences CEPLAS, Germany)
9:18 AM - 9:38 AM

[Workshop_07-03] CO₂ Sensing and Signaling Components are Required for Stomatal Responses to Elevated Temperatures
*Nattiwong Pankasem, Julian I. Schroeder (1. Cell and Developmental Biology Department, School of Biological Sciences, University of California San Diego, La Jolla, CA 92093-0116, USA.)
9:39 AM - 9:59 AM
[Workshop 08] Spatiotemporal dynamics of protein and protein complexes in the cell

Recent advances in biochemistry and biophysics, plant molecular and cell biology revealed that the differential fate of proteins in cell space including transport, modification, and even aggregation leads to contrasting cellular output in abiotic and biotic defense responses and plant development. Hence, the need for the detection and visualization of protein complex dynamics in living cells has become the technology of utmost importance. This workshop aims to showcase cutting-edge technologies and findings in spatiotemporal dynamics of cellular proteins and protein complexes.

Chair: Hisashi Koiwa (Texas A&M University), Libo Shan (Texas A&M University), Juan Dong (Rutgers University)

Thu. Jun 8, 2023 9:00 AM - 9:58 AM Makuhari Messe 2F(Room 3)

[Workshop_08-01] Tandem fluorescent timer in Plants: A Tool for Acquiring Spatiotemporal Information about Proteins
*Yukihiro Nagashima1, Jun Liu2, Xue Ding3,4, Juan Dong3,4, Libo Shan2,5, Hisashi Koiwa1,5 (1. Vegetable and Fruit Improvement Center and Department of Horticultural Sciences, Texas A&M University, 2. Department of Biochemistry & Biophysics, Texas A&M University, 3. Waksman Institute of Microbiology, Rutgers, The State University of New Jersey, 4. Department of Plant Biology, Rutgers, The State University of New Jersey, 5. Molecular and Environmental Plant Sciences, Texas A&M University)
9:02 AM - 9:15 AM

[Workshop_08-02] Ironing out the issues: protein dynamics in response to iron deficiency
*Terri A. Long1 (1. North Carolina State University)
9:16 AM - 9:29 AM

[Workshop_08-03] Plant plasma membrane nano-organization and cell polarization
*Xue Pan1 (1. Department of Biological Sciences, University of Toronto Scarborough, Toronto, Canada)
9:30 AM - 9:43 AM

[Workshop_08-04] Unraveling the molecular and cellular mechanisms underlying a MLR-NLR complex-regulated autoimmunity
*Fausto Andres Ortiz Morea1,2, Jun Liu1, Libo Shan1, Ping He1 (1. Department of Biochemistry & Biophysics, Texas A&M University, 2. Universidad de la Amazonia)
9:44 AM - 9:57 AM
Workshop 09 | Arabidopsis small RNA biology
This workshop will focus on newly discovered roles of small RNAs, highlighting two hot areas of research in the field: 1) The function of small RNAs that are generated only in very specific reproductive cells, and 2) The role of small RNA warfare during the Arabidopsis-pathogen/pest interaction.
Chair: Keith Slotkin (Donald Danforth Plant Science Center & University of Missouri)
Thu, Jun 8, 2023 9:00 AM - 10:00 AM, Makuhari Messe 2F (Room 4)

[Workshop_09-01] Mating system influences the requirement for RdDM during reproduction in Brassicaceae
Kelly A Dew-Budd¹, Hiu-Tung Chow¹, Timmy Kendall¹, Mark A Beilstein¹, *Rebecca A Mosher¹ (1. The School of Plant Sciences, The University of Arizona, Tucson, AZ 85721, USA)
9:01 AM - 9:12 AM

[Workshop_09-02] Interspecies regulatory small RNAs in plant-parasite interactions
Allison Zvarick², Elizabeth Brandt², Zoe Hester², *Saima Shahid² (1. The Pennsylvania State University, USA, 2. Oklahoma State University, USA)
9:13 AM - 9:24 AM

[Workshop_09-03] Translation-dependent epigenetic silencing of transposon
*Jungnam Cho¹,² (1. CAS Center for Excellence in Molecular Plant Sciences, China, 2. CAS-JIC Centre of Excellence for Plant and Microbial Science, China)
9:25 AM - 9:36 AM

[Workshop_09-04] Reproductive barriers established by epigenetic mechanisms in the endosperm
*Claudia Köhler¹,², Katarzyna Dziasek¹,², Juan Santos-González¹,² (1. Max Planck Institute of Molecular Plant Physiology, 2. Swedish University of Agricultural Sciences)
9:37 AM - 9:48 AM

[Workshop_09-05] Regulating Pol-IV to generate epigenetic diversity
*Julie Ann Law¹ (1. Salk Institute for Biological Studies)
9:49 AM - 10:00 AM
Workshop | Workshop | Workshop 06-10

[Workshop 10] Arabidopsis bioinformatics
This workshop will feature updates and introductions of online resources that are part of the Arabidopsis scientist’s modern research toolkit, just like laboratory equipment, enzymes, and buffers. Essential resources like TAIR and BAR will be revisited in addition to highlighting resources created and maintained by community members in the Asia Pacific region that are of global importance.
Chair: Nicholas Provart (University of Toronto), Tanya Berardini (Phoenix Bioinformatics)
Thu. Jun 8, 2023 9:00 AM - 10:00 AM  Makuhari Messe 3F(Room 5)
This session is sponsored by RIKEN CSRS.

[Workshop_10-01] Updates to the Bio-Analytic Resource
*Nicholas J Provart1,2 (1. University of Toronto, 2. Centre for the Analysis of Genome Evolution and Function)
9:02 AM - 9:14 AM

[Workshop_10-02] To integrate or not to integrate: how to collaborate with conversational AI programs
*Masanori Arita1 (1. RIKEN Center for Sustainable Resource Science)
9:15 AM - 9:27 AM

[Workshop_10-03] Complete sequence assembly of Arabidopsis ribosomal DNA (rDNA) arrays provides insight into rDNA variation, epigenetic regulation and large scale recombination
*Ramya Enganti1,2, Dalen Fultz1,2, Anastasia McKinlay1,2, Craig Pikaard1,2 (1. Howard Hughes Medical Institute, 2. Indiana University)
9:28 AM - 9:40 AM

[Workshop_10-04] The 2023 TAIR update: From basics to the progress with the community-developed v12 of the genome
*Tanya Z Berardini1, Leonore Reiser1, Shabari Subramaniam1, Erica Bakker1, Xingguo Chen1, Swapnil Sawant1, Trilok Prithvi1 (1. The Arabidopsis Information Resource/Phoenix Bioinformatics)
9:41 AM - 9:53 AM
[Workshop 11] Diversity and inclusion for excellence in science

Research and training using Arabidopsis has been vital to the success of plant science due, in large part, to sustained global collaborations in the plant science community. While recent studies indicate clear benefits of diversity and inclusion, progress in these areas is slow and has been driven by a few countries. This moderated workshop will feature a panel of plant biology faculty that will provide diverse perspectives on the challenges of working within academia, and the benefits of creating and sustaining a diverse community to achieving excellence.

Chair: Joanna Friesner (North American Arabidopsis Steering Committee), Yoselin Benitez-Alfonso (Centre for Plant Sciences. University of Leeds), Kanako Bessho-Uehara (Tohoku University), Keith Slotkin (Donald Danforth Plant Science Center & University of Missouri)

Thu. Jun 8, 2023 12:45 PM - 1:45 PM  Makuhari Messe 2F(Room 1)

[Workshop_11] Diversity and Inclusion for Excellence in Science

*Joanna Friesner¹, Kanako Bessho-Uehara³, Yoselin Benitez-Alfonso², R. Keith Slotkin¹⁴⁵, José Dinneny⁶, Terri Long⁷, Hironaka Tsukagoshi⁸, Gabriela Auge⁹, Keiko Torii¹⁰¹¹ (1. North American Arabidopsis Steering Committee (NAASC), USA, 2. Leeds University, UK, 3. Tohoku University, Japan, 4. Donald Danforth Plant Science Center, USA, 5. University of Missouri, USA, 6. Stanford University, USA, 7. North Carolina State University, USA, 8. Meijo University, Japan, 9. Consejo Nacional de Investigaciones Científicas y Tecnológicas (CONICET), 10. HHMI/University of Texas, Austin, USA, 11. Nagoya University, Japan)

12:45 PM - 1:45 PM
[Workshop 12] MASC: Arabidopsis for SDGs/4th Decadal Vision
The theme of this year’s ICAR is Arabidopsis for Sustainable Development Goals. Participants will discuss how research in Arabidopsis can be leveraged to help achieve some of the United Nation’s 17 SDGs, especially in the area of zero hunger, climate action, and life on land. In addition, participants will discuss how Arabidopsis research can help address important plant science questions (such as those posed in Armstrong et al., 2023; doi. 10.1111/nph.18771) and the kinds of international projects that might be considered as part of a 4th decadal vision for Arabidopsis research, following on from successful collaborations that have arisen from 3 decades of coordinated efforts.
Chair: Nicholas Provart (University of Toronto, Canada), Masatomo Kobayashi (RIKEN BRC, Japan)
Thu. Jun 8, 2023 2:00 PM - 3:30 PM  Makuhari Messe 2F(Room 1)
This session is sponsored by RIKEN BRC and RIKEN CSRS.

[Workshop_12] MASC: Arabidopsis for SDGs/4th Decadal Vision
2:00 PM - 3:00 PM
Gabriela Auge¹, Mentewab Ayalew², Sureshkumar Balasubramanian³, Dirk Inze⁴, Kazuki Saito⁵
(1. CONICET, Univ. of Buenos Aires, Argentina, 2. Spelman College, USA, 3. Monash Univ, Australia, 4. VIB, Belgium, 5. RIKEN CSRS, Japan)
[PO-001] Overexpression of soybean Class II acyl-CoA-binding proteins unveils an oxylipin signaling mechanism in salt-stressed Arabidopsis
*Terry Shiu-Cheung Lung¹, Sze Han Lai¹, Haiyang Wang¹, Mee-Len Chye¹ (1. School of Biological Sciences, The University of Hong Kong, Pokfulam, Hong Kong, China)

[PO-003] Chenopodium quinoa as a model plant to study salt stress
*Lucia Acosta-Gamboa¹, Kirk Czymmek², Anastasiya Klebanovych², Samuel Kenney¹, Jared Gordon¹, Noah Fahlgren¹, Jorge Gutierrez³, Haley Schuhl¹, Malia Gehan¹ (1. Donald Danforth Plant Science Center, 2. Advanced Bioimaging Laboratory, Donald Danforth Plant Science Center)

[PO-005] Overexpression of eelgrass Rare Cold Inducible 2 (RCI2) encoding a small-membrane protein maintains chlorophyll content in Arabidopsis subjected to high salinity and dehydration
Masahiro Senuma¹, Shohei Dobashi¹, Yukiko Bando¹, Sukmin Ko², *Hajime Shiota¹ (1. Yokohama City Univ., Japan, 2. Genecell Biotech Inc., Korea)

[PO-007] Physiological and molecular alterations in Schrenkiella parvula under mild salt stress
*Keriman Şekerci¹, Nahoko Higashitani¹, Rengin Ozgur¹,², Baris Uzilday¹,², Atsushi Higashitani¹, Ismail Turkan² (1. Tohoku University, Graduate School of Life Sciences, 2. Ege University, Faculty of Science, Department of Biology)

[PO-009] A Ca²⁺ sensor switch for SOS1 Na⁺/H⁺ antiporter activation confers tolerance to elevated salt stress in Arabidopsis
*Joerg Kudla¹, Gefeng He³, Leonie Steinhorst¹, Lena K. Moore³, Yibo Cao², Zaida André³, Paula Ragel³, Caifu Jiang², Yan Guo², Francisco J. Quintero³ (1. Institut für Biologie und Biotechnologie der Pflanzen, Westfälische Wilhelms-Universität Münster, 48149 Münster, Germany, 2. State Key Laboratory of Plant Physiology and Biochemistry (SKLPPB), College of Biological Sciences, China Agricultural University, Beijing 100193, China, 3. Instituto de Biología Vegetal y Fotosíntesis, Consejo Superior de Investigaciones Científicas, 41092 Seville, Spain)

[PO-011] Analyses of salt susceptibility of Arabidopsis inositol transporter (INT) loss-of-function mutants
*Li See Ng¹, Cheng-Hsun Li¹, Hungchen Emilie Yen¹ (1. National Chung Hsing University, Taiwan)

[PO-013] Identification of proteins interacting with CBL4 using a proximity biotinylation enzyme, AirID
*Akira Nozawa¹, Ryosuke Hori¹, Souta Shinohara¹, Kohei Nishino², Hidetaka Kosako², Tatsuya Sawasaki¹ (1. Ehime University, 2. Tokushima University)

[PO-015] Defects in Arabidopsis N-Acetylglucosamine-1-P Uridylyltransferase Expression Impairs Protein N-glycosylation and Induces ABA-Mediated Salt Sensitivity
*Ya-Huei Chen¹,², Hwei-Ling Shen¹, Wan-Hsing Cheng¹,² (1. Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan, 2. National Defense Medical Center, Graduate
[PO-017] From root to leaf: The effects of high soil salinity on the defense mechanisms of the phyllosphere
*Paula Collado Cordon¹, Sheng-Yang He¹,² (1. Duke University, 2. Howard Hughes Medical Institute)

[PO-019] Pectin lyase 1 (PEL1) and Arabidopsis thaliana Ring Zinc Finger 1 (AtRZF1) coordinately regulate osmotic stress response to control vascular development
*CHORONG PARK¹, Beom Ryong Kang², Cheol Soo Kim¹ (1. Department of Applied Biology, Chonnam National University, Gwangju 61186, Republic of Korea, 2. Institute of Environmentally-Friendly Agriculture, Chonnam National University, Gwangju 61186, Republic of Korea)

[PO-021] Meta-Analysis of Public RNA Sequencing Data of Multiple Abiotic Stresses in Arabidopsis thaliana Provides New Insights into both ABA-Dependent and ABA-Independent Stress Responsive Genes
*Mitsuo Shintani¹, Keita Tamura¹, Hidemasa Bono¹ (1. Hiroshima University, Japan)

[PO-023] An NPH3 domain protein mediates safe proline accumulation and drought resistance via function in intra-cellular trafficking.
*Neha Upadhyay Tiwari¹, Xin Jie Huang¹, Shashikant Singh, Yi Chen Lee, Paul E Verslues¹ (1. IPMB, Academia Sinica, Taipei, Taiwan)

[PO-025] Identification of upstream kinases that regulate SnRK2 kinases in Arabidopsis
*Fumiyuki Soma¹,², Fuminori Takahashi³, Satoshi Kidokoro², Haruka Kameoka², Takamasa Suzuki⁴, Yusaku Uga¹, Kazuo Shinozaki³, Kazuko Yamaguchi-Shinozaki²,⁵ (1. Institute of Crop Science, National Agriculture and Food Research Organization, 2. Graduate School of Agricultural and Life Sciences, University of Tokyo, 3. Gene Discovery Research Group, RIKEN Center for Sustainable Resource Science, 4. College of Bioscience and Biotechnology, Chubu University, 5. Research Institute for Agricultural and Life Sciences, Tokyo University of Agriculture)

*Yoshiaki Kamiyama¹,², Sotaro Katagiri¹, Kota Yamashita¹, Yangdan Li¹, Taishi Umezawa¹ (1. Tokyo Univ. Agric. Tech., Japan, 2. Kyoto Univ., Japan)

[PO-029] Identification of new targets for improving abiotic stress tolerance in plants
*María del Rosario González Bermúdez¹, Irene García-Maquilón¹, Jorge Lozano-Juste¹ (1. Instituto de Biologia Molecular y Celular de Plantas (IBMCP-UPV-CSIC), Universitat Politècnica de València (UPV), Consejo Superior de Investigaciones Científicas (CSIC), 46022, Spain.)

[PO-031] Diverse transcriptional regulation in response to drought in Brachypodium distachyon ecotypes
*Anzu Minami¹, Shimizu Minami¹, Asaka Kanatani¹, Miki Fujita⁴, Jun-Sik Kim¹, Keiichi Mochida¹,²,³ (1. RIKEN Center for Sustainable Resource Science, Japan, 2. Kihara Institute for Biological Research, Yokohama City University, Japan, 3. School of Information and Data
[PO-033] 1-Butanol treatment enhances drought stress tolerance in Arabidopsis thaliana
*Quynh Thi Nhu Do1,4, Daisuke Todaka1, Maho Tanaka1,2, Satoshi Takahashi1,2, Junko Ishida1,2, Hoi Xuan Pham4, Motoaki Seki1,2,3 (1. Plant Genomic Network Research Team, RIKEN Center for Sustainable Resource Science, Japan, 2. Plant Epigenome Regulation Laboratory, RIKEN Cluster for Pioneering Research, Japan, 3. Kihara Institute for Biological Research, Yokohama City University, Japan, 4. Agricultural Genetics Institute, Vietnam Academy of Agricultural Science, Vietnam)

[PO-035] Using Thermal Imaging to Assess the Water Status of Rice
*Yan-Ci Zhang1,3, Ya-Ling Hou2, Chin-Ying Yang1,3 (1. Department of Agronomy, National Chung Hsing University, Taiwan, 2. Crop Science Division, Taiwan Agricultural Research Institute, Council of Agriculture, Taiwan, 3. Smart Sustainable New Agriculture Research Center (SMARTer), National Chung Hsing University, Taiwan)

[PO-037] Phenome analysis focusing on small open reading frames found an Arabidopsis-specific emerged de novo gene enhancing drought tolerance.
*Tomoyuki Takeda1, Kentaro Nakaminami2, You-wang Kim1, Kazumasa Shirai3, Mieko Higuchi-Takeuchi2, Minami Shimizu2, Takayuki Kondo1, Masanori Okamoto2, Takeshi Yoshizumi2, Ranko Nishi2, Motoaki Seki1, Kazuo Shinozaki2, Minami Matsui2, Kousuke Hanada1 (1. Kyushu Institute of Technology, Japan, 2. RIKEN Center for Sustainable Resource Science, Japan)

[PO-039] SnRK2 mediates SIZ1 phosphorylation and global SUMOylation increment upon osmotic stresses
*sang tian1, Wang Peng cheng1 (1. SUSTC, China)

[PO-041] Response of Arabidopsis thaliana to flooding with physical flow

[PO-043] Drought Recovery Induced Immunity Confers Pathogen Resistance
*Natanella Illouz-Eliaz1, Kathryn Lande1, Jingting Yu1, Joseph R Ecker1 (1. Salk Institute)
[PO-002] Enhanced Salt Tolerance by an Antarctic moss gene  
*NoA Bae¹, Jun Hyuck Lee², Hyoungseok Lee², Byeong-ha Lee¹ (1. Sogang university, Korea, 2. Korea Polar Research Institute, Korea)  

[PO-004] Investigation of heterosis in the salinity tolerance of intraspecific hybrid in Arabidopsis thaliana  
*Yoshiki Kamiya¹, Hasan Mehraj¹, Ryo Fujimoto¹ (1. Kobe University, Japan)  

[PO-006] Arabidopsis APYs interact with PATL4 and co-regulate stress response in plants  
*Jia-Hong Tang¹, Mei-Chun Cheng¹ (1. National Taiwan University, Taiwan)  

[PO-008] A Comparative Study of Adaptive Stress Tolerance in the Brassicaceae Family  
*Andrea Ramirez Ramirez¹, Prashanth Ramachandran¹, José Dinneny¹ (1. Stanford University)  

[PO-010] Dissecting genetic mechanism of natural variation in salt tolerance among Arabidopsis thaliana  
*Takuma Kajino¹, Kaori Uchiyama¹, Hirotaka Ariga², Tomoaki Horie³, Akihisa Shinozawa¹, Izumi Yotsui¹, Yoichi Sakata¹, Teruaki Taji¹ (1. Dept. of Bioscience, Tokyo Univ. of Agriculture, 2. Res. Cent. of Gen. Res., NARO, 3. Div. of Applied Bioscience, Fac. of Textile Science and Technology, Shinshu Univ.)  

[PO-012] Soybean acyl-CoA-binding proteins modulate the activity of their protein interactor lipoxygenase in transgenic Arabidopsis during salinity stress  
*Mee-Len Chye¹, Shiu-Cheung Lung¹ (1. University of Hong Kong)  

[PO-014] Phosphorylation of Arabidopsis Glycine-Rich RNA-Binding Protein 8 by ABA-non-activated SnRK2s triggers its localization to the stress granules upon salinity stress by promoting its liquid-liquid phase separation  
*Adrian Mateusz Kasztelan¹, Justyna Maszkowska¹, Dominika Cieślak¹, Karolina Kasztelan¹, Anna Anielska-Mazur¹, Lidia Polkowska-Kowalczyk¹, Christiane Nöh², Alexander Steffen², Jarosław Poznański¹, Emilio Gutierrez-Beltran², Michał Dadlez¹, Dorothee Staiger², Olga Szatelman¹, Grażyna Dobrowolska¹ (1. Institute of Biochemistry and Biophysics, Polish Academy of Sciences, Poland, 2. RNA Biology and Molecular Physiology, Faculty of Biology, Bielefeld University, Germany, 3. Departamento de Bioquimica Vegetal y Biologia Molecular, Facultad de Biologia, Universidad de Sevilla, Spain)  

[PO-016] HAT22/ABIG1 represses the transcription of AtERF71/HRE2 through a HD-Zip II-binding-like cis-regulatory element in Arabidopsis  
*Md Bayzid¹, Hye-Yeon Seok⁵, Huong Thi Tran¹, Sun-Young Lee³, Mairaj Bibi¹, Swarnali Sarker¹, Yong-Hwan Moon¹ (1. Pusan National University, Republic of Korea)  

[PO-018] proline content alternative 8 (pca8) acts as a suppressor mutant of atrzf1 (Arabidopsis thaliana ring zinc finger 1) to regulate dehydration and abscisic acid responses in Arabidopsis  

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*Ying Gong¹, Ji-Hee Min², Cheol Soo Kim¹ (1. Department of Applied Biology, Chonnam National University, Gwangju 61186, Korea, 2. Department of Biochemistry and Biophysics, Texas A&M University, 300 Olsen Blvd, College Station, Texas 77843-2128, USA)

[PO-020] Functional characterization of *Glycine max* RING Zinc Finger-Like 1 (GmRZFL1) and *Solanum lycopersicum* RING Zinc Finger-Like 1 (SlRZFL1) regulates dehydration sensitivity in *Arabidopsis thaliana*

Ying Gong¹, Van Hien La², *Cheol Soo Kim¹ (1. Department of Applied Biology, Chonnam National University, Gwangju 61186, Republic of Korea, 2. Institute of Life Sciences, Thai Nguyen University of Agriculture and Forestry, Thai Nguyen 24119, Vietnam)

[PO-022] Analysis of the transcription factor SGR5 that functions in the drought resistance mechanism

*Moeca Arai¹, Keiko Kigoshi¹, Maki Kawai¹, Yoshimi Nakano¹, Nobutaka Mitsuda¹, Sumire Fujiwara¹ (1. Bioproduction Research Institute, AIST, 2. University of Tsukuba, Japan)

[PO-024] Improving plant productivity and drought tolerance by regulating the NAD salvage pathway in *Arabidopsis*

*Zarnab Ahmad¹,²,³, Khurram Bashir²,³, Akihiro Matsui¹,⁴, Maho Tanaka¹,⁴, Ryosuke Sasaki⁵, Akira Oikawa⁶, Masami Yokota Hirai⁵,⁷,⁸, Chaomurilege Chaomurilege⁹, Yanhui Zu⁹, Maki Kawai Yamada⁹, Bushra Rashid¹⁰, Tayyab Husnain¹⁰, Motoaki Seki¹,²,¹¹ (1. Plant Genomic Network Research Team, RIKEN Center for Sustainable Resource Science (CSRS), Yokohama 230-0045, Japan, 2. Laboratory of Plant Biotechnology, Department of Biology, Syed Babar Ali School of Science and Engineering, Lahore University of Management Sciences (LUMS), Lahore, Pakistan, 3. Fred Hutchinson Cancer Center, 1100 Fairview Avenue North, Seattle, 98109-1024, Washington, United States, 4. Plant Epigenome Regulation Laboratory, RIKEN Cluster for Pioneering Research, Wako, Saitama, 351-0198, Japan, 5. Mass Spectrometry and Microscopy Unit, RIKEN Center for Sustainable Resource Science (CSRS), Yokohama 230-0045, Japan, 6. Faculty of Agriculture, Yamagata University, Tsuruoka 997-8555, Japan, 7. Metabolic Systems Research Team, RIKEN Center for Sustainable Resource Science (CSRS), Yokohama 230-0045, Japan, 8. Graduate School of Bioagricultural Sciences, Nagoya University, Nagoya 464-8601, Japan, 9. Graduate School of Science and Engineering, Saitama University, 225 Shimo-Okubo, Sakura-ku, Saitama 338-8570, Japan, 10. Plant Genomics Laboratory, Centre of Excellence in Molecular Biology, University of the Punjab, Lahore, Pakistan, 11. Kihara Institute for Biological Research, Yokohama City University, Yokohama 244-0813, Japan)

[PO-026] Functional Analyses of Arabidopsis bZIP Transcription Factor Involved in Drought Tolerance

*Yoshimi Nakano¹, Keiko Kigoshi¹, Sumire Fujiwara¹ (1. National Institute of Advanced Industrial Science and Technology (AIST))

[PO-028] SnRK2-substrate 1 is phosphorylated in response to drought stress and accumulated to maintain plant growth.

*Sotaro Katagiri¹, Yoshiaki Kamiyama¹, Kota Yamashita¹, Akihisa Shinozawa³, Risa Suzuki¹, Sara Iizumi¹, Kozue Ishizuka¹, Yuki Aoi¹, Mika Nomoto¹, Fuminori Takahashi⁷, Takamasa Suzuki⁵, Soichir Inagaki, Toshihiko Kinoshita⁴, Yasuomi Tada², Hiroyuki Kasahara¹, Yoichi Sakata³, Taishi Umezawa¹ (1. Tokyo Univ. of Agric. and Thec., Japan, 2. Nagoya Univ., Japan, 3. Tokyo Univ. of Agric., Japan, 4. Nagoya Univ., Japan, 5. Chubu Univ., Japan, 6. The Univ. of Tokyo, Japan, 7. Riken, Japan)
[PO-030] Plant GSK-like kinase participates in the activation the B-RAF kinase under osmotic stress in Arabidopsis

*Zhen Lin¹, Xiaolei Liu², Pengcheng Wang¹ (1. Southern University of Science and Technology, China, 2. CAS Center for Excellence in Molecular Plant Sciences, Chinese Academy of Sciences, China)

[PO-032] Ethanol treatment enhances drought stress avoidance in cassava (Manihot esculenta Crantz)

*Ahn Thu Vu¹,², Yoshinori Utsumi¹, Chikako Utsumi¹, Maho Tanaka¹,², Satoshi Takahashi¹,², Daisuke Todaka¹, Yuri Kanno³, Mitsunori Seo³, Eigo Ando⁴, Kaori Sako¹,⁵, Khurram Bashir¹,⁶, Toshinori Kinoshiba⁵, Pham Xuan Hoi⁷, Motoaki Seki¹,² (1. Plant Genomic Network Research Team, CSRS, RIKEN, Japan, 2. Plant Epigenome Regulation Laboratory, CPR, RIKEN, Japan, 3. Dormancy and Adaptation Research Unit, CSRS, RIKEN, Japan, 4. Department of Biological Sciences, School of Science, The University of Tokyo, Japan, 5. Department of Advanced Bioscience, Faculty of Agriculture, Kindai University, Japan, 6. Department of Biology, Lahore University of Management Sciences, Lahore, Pakistan, 7. Institute of Transformative Bio-Molecules (WPI-ITbM), Nagoya University, Japan, 8. Agricultural Genetics Institute, Vietnam, 9. Kihara Institute for Biological Research, Yokohama City University, Japan)

[PO-034] Physiological responses of drought tolerant and sensitive Kimchi cabbage varieties during seedling stage drying exposure

*Yoonah Jang¹, Jinhee Kim¹, Junho Lee¹, Kyungran Do¹, Hwahyun Jung¹ (1. National Institute of Horticultural and Herbal Science, Republic of Korea)

[PO-036] Determining the Levels of Water Deficiency in Oryza sativa by Using Remote Sensor

*Tzu-Chiao Liao¹,³, Chin-Ying Yang¹,³, Ming-Der Yang²,³ (1. Department of Agronomy, National Chung Hsing University, Taiwan, 2. Department of Civil Engineering, National Chung Hsing University, Taiwan, 3. Smart Sustainable New Agriculture Research Center (SMARTer), National Chung Hsing University, Taiwan)

[PO-038] Characterization and molecular improvement of isothiocyanate-based inhibitors on stomatal opening that act as drought tolerance-conferring agrochemicals


[PO-040] Molecular Characterization and Expression Analysis of Nuclear Factor Y in wheat (Triticum aestivum L.)

*Ji woo Kim¹, Meng Chen¹, Young-Chen Kim¹, Jeong Hwan Lee¹ (1. Division of Life Sciences, Jeonbuk National University, Republic of Korea)

[PO-042] A translational agricultural study from Arabidopsis to cabbage: determination of mechanisms enhancing submergence tolerance in cabbage (Brassica oleracea L. var. capitata)

Shih-Jie Huang¹, Tze-Ching Chan¹, Yao-Cheng Lin², Yu-Lin Wu¹,², Hsuan-Ting Liu¹, Chun-Hao
Hu¹, *Fu-Chiun Hsu¹ (1. National Taiwan University, Taiwan, 2. Academia Sinica, Taiwan)
[PO-045] Analysis of transcriptional regulations of temperature-stress inducible genes mediated by clock-related transcription factors in Arabidopsis

[PO-047] Genome-wide epigenetic changes by warm temperature trigger developmental reprogramming in Arabidopsis
*Junghyun Kim\textsuperscript{1}, Sibum Sung\textsuperscript{1} (1. The University of Texas at Austin, USA)

[PO-049] Genetic determinants of thermal response
*Sourav Mukherjee\textsuperscript{1}, Avilash Singh Yadav\textsuperscript{1}, Nikita Bungay\textsuperscript{1}, Amy Smith\textsuperscript{1}, Craig I Dent\textsuperscript{1}, Partha P Das\textsuperscript{2}, Yalong Guo\textsuperscript{3}, Sridevi Sureshkumar\textsuperscript{1}, Sureshkumar Balasubramanian\textsuperscript{1} (1. School of Biological Sciences, Monash University, VIC 3800, AUSTRALIA, 2. Monash Biomedicine Discovery Institute, Monash University, VIC 3800, AUSTRALIA, 3. State Key Laboratory of Systemic and Evolutionary Botany, Institute of Botany, Chinese Academy of Sciences, Beijing, CHINA)

[PO-051] Memory of 5-min heat stress is associated with pathogen defense mechanisms in Arabidopsis
*Rio Shimizu\textsuperscript{1}, Mai Yunose\textsuperscript{1}, Kohei Oyoshi\textsuperscript{1}, Nobuhiro Suzuki\textsuperscript{1} (1. Sophia University, Japan)

[PO-053] Transcription factor and chromatin-based heat memory in plants
*Nobutoshi Yamaguchi\textsuperscript{1} (1. Nara Institute of Science and Technology)

[PO-055] Maintenance of abiotic stress memory in plants: Lessons learned from heat acclimation
*Yee-yung Charng\textsuperscript{1,2,3,4}, Suma Mitra\textsuperscript{1,2,5}, Shih-Jiun Yu\textsuperscript{1,4} (1. Agricultural Biotechnology Research Center, Academia Sinica, Taiwan, 2. Molecular and Biological Agricultural Sciences Program, TIGP, Academia Sinica, Taiwan, 3. Biotechnology Center, National Chung-Hsing University, Taiwan, 4. Department of Biochemical Sciences and Technology, National Taiwan University, Taiwan, 5. Graduate Institute of Biotechnology, National Chung-Hsing University, Taiwan)

[PO-057] Regulatory roles of microRNA164 enhanced thermotolerance
*JENG-SHANE LIN\textsuperscript{1}, Wei-An Tsai\textsuperscript{2}, Po-Han Sung\textsuperscript{1}, Yun-Wei Kuo\textsuperscript{4,1}, Ming-Cheng Chen\textsuperscript{1}, Shih-Tong Jeng\textsuperscript{3} (1. National Chung Hsing University, 2. The University of Queensland, 3. National Taiwan University, 4. Sanming Academy of Agricultural Sciences)

[PO-059] Deciphering the role of the conserved microRNA169 in enhancing yield and thermotolerance in Arabidopsis
*Apoorva Gupta\textsuperscript{1}, Sombir Rao\textsuperscript{1}, Saloni Mathur\textsuperscript{1} (1. National Institute of Plant Genome Research (NIPGR), New Delhi, India)
[PO-061] Prolonged Exposure to High Temperature Inhibits Shoot Primary and Root Secondary Growth in Panax ginseng
*Jeongeui Hong¹, Hojin Ryu¹ (1. Chungbuk National University, Republic of Korea)

[PO-063] atDjB3, a class II J-domain protein, regulates heat stress response in *Arabidopsis thaliana*
*Gouri Satheesh¹, Chandan Sahi¹ (1. Indian Institute of Science Education and Research, Bhopal, India)

[PO-065] Heat-regulated phosphorylation of TOT43 is a switch for stress granule association to contribute to heat tolerance in *Arabidopsis*
*Shao-Li Yang¹,², Cassio Flavio Fonseca De Lima¹,², Tingting Zhu¹,², Brigitte Van de Cotte¹,², Lam Dai Vu¹,², Ive De Smet¹,² (1. Department of Plant Biotechnology and Bioinformatics, Ghent University, Ghent, Belgium, 2. VIB Center for Plant Systems Biology, Ghent, Belgium)

[PO-067] Ethanol treatment induces heat tolerance in plants
*Daisuke Todaka¹, Quynh Thi Nhu Do¹,⁴, Maho Tanaka¹,², Akihiro Ezoe¹, Satoshi Takahashi¹,², Junko Ishida¹,², Miyako Kusano⁵,⁶,⁷, Makoto Kobayashi⁵, Kazuki Saito⁵, Atsushi J. Nagano⁸,⁹, Motoaki Seki¹,²,³ (1. Plant Genomic Network Research Team, RIKEN CSRS, Japan, 2. Plant Epigenome Regulation Laboratory, RIKEN CPR, Japan, 3. Kihara Institute for Biological Research, Yokohama City University, Japan, 4. Agricultural Genetics Institute, Vietnam, 5. Metabolomics Research Group, RIKEN CSRS, Japan, 6. Graduate School of Life and Environmental Sciences, University of Tsukuba, Japan, 7. Tsukuba Plant Innovation Research Center, University of Tsukuba, Japan, 8. Faculty of Agriculture, Ryukoku University, Japan, 9. Institute for Advanced Biosciences, Keio University, Japan)

[PO-069] *REVEILLE2* Thermosensitive Splicing: A Molecular Basis for the Integration of Nocturnal Temperature Information by the *Arabidopsis* Circadian Clock
*Matt Jones¹, Allan B James¹, Chantal Sharples¹,⁴, Janet Laird¹, Emily May Armstrong¹, Wenbin Guo², Nikoleta Tzioutziou²,³, Runxuan Zhang², John WS Brown²,³, Hugh G Nimmo¹ (1. University of Glasgow, 2. James Hutton Institute, 3. University of Dundee, 4. Bielefeld University)

[PO-071] Revealing the role of GNOM ARF-GEF in regulating cold stress response through a comparative proteomic approach
*Sumaiya Jannat Tapati¹, Nagib Ahsan², Abidur Rahman³,⁴,⁵ (1. The United Graduate School of Agricultural Sciences, Iwate University, Morioka 020-8550, Japan, 2. Department of Chemistry and Biochemistry, The University of Oklahoma, Norman, OK, USA, 3. The United Graduate School of Agricultural Sciences, Iwate University, Morioka 020-8550, Japan, 4. Department of Plant Biosciences, Faculty of Agriculture, Iwate University, Morioka 020-8550, Japan, 5. Department of Plant Sciences, College of Agriculture and Bioresources, University of Saskatchewan, Saskatoon, SK S7N 5AB, Canada)
**[PO-044]** Latitudinal gradient of molecular phenology unravels the physiological mechanism of bud dormancy
*Atsuko Miyawaki Kuwakado*¹,², Masaaki Shimizu¹, Keiko Kitamura³, Qingmin Han³, Akiko Satake¹ (1. Kyushu University, Japan, 2. Research Fellow of Japan Society for the Promotion of Science, Japan, 3. Forestry and Forest Products Research Institute (FFPRI), Japan)

**[PO-046]** SMAX1 potentiates phytochrome B-mediated hypocotyl thermomorphogenesis
Young-Joon Park¹,², Hye-Young Choi¹, *Chung-Mo Park*¹ (1. Seoul National University, Korea, 2. Kyung Hee University, Korea)

**[PO-048]** Evolution of plant responses to elevated ambient temperature
*Alvaro Montiel Jorda*¹, James Clark¹, Keara Franklin¹ (1. School of Biological Sciences, University of Bristol, Bristol BS8 1TQ, United Kingdom)

**[PO-050]** Thermosensory Transcription Factors Activate Thermoresponsive Gene Expression by Forming Biomolecular Condensates with the Mediator Complex
*Yongjian Qiu*¹, Abhisheesh Bajracharya¹, Eden E Bayer¹, Alyssa L Stoner¹ (1. The University of Mississippi, USA)

**[PO-052]** BrbZIP-S, a bZIP transcription factor from *Brassica rapa*, enhanced stress tolerance in *Nicotiana benthamiana*.
Seung Hee Eom¹, *Tae Kyung Hyun*¹ (1. Department of Industrial Plant Science and Technology, Chungbuk National University)

**[PO-054]** Sensitized expression of *LEARNED HEAT MEMORY 1* through histone modification confers thermotolerance in *Arabidopsis thaliana*.
*xuejing wang*¹, Nobutoshi Yamaguchi¹, Toshiro Ito¹ (1. Nara institute of science and technology, Japan)

**[PO-056]** Epidermal Cell Type-Specific Chromatin Dynamics Underlying Arabidopsis Heat Stress Memory
*Daniel Slane*¹,², Kenneth W Berendzen³, Yoshihiro Yoshitake⁴, Christopher Grefen⁵, Takayuki Kohchi⁴, Takuya Sakamoto²,⁶, Sachihiro Matsunaga¹ (1. Department of Integrated Biosciences, Graduate School of Frontier Sciences, The University of Tokyo, 5-1-5 Kashiwanoha, Kashiwa, Chiba, 277-8562, Japan, 2. Department of Applied Biological Science, Faculty of Science and Technology, Tokyo University of Science, 2641 Yamazaki, Noda, Chiba 278-8510, Japan, 3. Center for Plant Molecular Biology, University of Tübingen, Auf der Morgenstelle 32, Tübingen, 72076, Germany, 4. Graduate School of Biostudies, Kyoto University, Kyoto, 606-8502, Japan, 5. Faculty of Biology and Biotechnology, Molecular and Cellular Botany, University of Bochum, Universitätsstraße 150, 44780 Bochum, Germany, 6. Department of Science, Faculty of Science, Kanagawa University, 3-27-1, Rokkakubashi, Kanagawa-ku, Yokohama, Kanagawa, 221-8586, Japan)

**[PO-058]** The Regulated Mechanism of miR163 and Its Target Genes on Plant Thermotolerance
[PO-060] Characterization of Arabidopsis ECT family in stress tolerance and stress granules assembly

*ZHEN YUAN KOK, Bo-Shun Tseng, Hao-Chen Huang, Jeng-Shane Lin (1. National Chung Hsing University, Taiwan)

[PO-061] Identification of Protein Kinases Involved in the Post-translational Regulation of the Stress-Responsive Transcription Factor DREB2A

*Touko Nakazawa, So Sugimoto, Ryosuke Takahashi, Haruho Funamori, Fuminori Takahashi, Norihito Nakamichi, Toshinori Kinoshita, Kazuo Shinozaki, Kazu Yamaguchi-Shinozaki, Junya Mizoi (1. Graduate School of Agricultural and Life Sciences, The University of Tokyo, Japan, 2. Center for Sustainable Resource Science, RIKEN, Japan, 3. ITbM, Nagoya University, Japan, 4. Graduate School of Science, Nagoya University, Japan, 5. Research Institute for Agricultural and Life Sciences, Tokyo University of Agriculture, Japan)

[PO-064] Arabidopsis F-box protein EID1 regulates acquired thermotolerance through post-translational modification of HEAT SHOCK FACTOR BINDING PROTEIN

*GUAN-LIN CHUO, Chin-Mei Lee (1. National Taiwan Univeristy, Taiwan)

[PO-066] On the mechanism of maintaining heat acclimation memory by the HSP101-HSA32 module in Arabidopsis

*Suma Mitra, Nai-yu Liu, Shih-Jiun Yu, Hong-Yi Li, Yu-Yen Shen, Yee-yung Charng (1. Agricultural Biotechnology Research Center (ABRC), Academia Sinica, Taipei, 2. Graduate Institute of Biotechnology, National Chung Hsing University, Taichung, Taiwan, 3. Department of Biochemical Science and Technology, National Taiwan University, Taipei, Taiwan)

[PO-068] Phototropin mediates periodic cold priming in Arabidopsis

*Minoru Noguchi, Hitomi Takahashi, Issei Keino, Yutaka Kodama (1. Utsunomiya University, Japan)

[PO-070] Role of thioredoxins and regulation of carbon metabolism in acclimation to low temperatures

*David Gonzalez-Campo, Peter Geigenberger (1. LMU Munich)

[PO-072] Exploration of functional short peptides for protection against protein aggregation and instability in plants

*Hidefumi Hamasaki, Setsuko Shimada, Yukio Kurihara, Minami Matsui (1. Riken Yokohama Institute, 2. Tokyo University, Japan)
[P] 03 Abiotic response (others)

Tue. Jun 6, 2023 9:00 AM - 6:00 PM  Poster 3(Meeting Room 10)

[PO-073] Forward genetic screens to elucidate the molecular mechanism of alternative promoter selection in plants and yeasts

*Yoshiro Murakami¹, Ryutarou Tokutsu¹, Kazumasa Shirai², Mitsuhiako Tomita⁶, Noriyuki Suetsugu¹, Tomokazu Ushijima³, Takamasa Suzuki⁴, Tomoo Shimada¹, Atsushi Shimada⁵, Hidetoshi Saze⁵, Kousuke Hanada², Yoshito Oka¹, Tomonao Matsushita¹ (1. Kyoto University, Japan, 2. Kyusyu Institute of Technology, Japan, 3. Setsunan University, Japan, 4. Chubu University, Japan, 5. Okinawa Institute of Science and Technology, Japan, 6. Kyushu University, Japan)

[PO-075] Stomatal CO₂/bicarbonate Sensor Consists of Two Interacting Protein Kinases HT1 and MPK4/12 in Arabidopsis

*Yohei Takahashi¹,², Krystal C Bosmans¹, Po-Kai Hsu¹, Karnelia Paul¹, Christian Seitz¹, Chung-Yueh Yeh³, Yuh-Shuh Wang³, Dmitry Yarmolinsky³, Maija Sierla⁴, Triin Vahisalu⁴, J. Andrew McCammon¹, Jaakko Kangasjarvi⁴, Li Zhang¹, Hannes Kollist³, Thien Trac¹, Julian I Schroeder¹ (1. University of California San Diego, USA, 2. Nagoya University, Japan, 3. University of Tartu, Estonia, 4. University of Helsinki, Finland)

[PO-077] LZY3 is localized on the plasma membrane to transduce the gravity signal in columella cells

*Hiromasa Shikata¹,², Takeshi Nishimura¹,², Shogo Mori¹, Miyoshi Terao Morita¹,² (1. National Institute for Basic Biology, NINS, Japan, 2. Department of Basic Biology, Faculty of Life Science, SOKENDAI (Graduate University for Advanced Studies), Japan)

[PO-079] Genetic framework for the coordination of shoot gravitropic setpoint angle by TILLER ANGLE CONTROL1

*Nozomi Kawamoto¹, Takeshi Nishimura¹, Miyoshi Morita¹ (1. National Institute for Basic Biology)

[PO-081] Overexpression of a Tagetes patula Ascorbate peroxidase 1 in Arabidopsis enhances cadmium tolerance

*Chwan-Yang Hong¹, Yu-Ting Liu¹, Vokkaliga T. Harshavardhan¹ (1. National Taiwan University, Taiwan)

[PO-083] RECONFIGURATION OF CENTRAL METABOLITES DURING ABIOTIC STRESS PERIODS MODULATE DEFENCE TO PATHOGENS IN ARABIDOPSIS

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[PO-085] Abiotic Stress Modulated Plant U-Box Ubiquitin Ligases – Expression, Phenotype and Regulation

*Dudy Bar-Zvi¹, Tzofia Maymon¹, Avinash Sharma¹ (1. Ben-Gurion University of the Negev)
[PO-074] Stomatal characteristics of an Arabidopsis: Natural accession with high sensitivity to increased CO₂ concentration
*Tomoki Shuno¹, Satoko Nakae¹, Atsushi Mabuchi¹, Juntaro Negi¹, Koh Iba¹, Keina Monda¹

[PO-076] Analysis of the role of RLDs in the gravity response of shoot using Arabidopsis thaliana
*Takeshi Nishimura Nishimura¹, Miyo Terao Morita¹ (1. National Institute for Basic Biology)

[PO-078] The role of LAZY1-LIKE 4 in the signaling process in the gravity sensing cells in root gravitropism.
*Miyo Terao Morita¹, Takeshi Nisimura¹, Shogo Mori¹, Hiromasa Shikata¹, Yoshinori Abe², Takuma Hagihara², Masatsugu Toyota², Hiroshi Yoshikawa³, Takumi Higaki⁴ (1. National Institute for Basic Biology, Japan, 2. Saitama University, Japan, 3. Osaka University, Japan, 4. Kumamoto University, Japan)

[PO-080] Nicotianamine secretion for Zinc tolerance
*Kuo-Chen Yeh¹, Munkhtsetseg Tsednee¹, Yi-Tze Chen¹, Jing-chi Lo¹ (1. Academia Sinica)

[PO-082] Environmental pH governs the phospho-switching of major plasma-membrane transporters
*Dharmesh Jain¹,²,³, Wolfgang Schmidt¹,²,³,⁴,⁵ (1. Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, Academia Sinica and National Chung-Hsing University, Taipei 11529, Taiwan, 2. Graduate Institute of Biotechnology, National Chung-Hsing University, Taichung 40227, Taiwan, 3. Institute of Plant and Microbial Biology, Academia Sinica, Taipei 11529, Taiwan, 4. Biotechnology Center, National Chung-Hsing University, Taichung 40227, Taiwan, 5. Genome and Systems Biology Degree Program, College of Life Science, National Taiwan University, Taipei 10617, Taiwan)

[PO-084] Meta-Analysis of RNA Sequencing Data of Arabidopsis and Rice under Hypoxia
*Keita Tamura¹, Hidemasa Bono¹ (1. Hiroshima University, Japan)
[PO-087] Transcriptome Analysis of Dangerous Mix Autoimmunity in A. thaliana
* Donghui HU¹, Eunyoung CHAE¹ (1. National University of SinGapore, SinGapore)

[PO-089] Genetic Requirements of DM10-DM11 Autoimmunity in Arabidopsis thaliana
* Jinge Wang¹, Rachelle Lee¹, Wei Yuan Cher¹, Eunyoung Chae¹ (1. National University of SinGapore, SinGapore)

[PO-091] A Self-Compartmentalized Alpha/Beta Hydrolase Complex Participates in NLR-mediated Immunity in Plants
* Wei-Lin Wan¹, Gijeong Kim², Nuri Charoenit¹, Yizhong Zhang¹,³, Ji-Joon Song², Eunyoung Chae¹ (1. National University of SinGapore, SinGapore, 2. Korea Advanced Institute of Science and Technology, Republic of Korea, 3. Agency for Science, Technology and Research, SinGapore)

[PO-093] Bacterial effector hopAM1 activity reconfigures ETI responses.
* Nestoras Kargios¹, Adam Bayless², Marc Nishimura², Lijiang Song¹, Vardis Ntoukakis¹, Murray Grant¹ (1. University of Warwick, UK, 2. Colorado State University, USA)

[PO-095] Bacteria Pathogen Subvert Plant Innate Immunity via Phase Separating Effectors
* Yi Xie¹, Xin-Lu Zhu¹, Wei-Bing Wang¹, Yan-Song Miao¹ (1. School of Biological Sciences, Nanyang Technological University, SinGapore)

[PO-097] Study on the interaction between Ralstonia solanacearum effector RsT3E-P and ACC oxidases in pattern-triggered immunity
* YU CHUAN CHANG¹, Ya Yi Chung¹, Yi Fan Chen¹, Chien Sheng Wu¹, Chiu Ping Cheng¹ (1. Institute of Plant Biology and Department of Life Science, National Taiwan University, Taipei, Taiwan)

[PO-099] Bacterial pathogens deliver water/solute-permeable channels as a virulence strategy
* Kinya Nomura¹, Felip Andreazza², Jie Cheng³, Ke Dong², Pei Zhou³, Sheng Yang He¹ (1. Howard Hughes Medical Institute, Duke University, USA, 2. Duke University, USA, 3. Duke University School of Medicine, USA)

[PO-101] Characterization of high mobility group box proteins as conserved plant damage-associated molecular patterns
* Yukihisa Goto¹, Simon Flückiger¹, Jiashu Chu¹, Paul Derbyshire², Frank L.H. Menke², Cyril Zipfel¹,² (1. Institute of Plant and Microbial Biology, Zürich-Basel Plant Science Center, University of Zürich, Zürich, Switzerland, 2. The Sainsbury Laboratory, University of East Anglia, Norwich, United Kingdom)

* Mao-Sen Liu¹, Teng-Kuei Huang¹, Chih-Hang Wu¹, Chih-Horng Kuo¹, Erh-Min Lai¹ (1. Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan)
[PO-105] Valinomycin, a putative bi-directional natural compound with antifungal and immune-priming activity
*Nayeon Yoo1, Ji Eun Kang1,2, Huiwon Lee1, Dohee Ko1, Harin Kim1, Eui-Hwan Chung1 (1. Department of Plant Biotechnology, Korea University, Seoul 02841, Republic of Korea, 2. Boyce Thompson Institute (BTI), Cornell University, Ithaca, NY 14853, USA)

[PO-107] Effects of Turnip mosaic virus on Arabidopsis halleri-aphid interaction and the exploration of its causal genes in a natural environment.
*Miyabi Otsubo1, Hiroshi Kudoh1, Mie N Honjo1 (1. Center for Ecological Research, Kyoto University, Japan)

[PO-109] Decision factors of morphological diversity in insect galls
*Kanako Bessho-Uehara1 (1. Tohoku University)

[PO-111] Small cyclic peptides that enhance disease resistance in Arabidopsis thaliana and Brachypodium distachyon
*Yoshiteru Noutoshi1, Megumi Watanabe1, Ayako Moriya1, Yusuke Kouzai1, Yurie Yamanaka1, Mamiko Kimura1, Mai M.A. Abdelghany1, Naofumi Shoji2, Hyungjin Kim2, Takao Saito2, Mizuki Kitamatsu3 (1. Okayama University, 2. Sanyo Chemical Industries, 3. Kindai University)

[PO-113] XCP1 cleaves Pathogenesis-related protein 1 into CAPE9 for systemic immunity in Arabidopsis
Ying-Lan Chen1,2, Fan-Wei Lin1, Kai-Tang Cheng1, Chi-Hsin Chang1,3,4, Sheng-Chi Hung1,5, *Yu-Hsuan Huang1, Thomas Effertth6, Yet-Ran Chen1,3,4,5 (1. Agricultural Biotechnology Research Center, Academia Sinica, Taiwan, 2. Department of Biotechnology and Bioindustry Sciences, College of Bioscience and Biotechnology, National Cheng Kung University, Taiwan, 3. Molecular and Biological Agricultural Science Program, Taiwan International Graduate Program, Academia Sinica, Taiwan, 4. Taiwan Graduate Institute of Biotechnology, National Chung-Hsing University, Taiwan, 5. Institute of Biotechnology, National Taiwan University, Taiwan, 6. Department of Pharmaceutical Biology, Institute of Pharmaceutical and Biomedical Science, Johannes Gutenberg University, Germany)

[PO-115] Dimerization and activation of Arabidopsis MAPKKKs in chitin-induced immunity.
*Koji Yamaguchi1, Hiroto Komori1, Kanako Fujio1, Masayuki Fujiwara2, Tsutomu Kawasaki1 (1. Grad. Sch. Agri., Kindai Univ, 2. YANMAR HOLDINGS Co. Ltd.)

[PO-117] Bacterial effectors disrupt host chloroplast functions for virulence
*Charles Roussin-Leveillee1, Meliane St-Amand1, Philippe Desbiens-Fortin1, Moffett Peter1 (1. Universite de Sherbrooke, Canada)

[PO-119] The perception of quinones and reactive oxygen species by CARD1/HPCA1 in Arabidopsis
*Anuphon Laohavisit1, Nobuki Ishihama2, Ryoko Hiroyama2, Kaori Takizawa2, Ken Shirasu2 (1. Institute of Transformative Bio-Molecules, Nagoya University, Japan, 2. Plant Immunity Research Group, RIKEN Center for Sustainable Resource Science, Japan)

[PO-121] Conserved molecular regulatory mechanism of the ROS-producing activity of RBOHs by phosphorylation and Ca2+ binding in land plants
*Takafumi Hashimoto1, Kenji Hashimoto1, Takuya Miyakawa2, Masaru Tanokura3, Kazuyuki Kuchitsu1 (1. Tokyo University of Science, Japan, 2. Kyoto University, Japan, 3. University of Tokyo, Japan)
[PO-123] Involvement of two cyclic nucleotide-gated ion channel subunits in jasmonic acid-mediated immune signaling

*Hyunsuh Lee¹, Robin Goh¹, Angelica Mae Miraples¹, Mariane Ga Min Jeong², Shingo Maruyama³, Andrea Bosorogán³, Eliana Gonzales-Vigii³, Wolfgang Moeder¹, Hanae Kaku², Keiko Yoshioka¹ (1. University of Toronto, Canada, 2. Meiji University, Japan, 3. University of Toronto (Scarborough), Canada)

[PO-125] An attractive case of plant-virus coevolution supports the idea that non-canonical nucleotides within the host play an antiviral role

*Adrian Alejandro Valli¹, Rafael García López¹, Irene Gonzalo Magro¹, Juan Antonio García¹ (1. Spanish National Centre for Biotechnology (CNB-CSIC))

[PO-127] Molecular mechanism of tenoxicam that inhibits plant immune responses

*Nobuaki Ishihama¹, Seung-won Choi¹, Yoshiteru Noutoshi², Ivana Saska³, Kaori Takizawa¹, Yuko Nomura¹, Hirofumi Nakagami³, Yasumitsu Kondoh¹, Hiroyuki Osada¹, Ken Shirasu¹ (1. RIKEN CSRS, Japan, 2. Grad. Sch. Env. Life Sci., Okayama Univ., Japan, 3. MPIPZ, Germany)

[PO-129] Identification of epigenetically regulated genes in plant-virus interaction

*Regis Lopes Correa¹, Silvia Ambrós¹, Monica Bustos¹, Denis Kutnjak², Santiago F Elena¹ (1. Institute for Integrative Systems Biology (I2SysBio), Consejo Superior de Investigaciones Científicas (CSIC) and Universidad de Valencia, Spain, 2. Department of Biotechnology and Systems Biology, National Institute of Biology, Ljubljana, Slovenia)

[PO-131] ELF18 INDUCED LONG NONCODING RNA 2 regulates the defense response by modulating CHITINASE expression

*Jun Sung Seo¹ (1. Institution of GreenBio Science and Technology, Seoul National University, Republic of Korea)

[PO-133] AGO2 condensates behavior after bacterial inoculation

*Moriaki Saito¹, Po Hu¹, Hailing Jin³ (1. Department of Microbiology and Plant Pathology, Center for Plant Cell Biology, Institute for Integrative Genome Biology, University of California, Riverside, USA)

[PO-135] TRANSLATION DYNAMICS OF THE PLANT-VIRUS INTERACTION

*Gemma Sans-Coll¹, Araceli G. Castillo¹, Eduardo R. Bejarano¹, Catharina Merchante¹ (1. Instituto de Hortofruticultura Subtropical y Mediterránea “La Mayora”, Universidad de Málaga-Consejo Superior de Investigaciones Científicas (IHSUM-CSIC), 2. Dpto. Biología Molecular y Bioquímica, UMA, 3. Dpto. Biología Celular, Genética y Fisiología, UMA)

[PO-137] DNA binding activity of CAMTA3 is essential for its function: Identification of critical amino acids for its transcriptional activity

*KASAVAJHALA V.S.K. Prasad¹, Amira Abdel-Hameed¹, Qiyan Jiang¹, Anireddy Reddy¹ (1. Department of Biology, Colorado State University, Fort Collins, CO-80526, USA)

[PO-139] Should I stay or should I go: nuclear mRNA retention during plant defense

*Tessa Visscher¹, Guido van den Ackerveken², Saskia C.M. van Wees¹ (1. Plant-Microbe Interactions, Utrecht University, the Netherlands, 2. Translational Plant Biology, Utrecht University, the Netherlands)

[PO-141] Novel eINTACT system dissects bacterial exploitation of plant osmosignaling to promote disease
[PO-143] Toward identification of host cell death-inducing genes of *Colletotrichum higginsianum* via transient gene expression in *Arabidopsis thaliana* leaves

*Yuan You1, Grzegorz Koczyk2, Maria Nuc2, Robert Morbitzer3, Danaly R. Holmes3, Edda von Roepenack-Lahaye3, Zhihao Jiang3, Shiji Hou4, Axel Giudicatti6, Carine Gris5, Pablo A. Manavella6, Laurent D. Noël5, Paweł Krajewski2, Thomas Lahaye3 (1. Technical University of Munich, Germany, 2. Polish Academy of Sciences, Poland, 3. Eberhard-Karls-University Tübingen, Germany, 4. Huazhong Agricultural University, China, 5. Université de Toulouse, INRAE, CNRS, France, 6. Universidad Nacional del Litoral, Argentina)

[PO-145] Microbiota-mediated immunocompetence in Arabidopsis

*Yuan You1, Grzegorz Koczyk2, Maria Nuc2, Robert Morbitzer3, Danaly R. Holmes3, Edda von Roepenack-Lahaye3, Zhihao Jiang3, Shiji Hou4, Axel Giudicatti6, Carine Gris5, Pablo A. Manavella6, Laurent D. Noël5, Paweł Krajewski2, Thomas Lahaye3 (1. Technical University of Munich, Germany, 2. Polish Academy of Sciences, Poland, 3. Eberhard-Karls-University Tübingen, Germany, 4. Huazhong Agricultural University, China, 5. Université de Toulouse, INRAE, CNRS, France, 6. Universidad Nacional del Litoral, Argentina)

[PO-147] Functional analysis of *rym*-mediated resistance against *Barley yellow mosaic virus* infection to root and leaf in barley

*Hongjing Zhu1,2, Kohei Mishina1, Tetsuo Oikawa1, Gang Chen1,2, Shinji Kikuchi2, Hidenori Sassa2, Takao Komatsuda1,2,3, Youko Oono1,2 (1. Institute of Crop Science, National Agriculture and Food Research Organization (NARO), Tsukuba, Japan, 2. Graduate School of Horticulture, Chiba University, Matsudo, Japan, 3. Crop Research Institute, Shandong Academy of Agricultural Sciences, Shandong, China)

[PO-149] Functions of Green Leaf Volatiles in Direct and Indirect Defense of Plants against Herbivores

*Rika Ozawa1, Ryohi Fujita2, Takuma Nakao2, Yuka Ohno2, Wataru Ota2, Kaori Shiojiri2, Kyutaro Kishimoto3, Kenji Matsui3, Junji Takabayashi1 (1. Kyoto University, Japan, 2. Ryukoku University, Japan, 3. Yamaguchi University, Japan)

[PO-151] Single-cell gene expression profiles of glucosinolate-myoosinase defense system-associated cells

*Taro Maeda1, Sugano S Shigeo2, Makoto Shirakawa3, Sagara Mayu3, Toshiro Ito3, Atsushi J Nagano1,4 (1. Keio University, Japan, 2. National Institute of Advanced Industrial Science and Technology, Japan, 3. Nara Institute of Science and Technology, Japan, 4. Ryukoku University, Japan)

[PO-153] Investigating the Role of Carbohydrate Metabolism in Bacterial-Triggered Stomatal Movements Using the Model System *Arabidopsis thaliana* and *Pseudomonas syringe pv tomato*

*Lucia Piro1 (1. ETH Zurich)

[PO-155] Preserving salicylic acid-mediated plant immunity in a warming climate

*Jonghum Kim1,2, Christian Danve M. Castroverde3,4,5, Chi Kuan1, Sheng Yang He1,2,3 (1. Department of Biology, Duke University, USA, 2. Howard Hughes Medical Institute, USA, 3. Department of Energy Plant Research Laboratory, Michigan State University, USA, 4. Plant Resilience Institute, Michigan State University, USA, 5. Department of Biology, Wilfrid Laurier University, Canada)
[PO-086] Characterisation of a TIR-NLR mediated immune activation with an alpha/beta-hydrolase fold protein
*Yi Yun Tan¹, Wei-Lin Wan¹, Nuri Charoennit¹, Shen Kai Ng¹, Jing Wei Keoni Chan¹, Eunyoung Chae¹ (1. National University of SinGapore, SinGapore)

[PO-088] Characterization of an antagonistic NLR pair in plant autoimmunity
*Yin Yin Liew¹, Eunyoung Chae¹ (1. National University of SinGapore)

[PO-090] Highly variable plant immune receptors share distinct genomic and epigenomic features
Chandler Sutherland¹, Daniil M Prigozhin², J Grey Monroe³, *Ksenia Krasileva¹ (1. University of California, Berkeley, 2. Lawrence Berkeley National Laboratory, 3. University of California, Davis)

[PO-092] 2D-Phase separation of pathogen effectors subverts plant defence
*xinlu zhu¹, Yi XIE¹, Simou SUN², Choon-Peng CHNG², Ben CAO³, He SUN¹, Changjin HUANG³, Jay T. Groves², Yansong MIAO¹,² (1. School of Biological Sciences, Nanyang Technological University, 637551,SinGapore, 2. Institute for Digital Molecular Analytics and Science, Nanyang Technological University, 636921, SinGapore, 3. School of Mechanical and Aerospace Engineering, Nanyang Technological University, 639798,SinGapore)

[PO-094] A plant defence metabolite disarms bacterial type III injectisome assembly
*Pei Miao¹, Haijun Wang², Wei Wang¹, Jinjing Ni³, Jingnan Liang⁴, Yu-Feng Yao³, Jian-Min Zhou¹, Xiaoguang Lei² (1. Institute of Genetics and Developmental Biology, Beijing, 2. Peking University, Beijing, 3. Shanghai Jiao Tong University School of Medicine, Shanghai, 4. Institute of Microbiology, Beijing)

[PO-098] The effector protein RipBJ of *Ralstonia solanacearum* elicits plant immunity
*Chun yu Kuo¹, Chi Hsin Chang¹, Li Wen Chu¹, Tai Hsiang Chu¹, Chien Hui Li¹, Pei Shan Liao¹, Chien Sheng Wu¹, Chiu Ping Cheng¹,²,³ (1. Institute of Plant Biology, National Taiwan University, Taipei, Taiwan, 2. Department of Life Science, National Taiwan University, Taipei, Taiwan, 3. Global Agriculture Technology and Genomic Science Master Program, National Taiwan University, Taipei, Taiwan)

[PO-100] Identification of yeast-secreted proteins to induce plant immune responses
Keunchun Park¹, Hyeokjin Kwon¹, Hae Ri Kwon¹, Minjeong Jo¹, Mi Kyung Kim¹, Hye Sup Yun², *Chian Kwon¹ (1. Dankook University, Korea, 2. Konkuk University, Korea)

[PO-102] Functional study on roles of *Solyc12gA*-interacting proteins in plant innate immunity
*Yu Chuan Chiu¹, Chun You Kou¹, Ching Jung Lin¹, Chiu Ping Cheng¹ (1. Institute of Plant Biology, National Taiwan University)

[PO-104] A bacterial type III effector requires the LRR-RK KIN7 to negatively regulate FLS2 homeostasis in *Arabidopsis thaliana*
Yukihisa Goto¹,², Hidenori Matsui³, Jan Sklenar⁴, Paul Derbyshire⁴, Frank L.H. Menke⁴
Hirofumi Nakagami[^5], Darrell Desveaux[^6], Cyril Zipfel[^4,7], *Yasuhiro Kadota[^1], Ken Shirasu[^1,2] (1. RIKEN Center for Sustainable Resource Science (CSRS), 2. Graduate School of Science, The University of Tokyo, 3. Graduate School of Environment and Life Science, Okayama University, 4. The Sainsbury Laboratory, University of East Anglia, Norwich Research Park, Norwich, UK., 5. Max Planck Institute for Plant Breeding Research, 6. Department of Cell and System Biology and Centre for the Analysis of Genome Function and Evolution, University of Toronto, 7. Institute of Plant and Microbial Biology, Zurich-Basel Plant Science Center, University of Zurich, Zurich, Switzerland)

**[PO-106]** Gene regulatory network induced by Western flower thrips
Merel Steenbergen[^1], Niels Aerts[^1], Richard Hickman[^1], *Saskia van Wees[^1] (1. Utrecht University)

**[PO-108]** Quantitative analysis of the feeding behavior of herbivorous insects on Arabidopsis leaves reveals detailed mechanisms of trichomes contribution to plant defense
*Naoyuki Sotta[^1], Toru Fujiwara[^1] (1. The University of Tokyo, Japan)

**[PO-110]** Wound induced small-peptide mediated signalling cascade regulated by a receptor like kinase- RLK1 dictates growth vs defense decision in rice
*HARSHITH CHITHAVALLI YOGESH GOWDA[^1], Avik Kumar Pal[^1], Ashwin Nair[^1,2], Monoswi Chakraborty[^3], Steffi Raju[^1,2], Shivprasad P V[^1] (1. National Centre For Biological Sciences, TIFR, India, 560 065, 2. SASTRA University, Thirumalaisamudram, Thanjavur 613401, India., 3. Institute of Bioinformatics and Applied Biotechnology, Electronics City, Bangalore, India, 560 100)

**[PO-112]** Defense signal sensitization in response to damage-associated Pep peptides during phosphate starvation response
*Natsuki Tsuchida[^1], Lee Tae Hong[^1], Kentaro Okada[^1], Kei Hiruma[^1], Shigetaka Yasuda[^1], Yusuke Saijo[^1] (1. Nara Institute of Science and Technology)

**[PO-114]** 14-3-3 proteins facilitate the activation of MAP kinase cascades by upstream immunity-related kinases
*Xiaojing Dong[^1], Feng Feng[^3], Yangjun Li[^1], Lin Li[^2], Chen She[^2], Jian-Min Zhou[^1] (1. Institute of Genetics and Developmental Biology, 2. National Institute of Biological Sciences, 3. Department of Biochemistry and Molecular Biology)

**[PO-118]** Receptor-like cytosolic kinase RIPK confers broad-spectrum disease resistance without yield penalties
*Yan Liang[^1] (1. Zhejiang University, China)

**[PO-120]** The cytosolic thiol peroxidase PRXIIB is an intracellular sensor for H$_2$O$_2$ that regulates plant immunity through a redox relay
*Man Hu[^1,2,3], Guozhi Bi[^1,2], Ling Fu[^4], Xiaojuan Zhang[^1], Jianru Zuo[^1,3,5], Jiayang Li[^1,3,5], Jing Yang[^4], Jian-Min Zhou[^1,2,3,5] (1. Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, 2. CAS Center for Excellence in Biotic Interactions, University of Chinese Academy of Sciences, 3. College of Advanced Agricultural Sciences, University of Chinese Academy of Sciences, 4. State Key Laboratory of Proteomics, Beijing Proteome Research Center, National Center for Protein Sciences, 5. Hainan Yazhou Bay Seed Laboratory)

**[PO-122]** Oomycete effector AVRblb2 inhibits Ca$^{2+}$ influx by targeting cyclic nucleotide-gated channel through Ca$^{2+}$ sensors to suppress immune
[PO-124] An Interactor of CYCLIC NUCLEOTIDE-GATED ION CHANNEL 12 enhances downstream immune signaling events
*Robin Hon Ming Goh¹, Angelica Mae Miraples¹, Wolfgang Moeder¹, Keiko Yoshioka¹ (1. Department of Cell & Systems Biology, University of Toronto)

[PO-126] Ethylene signal modulates survival of leaf explants in Arabidopsis
*Chae-min Lee¹², Seung Yong Shin¹³, Jin Ho Yang¹, Hyun-Soon Kim¹⁴, Changsoo Kim², Jae-Heung Jeon¹, Hyo-Jun Lee¹³⁵ (1. Plant Systems Engineering Research Center, Korea Research Institute of Bioscience and Biotechnology, Korea, 2. Department of Crop Science, Chungnam National University, Korea, 3. Department of Functional Genomics, KRIBB School of Bioscience, University of Science and Technology, Korea, 4. Department of Biosystems and Bioengineering, KRIBB School of Biotechnology, University of Science and Technology, Korea, 5. Department of Biological Sciences, Sungkyunkwan University, Korea)

[PO-128] Extracellular NAD(P) is a central signaling molecule of systemic acquired resistance
*Zhonglin Mou¹², Qi Li¹, Mingxi Zhou² (1. Department of Microbiology and Cell Science, University of Florida, USA, 2. Plant Molecular and Cellular Biology Program, University of Florida, USA)

[PO-130] A novel function for transcriptional regulators IBM2 and EDM2 as limiters of salicylic acid-dependant defence genes in Arabidopsis.
*Leonardo Furci¹, Hidetoshi Saze¹ (1. OIST)

[PO-132] Identification of binding proteins of long non-coding RNA that act in plant infection defense
*HUIYUAN JIA¹, Juan Wu², Shuang Li¹, Yasushi Yukawa¹ (1. Nagoya City University, Japan, 2. Northeast Forestry University, China)

Alexander Marsell¹, Amir Maboubi², Johannes Hanson², Arthur Korte¹, *Wolfgang Dröge-Laser¹ (1. University of Würzburg, 2. Umeå Plant Science Center)

[PO-136] Translation initiation landscape profiling reveals hidden open-reading frames required for the pathogenesis of tomato yellow leaf curl Thailand virus
*Chin-Wen Chiu¹, Ya-Ru Li¹, Cheng-Yuan Lin¹, Hsin-Hung Yeh¹, Ming-Jung Liu¹ (1. The Agricultural Biotechnology Research Center of Academia Sinica, Taiwan)

[PO-138] Subgenome-dominant expression and alternative splicing in response to Sclerotinia infection in polyploid Brassica napus and progenitor species
Grant de Jong¹, *Keith Adams¹ (1. University of British Columbia)

[PO-140] The Role of Nuclear Pore during Effector-triggered Immunity
*Xing Zhang¹, Andres V Reyes², Shou-Ling Xu², Xinnian Dong¹ (1. Howard Hughes Medical Institute)
[PO-142] Proteomic analysis to understand chloroplast-nucleus communication in plant immunity.
*Seungmee Jung¹, Jongchan Woo¹, Eunsook Park¹ (1. Department of Molecular Biology, College of Agriculture, Life Sciences and Natural Resources, University of Wyoming, Laramie, WY USA.)

[PO-144] Dynamics of Plasma Membrane Nanodomains during Disease Response in Arabidopsis thaliana
*Saki Takayama¹, Yoichiro Fukao¹, Minoru Nagano¹ (1. Ritsumeikan University, Japan)

[PO-146] The gene regulatory network in roots that create a disease suppressive soil
*Run Qi¹, Jelle Spooren¹, Roeland L. Berendsen¹, Corné M.J. Pieterse¹, Saskia C.M. Van Wees¹ (1. Plant-Microbe Interactions, Department of Biology, Faculty of Science, Utrecht University, Utrecht, Netherlands)

[PO-148] Is Ca²⁺-induced activation of Arabidopsis lipoxygenase 2 involved in green leaf volatile burst?
*Kenji Matsui¹, Moena Tanaka, Kano Yamanaka, Mone Ohtaguro, Satoshi Mochizuki² (1. Yamaguchi University, Japan, 2. RIBS Okayama, Japan)

[PO-150] Real-time visualization of green leaf volatile-sensory Ca²⁺ signaling in Arabidopsis
Yuri Aratani¹, Takuya Uemura¹, *Masatsugu Toyota¹,²,³ (1. Saitama University, 2. Suntory Foundation for Life Sciences, 3. University of Wisconsin-Madison)

[PO-152] The phytocytokine AtCAPE9 and its receptor AtCAPER1 functions on plant systemic stomatal immunity
*Chi-Hsin Chang¹,²,³, Kai-Tan Cheng¹, Fan-Wei Lin¹, Yet-Ran Chen¹ (1. Agricultural Biotechnology Research Center, Academia Sinica, Taiwan, 2. Molecular and Biological Agricultural Sciences, Taiwan International Graduate Program, Academia Sinica, Taiwan, 3. Graduate Institute of Biotechnology, National Chung Hsing University, Taiwan)

[PO-154] High humidity-induced abscisic acid catabolism critical for plant resistance against bacterial water acquisition and pathogenesis
*Shigetaka Yasuda¹, Taishi Hirase¹, Haruka Ishizaki¹, Ryuji Suzuki², Akihisa Shinozawa³, Shioriko Ueda¹, Izumi Yotsui³, Masatsugu Toyota², Yusuke Saijo¹ (1. Nara Institute of Science and Technology, Japan, 2. Saitama University, Japan, 3. Tokyo University of Agriculture, Japan)
[PO-157] A role for phytocytokines during parasitic plant haustorium formation
*Maxwell Fishman¹, Anuphon Laohavisit², Takanori Wakatake³, Ryoko Hiroyama¹, Bruno Ngou¹, Ken Shirasu¹ (1. RIKEN Center for Sustainable Resource Science, 2. Institute of Transformative Bio-Molecules, Nagoya University, 3. Research Center of Genetic Resources, NARO)

[PO-159] Characterization of rhizobacteria-induced immunity using Arabidopsis
*Mack Loranger¹, Arvin Nickzad², Eric Déziel², Wolfgang Moeder, Keiko Yoshioka¹ (1. Department of Cell & Systems Biology, University of Toronto, 2. INRS)

[PO-161] Involvement of receptor proteins for peptidoglycans in mediation of growth promoting effects by Bacillus pumilus TUAT1 in Arabidopsis thaliana.
*Md Monirul Islam¹,2, Shin-ichiro Agake³, Tetsuya Yamasda⁴, Naoko Ohkama Ohtsu³,4 (1. Institute of Food and Radiation Biology, Bangladesh Atomic Energy Commission, Dhaka-1207, Bangladesh., 2. United Graduate School of Agriculture, Tokyo University of Agriculture and Technology, Tokyo, Japan., 3. Institute of Global Innovation Research, Tokyo University of Agriculture and Technology, Tokyo, Japan., 4. Institute of Agriculture, Tokyo University of Agriculture and Technology, Tokyo, Japan.)

[PO-163] Rhizobium vitis VAR03-1 enhances Arabidopsis thaliana primary root growth under nutrient-limited conditions
*Niarsi Merry Hemelda¹, Bao Jiyuan¹, Hidenori Matsui¹, Mikihiro Yamamoto¹, Kazuhiro Toyoda¹, Yuki Ichinose¹, Akira Kawaguchi², Yoshiteru Noutoshi¹ (1. Okayama University, 2. Western Region Agricultural Research Center, National Agriculture and Food Research Organization (NARO), Japan)

[PO-165] Deciphering the molecular mechanism of plant growth-promoting rhizobacterium Pseudomonas sp. CM11 on plant promotion
*Zhuang Yang¹, Roman Lakerveld¹, Qian Li², Joel Klein¹, Huchen Li²,1, Viola Willemsen¹ (1. Cluster of Plant Developmental Biology, Wageningen University and Research, Netherlands, 2. Beijing Advanced Innovation Center for Tree Breeding by Molecular Design, Beijing University of Agriculture, China)

[PO-167] Designing the assessment platform for determining the impacts of microbes to plant stress resilience
*Tao-Ho Chang¹, Chia-Cheng Hsieh¹, Jenn-Wen Huang¹,2, Pi-Fang Linda Chang¹,2 (1. Academy of Circular Economy, National Chung Hsing University, Taiwan, 2. Department of Plant Pathology, National Chung Hsing University, Taiwan)

[PO-169] Root endophyte Colletotrichum tofieldiae promotes plant growth and recruits beneficial bacteria to roots under laboratory and field conditions with nitrogen deficiency
Nhi Tan Anh Nguyen¹, Yuniar Devi Utami¹, Masami Nakamura¹, *Kei Hiruma¹ (1. The University of Tokyo)
Iron effects on prehaustorium formation in *Phtheirospermum japonicum*

*MOHD HAFIFI BIN ABU BAKAR¹, Satoko Yoshida¹ (1. Nara Institute of Science and Technology)

snRNA-seq reveals the transcriptional landscape for host-regulated vascular connections in Arabidopsis and parasitic plant interaction.

*Mengqi Cui¹, Momoko Yamaji¹, Kaori M. Furuta¹, Natsumi Masumoto¹, Kie Kumaishi², Yasunori Ichihashi, Dongbo Shii, Ayako Kawamura, Keiko Sugimoto³, Satoko Yoshida¹ (1. Nara Institute of Science and Technology, 2. Biological Resource Center, RIKEN, 3. Center for Sustainable Resource Science, RIKEN)

The missing link between Casparian strip integrity and rhizobacterial colonization

*Huei-Hsuan Tsai¹, Yuanjie Tang², Niko Geldner¹, Feng Zhou² (1. University of Lausanne, Switzerland, 2. Chinese Academy of Sciences, China)

A plant endophytic bacterium, *Burkholderia sp.* strain 869T2, promotes plant growth of *Arabidopsis*, lettuces, and several other vegetables

*Hau-Hsuan Hwang¹,², Pei-Ru Chien¹, Fan-Chen Huang¹, Chih-Lin Wu¹, Liang-Yu Chen¹, Shih-Hsun Walter Hung¹, Chieh-Chen Huang¹² (1. Department of Life Sciences, National Chung Hsing University, Taichung, Taiwan 402, 2. Innovation and Development Center of Sustainable Agriculture, National Chung Hsing University, Taichung, Taiwan 402)

Dissecting bacterial root colonization strategies using complex synthetic communities on diverse hosts

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Microbiome colonization leads to emergent plant phenotypes at elevated temperature.

*Hannah M. McMillan¹, Sheng Yang He¹,² (1. Department of Biology, Duke University, Durham, NC 27708, USA, 2. Howard Hughes Medical Institute)

Root ER bodies and tryptophan derived secondary metabolites modulate root microbiota assembly

*Arpan Kumar Basak¹,²,³, Anna Piasecka⁴, Jana Huckenbroich³, Gözde Merve Türksoy³, Rui Guan³, Pengfan Zhang³, Felix Getzke³, Ruben Garrido-Oter³⁵, Stephane Hacquard³⁵, Kazimierz Strzałka¹², Paweł Bednarek⁴, Kenji Yamada², Ryoei Thomas Nakano³ (1. Institute of Environmental Sciences, Faculty of Biology, Jagiellonian University, Krakow, Poland, 2. Malopolska Centre of Biotechnology, Jagiellonian University, Krakow, Poland, 3. Department of Plant Microbe Interactions, Max Planck Institute for Plant Breeding Research, Cologne, Germany, 4. Institute of Bioorganic Chemistry, Polish Academy of Sciences, Poznan, Poland, 5. Cluster of Excellence on Plant Sciences (CEPLAS), Max Planck Institute for Plant Breeding Research, Cologne, Germany, 6. Faculty of Biochemistry, Biophysics and Biotechnology, Department of Plant Physiology and Biochemistry, Jagiellonian University, Krakow, Poland)
[PO-171] Site-specific epigenetic regulation-mediated plant defense response  
*Yuan Wang Wang1 (1. Institute of Genetics and Developmental Biology, Chinese Academy of Sciences)

[PO-173] Hi-C Analyses Reveal Altered Chromatin Conformation Under Elevated CO₂  
*Scott Lewis1,2, Alex Harkess3, Kaushik Panda1, Keith Slotkin1,4, Blake Meyers1,4 (1. Donald Danforth Plant Science Center, MO, USA, 2. Washington University in St. Louis, MO, USA, 3. HudsonAlpha Institute for Biotechnology, AL, USA, 4. University of Missouri - Columbia, MO, USA)

[PO-175] Compensation of H2A.Z and Polycomb Repressive Complex 2 in Determining Plant Cell Fate under Low Ambient Temperature  
*Kehui Zhu1,2, Long Zhao1,2, Fangfang Lu1,2, Doris Wagner3, Yue Zhou4, Jun Xiao1,2,5 (1. Key Laboratory of Plant Cell and Chromosome Engineering, Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, Beijing, 2. University of Chinese Academy of Sciences, Beijing, 3. Department of Biology, University of Pennsylvania, Philadelphia, 4. State Key Laboratory of Protein and Plant Gene Research, School of Advanced Agricultural Sciences, Peking-Tsinghua Center for Life Sciences, Peking University, Beijing, 5. CAS-JIC Centre of Excellence for Plant and Microbial Science (CEPAMS), Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, Beijing)

[PO-177] Co-transcriptional regulation of VIN3 expression by a RNA binding protein during vernalization  
*Yusheng Zhao1, Fengying Chen1 (1. CAS, institute of genetics and developmental biology)

[PO-179] Down to earth: VAL1 and VAL2 affect root development in Arabidopsis  
*José María Olvera Herrera1, Atzhiry Dení Vigueras Enciso1, Berenice García Ponce1, Adriana Garay Arroyo1, Elena Alvarez-Buylla1, María De la Paz Sanchez1 (1. Laboratorio de Genética Molecular, Epigenética, Desarrollo y Evolución de plantas. Instituto de Ecología, Universidad Nacional Autónoma de México, México)

[PO-181] Transposition and silencing mechanisms of Tpn1 family transposable elements in the Japanese morning glory  

[PO-183] Antagonistic regulation of endosperm development by maternally and paternally imprinted genes in Arabidopsis thaliana  
*Yuko Wada1, Sho Yamaguchi1, Tamaki Shitabo1, Aoi Hosaka2, Kei Yamaguchi1, Keishiro Yamada1, Ryoko Ebihara1, Asuka Higo3, Kaoru Tonosaki2, Hiroyuki Tsuji3, Seiji Takayama4, Tetsu Kinoshita3, Toshiro Ito1 (1. Nara Inst. of Sci. and Tech., Japan, 2. Yokohama City University, Japan, 3. Nagoya University, Japan, 4. Tokyo University, Japan)
[PO-185] Upstream regulator of genomic imprinting in rice is a small RNA-associated chromatin remodeler
*Avik Kumar Pal¹, Vivek Hari Sundar G¹, Amruta B Nambiar¹, Shivaprasad P V¹ (1. National Centre for Biological Sciences, Tata Institute of Fundamental Research, GKVK Campus, Bangalore 560 065, India)

[PO-187] Single-molecule Targeted Accessibility and Methylation Sequencing of Centromeres, Telomeres, and rDNAs in Arabidopsis
*Weipeng Mo¹, Yi Shu¹, Bo Liu¹, Yangping Long¹, Jixian Zhai¹ (1. Department of Biology, School of Life Sciences, Southern University of Science and Technology, Shenzhen 518055, China)

[PO-189] Regulatory mechanisms and roles of centromere arrangement in Arabidopsis thaliana

[PO-191] Gene-transposon transcripts can be epigenetically regulated and impact gene response to stress conditions in Arabidopsis thaliana
*Jeremy Berthelier¹, Leonardo Furci¹, Shuta Asai², Munissa Sadykova¹, Tomoe Shimazaki¹, Ken Shirasu², Hidetoshi Saze³ (1. Plant Epigenetics Unit, Okinawa Institute of Science and Technology (OIST), Okinawa, Japan, 2. Center for Sustainable Resource Science, RIKEN, Yokohama, Japan)

[PO-193] Translation-coupled Epigenetic Regulation of Transposable Elements in Plants
*Zhen Lei¹,², Ling Wang¹,², Hui Li¹,², Jungnam Cho¹,²,³ (1. CAS Center for Excellence in Molecular Plant Sciences, 2. University of Chinese Academy of Sciences, 3. CAS-JIC Centre of Excellence for Plant and Microbial Science)

[PO-195] RNA-directed DNA Methylation promotes genome integrity in Arabidopsis epiRILs
*ATSUSHI SHIMADA¹, HIDETOSHI SAZE¹ (1. Okinawa Institute of Science and Technology, Japan)

[PO-197] Comprehensive characterization of transposable element-encoded genes and their function in Arabidopsis thaliana
*Carles Borredá¹,², Basile Leduque¹,², Erwann Cailleux²,³, Vincent Colot²,³, Leandro Quadrana¹,² (1. Institute of Plant Sciences Paris-Saclay (IPS2), Université Paris-Saclay, INRAE, Université Evry, Université Paris Diderot, 2. Centre National de la Recherche Scientifique (CNRS), 3. Institut de Biologie de l’Ecole Normale Supérieure (IBENS), Institut National de la Santé et de la Recherche Médicale (INSERM), Ecole Normale Supérieure, PSL Research University)

[PO-199] Induction of T-DNA amplification by retrotransposon-derived sequences
*Wenxin Yuan¹, Lauren Dickinson¹, Chantal LeBlanc¹, Geoffrey Thomson¹, Siyuan Wang²,³, Yannick Jacob¹ (1. Yale University, Department of Molecular, Cellular and Developmental Biology, New Haven, Connecticut, USA, 2. Yale University, Department of Genetics, Yale School of Medicine; New Haven, Connecticut, USA, 3. Yale University, Department of Cell
[PO-201] Re-analysis of publicly available methylomes using signal detection yields new information
*Alenka Hafner¹, Sally Mackenzie¹ (1. Pennsylvania State University)

[PO-203] The Influence of loss of DECREASE IN DNA METHYLATION 1 function on heterosis in Arabidopsis thaliana
*Keita Nishimura¹, Yoshiki Kamiya¹, Kodai Matsuo¹, Motoki Shimizu², Elizabeth S. Dennis³, Ryo Fujimoto¹ (1. Kobe University, Graduate School of Agricultural Science, Kobe, Japan, 2. Iwate Biotechnology Research Center, Department of Genomics and Breeding, Kitakami, Japan, 3. CSIRO, Agriculture and Food, Canberra, Australia)

[PO-205] Live-cell imaging of H3K4me3 in Arabidopsis thaliana
*Megumi Matsuoka¹, Takuya Sakamoto², Mio Shibuta³, Yuko Sato⁴, Hiroshi Kimura⁴, Sachihiro Matsunaga¹ (1. Department of Integrative Biosciences, The University of Tokyo, Japan, 2. Department of Applied Biological Science, Tokyo University of Science, Japan, 3. Faculty of Science, Yamagata University, Japan, 4. Department of Life Science and Technology, Tokyo Institute of Technology, Japan)

[PO-207] Real-time visualization of somatic retrotransposition reveals principles of genomic permissivity to transposon integration
*Jie Chu¹,², Rui Xiao Zhang¹,², Jungnam Cho¹,²,³ (1. National Key Laboratory of Plant Molecular Genetics, CAS Center for Excellence in Molecular Plant Sciences, Chinese Academy of Sciences, Shanghai 200032, China., 2. University of Chinese Academy of Science, Beijing 100049, China., 3. CAS-JIC Centre for Excellence in Plant and Microbial Science, Shanghai 200032, China.)
[PO-172] Elucidation of molecular mechanism underlying the antagonistic roles of class I and II RPD3-like histone deacetylases in response to environmental stresses
*Minoru Ueda¹,², Akihiro Ito³,⁴, Takehiro Suzuki⁵, Satoshi Takahashi¹,², Maho Tanaka¹,², Junko Ishida¹,², Naoshi Dohmae⁵, Minoru Yoshida¹,³, Motoaki Seki¹,²,⁷ (1. Plant Genomic Network Research Team, RIKEN CSRS, Japan, 2. Plant Epigenome Regulation Lab., RIKEN CPR, Japan, 3. Chemical Genomics Research Group, RIKEN CSRS, Japan, 4. Dept. Mol. Biol., Tokyo Univ. Pharmacy &Life Sci., Japan, 5. Biomolecular Characterization Unit, RIKEN CSRS, Japan, 6. Grad. Sch. Agr. &Life Sci., Univ. Tokyo, Japan, 7. Kihara Inst., Yokohama City Univ., Japan)

[PO-174] Regulatory mechanism of heat-active retrotransposons by SET Domain Proteins SUVH2
*Niu Xiaoying¹, Ge Zhiyu¹, Ito Hidetaka¹ (1. Hokkaido university, Japan)

[PO-176] Epigenetic regulation by a long-term environment-responsive promoter of Arabidopsis halleri
*Hanako Shimizu¹, Haruki Nishio¹,², Hiroshi Kudoh¹ (1. Kyoto University, Japan, 2. Shiga University, Japan)

[PO-178] A coiled-coil protein associates Polycomb Repressive Complex 2 with KNOX/BELL transcription factors to maintain silencing of cell differentiation-promoting genes in the shoot apex
*Wentao Wang¹, Feng-Quan Tan³,Junjie Li¹, Yue Lu², Bo Zhu¹, Fangfang Hu¹, Qi Li¹, Yu Zhao¹, Dao-Xiu Zhou³ (1. Huazhong Agricultural University 2. Yangzhou University, 3. University Paris-Saclay)

[PO-180] Chromatin remodeling in the regulation of somatic genome integrity and meiotic inheritance in Arabidopsis
*Wen Hui Shen¹, Mathieu Bruggeman¹, Sebastien Staerck¹, Amit Kumar Singh¹, Salimata Ousmane Sall¹, Jean Molinier¹ (1. IBMP-CNRS, 12 rue du Général Zimmer, 67084 Strasbourg, France)

[PO-182] Effect of transposon mobilization on genomic imprinting in Arabidopsis
*Gerardo del Toro de León¹, Juan Santos-González¹, Claudia Köhler¹ (1. Max Planck Institute of Molecular Plant Physiology)

[PO-184] Dissecting parent-of-origin allele specific expression in Arabidopsis hybrids using fluorescence-activated nuclear sorting
*Ida Velle Myking¹, Karina Stensland Hornslien¹, Renate Marie Alling¹, Kristin Kimo Gannestad¹, Anne Krag Brysting¹, Paul Eivind Grini¹ (1. University of Oslo, Norway)

[PO-186] SbfI-based DNA double-strand breaks induce histones H4K16ac and H2A.Z deposition at multiple cleavage sites in Arabidopsis thaliana
*Kohei Kawaguchi¹, Mei Kazama¹, Takayuki Hata², Mitsuhiro Matsuo³, Junichi Obokata³, Soichirou Satoh¹ (1. Kyoto Prefectural University, Kyoto, Japan, 2. Hirosaki University, Aomori, Japan, 3. Setsunan University, Osaka, Japan)
[PO-188] Cotranscriptional demethylation induces global loss of H3K4me2 from active genes in *Arabidopsis*  
*Shusei Mori*¹, Satoyo Oya¹, Mayumi Takahashi², Kazuya Takashima², Soichi Inagaki¹, Tetsuji Kakutani¹ (1. The University of Tokyo, Japan, 2. National Institute of Genetics, Japan)

[PO-190] Transition of histone H2A.Z distribution on the genomic region in the evolution of *Arabidopsis*  
*Soichi Satoh*¹, Kazuki Mukae¹, Shoma Morita¹, Haruno Narukawa¹, Kohei Kawaguchi¹, Takayuki Hata², Junichi Obokata³ (1. Kyoto Prefectural University, Kyoto, Japan, 2. Hirosaki University, Aomori, Japan, 3. Setsunan University, Osaka, Japan)

[PO-192] Investigating small RNA-mediated silencing mechanisms in duckweeds  
*Veronica Barragan-Borrero*¹, Rana Elias¹, Rodolphe Dombey¹, Christian Parteli¹, Arturo Mari-Ordóñez¹ (1. Gregor Mendel Institute of Molecular Plant Biology, Vienna, Austria, 2. Vienna BioCenter PhD Program, Doctoral School of the University of Vienna and Medical University of Vienna, Austria)

[PO-194] RNA deadenylation pathway suppresses transposable elements in *Arabidopsis*  
*Ling Wang*¹,², Hui Li¹,², Mengxiao Yan³, Jun Yang¹,³, Jungnam Cho¹,²,⁴ (1. CAS Center for Excellence in Molecular Plant Sciences / Institute of Plant Physiology and Ecology, 2. University of Chinese Academy of Science, 3. Shanghai Key Laboratory of Plant Functional Genomics and Resources, Shanghai Chenshan Botanical Garden, 4. CAS-JIC Centre for Excellence in Plant and Microbial Science)

[PO-196] Identification of underlying mechanisms involved in transposon activity and distribution in natural accessions of *Arabidopsis thaliana*  
*Laura Diezma Navas*¹, Mayela Soto¹, Arturo Mari-Ordóñez¹, Magnus Nordborg¹ (1. Gregor Mendel Institute (GMI), Vienna, Austria)

[PO-198] The roles of histone H2A variants for the establishment of transposon-specific silent modification in *Arabidopsis*  
*Shoko Oda*¹, Sayaka Tominaga¹, Shumpei Takeuchi¹, Taiko Kim To¹, Tetsuji Kakutani¹ (1. The University of Tokyo)

[PO-200] Molecular mechanisms on the maintenance of epigenetic silent marks regulated by histone variant H2A.W and chromatin remodeler DDM1  
*Akihisa Osakabe*¹,², Yoshimasa Takizawa³, Naoki Horikoshi³, Suguru Hatazawa³, Lumi Negishi³, Frédéric Berger⁴, Hitoshi Kurumizaka⁵, Tetsuji Kakutani¹ (1. Department of Biological Sciences, The University of Tokyo, Japan, 2. JST PRESTO, Japan, 3. Institute for Quantitative Biosciences, The University of Tokyo, Japan, 4. Gregor Mendel Institute, Austrian Academy of Sciences, Vienna Biocenter, Austria)

[PO-202] High parent dominance of trimethylation of lysine 27 of histone H3 level in interspecific hybrids of *Arabidopsis thaliana*  
Saaya Shiraki¹, Kodai Matsuo¹, Satoshi Takahashi², Motoki Shimizu³, Elizabeth S Dennis⁴, Motoaki Seki², *Ryo Fujimoto*¹ (1. Kobe University, Japan, 2. RIKEN, Japan, 3. IBRC, Japan, 4. CSIRO, Australia)

[PO-204] Contribution of epigenetic mutations to the adaptive evolution of plant by regulating specialized metabolism  
*Kazumasa Shirai*¹, Mitsuhiko P Sato², Ranko Nishi³, Masahide Seki⁴, Yutaka Suzuki⁴, Kousuke Hanada¹ (1. Kyushu Institute of Technology, Japan, 2. Tohoku University, Japan, 3. RIKEN
[PO-206] Enzyme-based fluorescence labeling of DNA methylation on a chromosome scale
*Min Jeong Kim¹,², Woo Lee Choi¹, Jin Hoe Huh¹,²,³ (1. Department of Agriculture, Forestry and Bioresources, Seoul National University, Seoul 08826, Korea, 2. Plant Genomics and Breeding Institute, Seoul National University, Seoul 08826, Korea, 3. Research Institute for Agriculture and Life Sciences, Seoul National University, Seoul 08826, Korea)

[PO-208] A Novel strategy to enhance phenotypic variation in plants
*Hidayah Faisal Alotaibi¹, Ryan Merrit¹, Korawit Opassathian¹, Javier Antunez-Sanchez¹, Jose Gutierrez-Marcos¹ (1. Doctor)
[PO-209] RNA triple helical structure facilitates retrotransposon mobilization in Arabidopsis
*Hui Li\textsuperscript{1,2}, Ling Wang\textsuperscript{1,2}, Zhen Lei\textsuperscript{1,2}, Jungnam Cho\textsuperscript{1,2,3} (1. CAS Center for Excellence in Molecular Plant Sciences / Institute of Plant Physiology and Ecology, 2. University of Chinese Academy of Science, Beijing 100049, China., 3. CAS-JIC Centre for Excellence in Plant and Microbial Science, Shanghai 200032, China.)

[PO-211] siRNAs derived from nitrate reductases, NIA1 and NIA2, play vital roles in growth and stress adaptation
*Yan Yan\textsuperscript{1}, Yinpeng Xie\textsuperscript{1}, Qian Gao\textsuperscript{1}, Yajie Pan\textsuperscript{1}, Xianli Tang\textsuperscript{1}, Wei Yan\textsuperscript{1}, Hongwei Guo\textsuperscript{1} (1. Institute of Plant and Food Science, Department of Biology, Southern University of Science and Technology, Shenzhen, 518055, China)

[PO-213] ARGONAUTE1 nuclear/cytoplasmic shuttling controls small RNA regulation in Arabidopsis thaliana.
*Belén Moro\textsuperscript{1}, Violeta Sanchez Retuerta\textsuperscript{1}, Antoine Bouet\textsuperscript{1}, Andrea Martin Merchán\textsuperscript{1}, Nicolás Bologna\textsuperscript{1} (1. Centre for Research in Agricultural Genomics (CRAG))

[PO-215] Plant miRNA-target 3′-end pairing affects miRNA-mediated translational repression
*Ho-Ming Chen\textsuperscript{1} (1. Academia Sinica, Taiwan)

[PO-217] Reevaluation of Intracellular DCL1 Localization of Wild-type and Mutant Alleles in Relevance to Functional Ability and Phenotypes
*Yuichiro Watanabe\textsuperscript{1} (1. Dept. of Life Sciences, Grad. School of Arts and Sciences, University of Tokyo)

[PO-219] Chromatin-associated microprocessor assembly is regulated by the U1 snRNP auxiliary protein PRP40
Agata Stepień\textsuperscript{1}, Jakub Dolata\textsuperscript{1}, Tomasz Gulanicz\textsuperscript{1,3}, Dawid Bielewicz\textsuperscript{1}, Mateusz Bajczyk\textsuperscript{1}, Dariusz J Smolinski\textsuperscript{2,3}, Zofia Szweykowska Kulinska\textsuperscript{1}, *Artur Jarmolowski\textsuperscript{1} (1. Department of Gene Expression, Faculty of Biology, Institute of Molecular Biology and Biotechnology, Adam Mickiewicz University, Poznan 61-614, Poland., 2. Department of Cellular and Molecular Biology, Nicolaus Copernicus University, Torun 87-100, Poland., 3. Centre for Modern Interdisciplinary Technologies, Nicolaus Copernicus University, Torun 87-100, Poland.)

[PO-221] A U1 snRNP component regulates thermomorphogenesis through alternative RNA splicing in Arabidopsis
*Geeng-Loo Chong\textsuperscript{1}, Ping Chang\textsuperscript{1}, Hsin-Yu Hsieh\textsuperscript{1}, Shih-Long Tu\textsuperscript{1} (1. Institute of Plant and Microbial Biology, Academia Sinica, Taiwan)

[PO-223] Minor-intron splicing is required for proper HSP-mediated plant response to heat shock
Katarzyna Kruszka\textsuperscript{1}, Dawid Bielewicz\textsuperscript{1}, Roman Malinowski\textsuperscript{2}, Misato Ohtani\textsuperscript{3}, Yuichiro Watanabe\textsuperscript{4}, Artur Jarmolowski\textsuperscript{1}, *Zofia Szweykowska Kulinska\textsuperscript{1} (1. Department of Gene Expression, Institute of Molecular Biology and Biotechnology, Faculty of Biology, Adam Mickiewicz University, Poznan, Poland, 2. Integrative Plant Biology Team, Institute of Plant
Cleavage Factor I is essential for maintaining the diversity at the 3′ ends of mRNA in plants
*Tomohiko TSUGE¹, Xiaojuan ZHANG¹, Łukasz SZEWC², Mika NOMOTO³, Marta GARCIA-LEÓ N⁴, Mariko KATO¹, Kei YURA⁵, Vicente RUBIO⁴, Yasuomi TADA³, Tsuyoshi FURUMOTO⁷, Dorothee STAIGER⁸, Takashi AYOYAMA¹, Artur JARMOLOWSKI² (1. ICR, Kyoto University, Japan, 2. Adam Mickiewicz University, Poland, 3. Nagoya University, Japan, 4. CSIC, Spain, 5. Waseda University, Japan, 6. Ochanomizu University, Japan, 7. Ryukoku University, Japan, 8. Bielefeld University, Germany)

Interaction between polyadenylation and C-to-U editing of mitochondrial mRNA involved in cytochrome c maturation

Role of pre-mRNA splicing in lateral root morphogenesis regulated by plastid signal
*Natsu Takayanagi¹, Toshihiro Arae¹, Takayuki Shimizu¹, Gorou Horiguchi², Mitsuhiro Aida³, Hidehiro Fukaki³, Tatsuru Masuda¹, Michitaka Notaguchi³, Takashi Hirayama⁶, Misato Ohtani¹,⁷,⁸ (1. The University of Tokyo, Japan, 2. Rikkyo University, Japan, 3. Kumamoto University, Japan, 4. Kobe University, Japan, 5. Nagoya University, Japan, 6. Okayama University, Japan, 7. Nara Institute of Science and Technology, Japan, 8. RIKEN, Japan)

Arabidopsis mRNA decay landscape shaped by XRN 5′-3′ exoribonucleases
*Wan-Yin Han¹,², Bo-Han Hou¹, Wen-Chi Lee¹, Tze-Ching Chan¹, Tzu-Hsiang Lin¹, Ho-Ming Chen¹,² (1. Agricultural Biotechnology Research Center, Academia Sinica, 2. Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, National Chung-Hsing University, Taichung 40227, Taiwan, and Academia Sinica, Taipei 11529, Taiwan)

Assessing global impact of alternative splicing using multi-omics strategy
*Andres Reyes¹,², Ruben Shrestha¹, Tarabryn Grismer¹,², Shouling Xu¹,² (1. Department of Plant Biology, Carnegie Institution for Science, Stanford, CA, USA., 2. Carnegie Mass Spectrometry Facility, Carnegie Institution for Science, Stanford, CA, USA.)

Structural feature and function of pre-tRNA splicing enzymes from Arabidopsis thaliana and rice
Naoki Okamoto¹, Moniruzzaman Mohammad¹, Kazuhito Akama¹,² (1. Graduate School of Natural Science and Technology, Shimane University, Japan, 2. Department of Life Science, Shimane University, Japan)

Dose-dependent long-distance movement of microRNA399 duplex regulates phosphate homeostasis in Arabidopsis
*Chih-Pin Chiang¹, Jia-Ling Li¹, Tzuy-Jen Chiu¹ (1. Agricultural Biotechnology Research
[PO-241] The emergent complexity of systemic mRNA transport by m⁵C-methylation
*Ying Xu¹, Saurabh Gupta¹, Lei Yang¹, Federico Apelt¹, Eleni Mavrothalassiti¹, Eleftheria Saplaoura¹, Steffen Ostendorp², Julia Kehr², Richard Morris³, Friedrich Kragler¹ (1. Max Planck Institute of Molecular Plant Physiology, 2. Universität Hamburg, Institute for Plant Science and Microbiology, 3. Computational and Systems Biology, John Innes Centre)

[PO-245] Simultaneous detection of miRNA and mRNA at the single-cell level in plant tissues
*Wen-Hsiung Li¹, Chi-Chih Wu¹, Kun-Ting Hsieh¹ (1. Academia Sinica)

*Takashi Hirayama¹,², June-Sik Kim¹,³, Aleksandr Sorokin², Keiichi Mochida³,⁴,⁵ (1. Okayama Univ. IPSR, 2. Okayama Univ. Graduate School of Environment & Life Science, 3. RIKEN CSRS, 4. Yokohama City Univ. KIBR, 5. Nagasaki Univ. School of Information & Data Sciences)
[PO-210] Proof of concept: circular antisense RNAs (caRNAs) as a new mode of action for RNA-based plant protection  
*Timo Schlemmer1,2, Aline Koch1, Albrecht Bindereif2 (1. University of Regensburg, Regensburg, 2. Justus-Liebig-University, Gießen)

[PO-212] The negative effect of flavonoids against dsRNA-cleaving activities of Dicer-like proteins  
*Midori Tabara1, Toshiyuki Fukuhara2, Atsushi Takeda1 (1. Ritsumeikan University, 2. Tokyo University of Agriculture and Technology)

[PO-214] Functions of Arabidopsis FHA2 in miRNA biogenesis  
*Joong-Tak Yoon1, Seung Jun Park1, Hyun-Sook Pai1 (1. Yonsei University, Republic of Korea)

[PO-216] Forward genetics identifies a DEAD box RNA helicase and a DnaJ-domain chaperone as new miRNA biogenesis factors  
*Florian Brioudes1, Florence Jay1, Angel Vergara Cruces1, Axel Giudicatti2, Pablo Manavella2, Olivier Voinnet1 (1. Swiss Federal Institute of Technology (ETH), Zürich, Switzerland, 2. Instituto de Agrobiotecnología del Litoral (IAL), Centro Científico Tecnológico Santa Fe (CCT), Santa Fe, Argentina)

[PO-218] An evolutionarily conserved secondary structure motif regulates the miRNA cleavage  
*Yueying Zhang1, Yiliang Ding1 (1. John Innes Centre, UK)

[PO-220] A mutation in the Arabidopsis tri-snRNP associated protein suppresses the sta1-1 defects by restoring protein-protein interaction  
*Heejin Kim1, Kyoung-jae Yu1, Dong Hye Seo2, Woo Taek Kim2, Byeong-ha Lee1 (1. Sogang university, Korea, 2. Yonsei university, Korea)

[PO-222] Dynamic RNA methylation modulates growth in response to light and temperature in Arabidopsis  
*Ullas Pedmale1 (1. Cold Spring Harbor Laboratory)

[PO-224] Serine/Arginine-rich 45-mediated transcriptional and splicing regulation in plant immunity in Arabidopsis thaliana  
Audrey Bui1, Arden Bui1, Hunter S Beard2, Wesley M Garrett2, Bret Cooper2, Min Gao3, Serena Fan1, Iesh Gujral1, Anthony Long1, Hua Lu3, *Xiao-Ning Zhang1 (1. St. Bonaventure University, USA, 2. USDA-ARS, USA, 3. University of Maryland Baltimore County, USA)

[PO-226] Minor-intron splicing is important for nutrient-dependent growth regulation in plants  

[PO-228] Dissecting the molecular mode of action of restorer-of-fertility-like proteins in plant mitochondria  
*Sang Dang Huynh1, Joanna Melonek1, Catherine Colas des Francs-Small1, Harvey Millar1, Ian
[PO-230] Suppression of the dwarf phenotype of acl5, a mutant defective in thermospermine biosynthesis by a single-base change in a uORF of SAC51
*Yuichi Nishii¹, Daiki Koyama¹, Hiroko Fukushima¹, Taku Takahashi¹ (1. Okayama University, Japan)

[PO-232] A GWAS-driven CROSS-SPECIES APPROACH TOWARDS A SPLICING CODE
Craig IDent¹, Stefan Prodic¹, Aiswarya Balakrishnan¹, James Georges¹, Sourav Mukherjee³, Jordyn Coutts¹, Ya-Long Guo², Alex Fournier-Level³, Richard Burke¹, Sridevi Sureshkumar¹, David Powell⁴, *Sureshkumar Balasubramanian¹ (1. School of Biological Sciences, Monash University, VIC 3800, AUSTRALIA, 2. Institute of Botany, Chinese Academy of Sciences, Beijing, CHINA, 3. School of Biosciences, University of Melbourne, VIC3010, AUSTRALIA, 4. Monash Bioinformatics Platform, Monash University, VIC3800, AUSTRALIA)

[PO-234] Arabidopsis DXO1, a decapping enzyme for NAD-capped RNAs, activates RNMT1 to methylate the mRNA guanosine cap
*Chen Xiao¹, Hailei Zhang¹, Kaien Li¹, Jingmin Hua¹, Feng Zhang¹, Qiongfang Li¹, Shumin Liang¹, Wuzhen Liu¹, Huan Zhong¹, Zongwei Cai¹, Yiji Xia¹ (1. Hongkong Baptist University, HongKong)

[PO-236] NMD and translation of intergenic splicing-mediated polycistronic transcripts
*Yuki Kurikara¹, Fukuma Kikuchii², Masaharu Kawauchi², Tomoko Kurishima³, Minami Matsui³ (1. The University of Tokyo, Japan, 2. Maebashi Institute of Technology, Japan, 3. RIKEN CSRS, Japan)

[PO-238] Single-cell transcriptome map and distribution of mobile mRNAs in heterografted Arabidopsis thaliana in response to nutritional changes
*Yagmur Hasbioglu¹, Federico Apelt¹, Eleni Mavrothalassiti¹, Saurabh Gupta¹, Melissa Tomkins², Richard Morris², Friedrich Kragler¹ (1. Max Planck Institute of Molecular Plant Physiology, Potsdam-Golm, Germany, 2. John Innes Centre, Norwich, UK)

[PO-240] The role of Arabidopsis Cold Shock Proteins in the regulation of RNA mobility
*Diego Pinheiro Brito¹, Steffen Ostendorp², Julia Kehr², Friedrich Kragler¹ (1. Max Planck Institute of Molecular Plant Physiology, Germany, 2. University of Hamburg, Germany)

[PO-242] Insights into tRNA-like structures (TLS) as motifs facilitating long-distance transport of mRNAs
*Eleftheria Saplaoura¹, Lei Yang¹, Frank Machin¹, Shuangfeng Wang¹, Friedrich Kragler¹ (1. Max Planck Institute for Molecular Plant Physiology)

[PO-244] Expanding the horizons of plant RNA research using single molecule FISH
*Susan Duncan¹, Yiliang Ding¹ (1. John Innes Centre)

[PO-246] Transcripts with long or structured translated upstream open reading frames (uORFs) can escape nonsense-mediated mRNA decay (NMD) in plants
Miriam Ayala Cymerman¹, Helen Saul¹, Ronit Farhi¹, Karina Vexler¹, Dror Gottlieb¹, Irina

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Berezin¹, *Orit Shaul¹ (1. Bar-Ilan University, Israel)

[PO-248] Cell-type specific mRNA delivery in heterografted Arabidopsis revealed by single-cell transcriptomics

*Federico Apelt¹, Saurabh Gupta¹, Eleni Mavrothalassiti¹, Yagmur Hasbioglu¹, Eleftheria Saplaoura¹, Richard Morris², Friedrich Kragler¹ (1. Max Planck Institute of Molecular Plant Physiology, Germany, 2. John Innes Centre, UK)
[PO-249] The phosphorylation of carboxyl-terminal eIF2α by SPA kinases contributes to enhanced translation efficiency during photomorphogenesis
*Hui-Hsien Chang¹, Lin-Chen Huang¹, Mei-Chun Cheng¹ (1. National Taiwan University, Taiwan)

[PO-251] Dynamic phosphorylation of ribosomal protein S6A ensures the successful development of young Arabidopsis seedlings
*Yueh Cho¹, Guan-Hong Chen¹, Shu-Hsing Wu¹ (1. Institute of Plant and Microbial Biology, Academia Sinica, Taiwan)

*Violeta Londono Velez¹, Itzell E. Hernandez Sanchez¹, Monika Chodasiewicz¹ (1. Center for Desert Agriculture, Biological and Environmental Science and Engineering Division, King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia)

[PO-255] Linking cold induced variation in RPL7 paralog abundances to the emergence of specialized ribosomes
*Dione Gentry Torfer¹,², Federico Martinez-Seidel¹,², Joachim Kopka¹ (1. Max Planck Institute of Molecular Plant Physiology, Potsdam-Golm, Germany, 2. School of Biosciences, The University of Melbourne, Parkville, VIC, Australia)

[PO-257] Genome-wide identification of Arabidopsis non-AUG-initiated upstream ORFs with evolutionarily conserved regulatory sequences that control protein expression levels
*Yuta Hiragori¹, Hiro Takahashi²,³, Taihei Karino¹, Atsushi Kaido¹, Noriya Hayashi¹, Shun Sasaki¹, Kodai Nakao¹, Yui Yamashita¹,⁴, Satoshi Naito⁴,⁵, Hitoshi Onouchi¹,⁴ (1. Graduate School of Agriculture, Hokkaido University, 2. Graduate School of Medical Sciences, Kanazawa University, 3. Graduate School of Horticulture, Chiba University, 4. Research Faculty of Agriculture, Hokkaido University, 5. Graduate School of Life Science, Hokkaido University)
[PO-250] Functional study of PHYTOCHROME INTERACTING FACTOR in the translational regulation during photomorphogenesis
*Wei Lin¹, Mei-Chun Cheng¹ (1. Department of Biochemical Science & Technology, National Taiwan University)

[PO-252] Role of G3BP1 in Plant Stress Granules
*Fatimah Abdulhakim¹, Aala Abulfaraj², Itzell Hernandez Sanchez¹, Israel Lopez¹, Monika Chodasiewicz¹, Naganand Rayapuram¹, Heribert Hirt¹ (1. Biological and Environmental Sciences and Engineering, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia, 2. King Abdulaziz University, Jeddah, Saudi Arabia)

[PO-254] Deciphering the role of specialized ribosomes in plants’ translation efficiency
*Jose Antonio Duarte-Conde¹, Gemma Sans-Coll¹, Catharina Merchante¹ (1. Instituto de Hortofruticultura Subtropical y Mediterránea, Universidad de Málaga-Consejo Superior de Investigaciones Científicas (IHSM-UMA-CSIC))

[PO-256] Characterization of AtSQTL1, the Dedicated Chaperone of AtRPL10 in Arabidopsis
*Zhi Xing Lau¹, Wan-Hsing Cheng¹ (1. IPMB, Academia Sinica)

[PO-258] Modeling plant alternative translation initiation sites reveals evolutionarily conserved cis-regulatory codes in eukaryotes
*Ya-Ru Li¹, Ting-Ying Wu², Kai-Jyun Chang¹, Daisuke Urano⁴,⁵, Ming-Jung Liu¹,³ (1. Biotechnology Center in Southern Taiwan, Academia Sinica, Taiwan, 2. Institute of Plant and Microbial Biology, Academia Sinica, Taiwan, 3. Agricultural Biotechnology Research Center, Academia Sinica, Taiwan, 4. Temasek Life Sciences Laboratory, SinGapore, 5. National University of SinGapore, SinGapore)
[PO-259] NLP7 is a central integrator of transcription networks in nitrogen signaling and drought stress
Nathan Johnson⁴, Tomás C Moyano¹, Viviana Araus², Jonathan Canan³, Ji Huang⁶, Carly Shanks⁴, Samantha Frangos⁴, Ariel Herrera¹, Francisca Blanco-Herrera¹,², Gloria M Coruzzi⁴, Elena A Vidal¹,², *Jose M Alvarez¹,² (1. Centro de Biotecnología Vegetal, Facultad de Ciencias de la Vida, Universidad Andres Bello, Santiago 8370186, Chile, 2. ANID-Millennium Science Initiative–Millennium Institute for Integrative Biology (iBIO), Santiago 7500565, Chile, 3. Centro de Genómica y Bioinformática, Facultad de Ciencias, Universidad Mayor, 8580745 Santiago, Chile., 4. Center for Genomics and Systems Biology, New York University, New York, NY 10003)

[PO-261] Coregulation of glutamine synthetase1;2 (GLN1;2) and NADH-dependent glutamate synthase (GLT1) gene expression in Arabidopsis roots in response to ammonium supply
*Soichi Kojima¹,², Hideki Takahashi²,³, Keiki Ishiyama¹,² (1. Tohoku University, 2. RIKEN, Japan, 3. Michigan State University, USA)

[PO-263] Histone chaperone NAP1 proteins are involved in plant growth under nitrogen deficient conditions in Arabidopsis thaliana
*Jie Linnan¹, Miho Sanagi¹, Yongming Luo¹, Haruna Maeda¹, Yoichiro Fukao³, Yukako Chiba¹, Shuichi Yanagisawa³, Junji Yamaguchi¹, Junpei Takagi¹, Takeo Sato¹ (1. Hokkaido University, 2. Ritsumeikan University, 3. The University of Tokyo)

[PO-265] Regulation of high-affinity nitrate uptake activity by NRT2.1 phosphorylation
*Yuri Okubo¹, Saki Noda¹, Yoshikatsu Matsubayashi¹ (1. Nagoya University, Japan)

[PO-267] Glucosinolate catabolism maintains glucosinolate profiles and transport in sulfur-starved Arabidopsis
*Liu Zhang¹, Ryota Kawaguchi¹, Tomomi Morikawa-Ichinose¹, Alaa Allahham², Takuo Enomoto³, Sho Nishida³, Meike Burow⁴, Akiko Maruyama-Nakashita¹ (1. Kyushu University, Japan, 2. University of Freiburg, Germany, 3. Saga University, Japan, 4. University of Copenhagen, Denmark)

[PO-269] Plant iron nutrition: towards a new paradigm?
Kevin Robe¹, Geneviève Conejero¹, Fei Gao¹, Marie barberon², Pierre Fourcroy¹, Shunsuke Watanabe¹, Esther Izquierdo¹, *Christian DUBOS¹ (1. IPSiM, Univ Montpellier, CNRS, INRAE, Institut Agro, Montpellier, France, 2. UNIGE, university of Geneva, Geneva, Switzerland)

[PO-271] The Effect of Chromatin Remodeling on Iron Homeostasis
*Justin Su¹, Emily Y Park¹, Isabella G Han¹, Elizabeth M Parsons¹, Kaitlyn M Tsuyuki¹, Jeeyon Jeong¹ (1. Department of Biology, Amherst College, USA)

[PO-273] Identification of Sorghum bicolor iron transporter gene using Arabidopsis gene knockout line.
*Ryoichi Araki¹,², Nanaka Tsuji¹, Matsugi Kashiwagi¹, Hiroyuki Ii³ (1. Faculty of Education, Wakayama University, Japan, 2. Center for Food & Agriculture Research and Education, Wakayama University, Japan, 3. Faculty of Systems Engineering, Wakayama University,
A FIT/WRKY complex modulates the biosynthesis of coumarins in response to environmental pH

*Jorge Enrique Salazar Henao¹, Dharmesh Jain²,³, Wolfgang Schmidt²,⁴,⁵ (1. Institute of Plant and Microbial Biology, Academia Sinica, Taipei 11529, Taiwan, 2. Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, Academia Sinica and National Chung-Hsing University, Taipei 11529, Taiwan, 3. Graduate Institute of Biotechnology, National Chung-Hsing University, Taichung 40227, Taiwan, 4. Biotechnology Center, National Chung-Hsing University, Taichung 40227, Taiwan, 5. Genome and Systems Biology Degree Program, College of Life Science, National Taiwan University, Taipei 10617, Taiwan)

Understanding the molecular mechanisms mediating the crosstalk between iron and sulfur networks in Arabidopsis.

*David Mendoza¹, Ron Mittler¹ (1. University of Missouri)

Inhibition of TOR, a positive growth regulator, rescues root growth suppression under limited boron condition in Arabidopsis thaliana

*Ramita Jamornjureekul¹, Naoki Iwasa¹, Kyoko Miwa¹ (1. Hokkaido University, Japan)

Functional Analysis of Arabidopsis Magnesium Ion Transporter AtMRS2-1

*Xiaoyu Yang¹, Natsuko I. Kobayashi¹, Yoshioki Hayashi², Koichi Ito², Motoyuki Hattori³, Yoshitaka Moriwaki¹, Keitaro Tanoi¹ (1. Graduate School of Agricultural and Life Sciences, The University of Tokyo, 2. Graduate School of Frontier Sciences, The University of Tokyo, 3. School of Life Sciences, Fudan University)

Starvation-induced transcriptional control: metabolic signals, transmission via the central metabolic kinase SnRK1 and downstream gene regulation

*Jan Draken¹, Regina Feil², John Lunn², Christoph Weiste³, Wolfgang Dröge-Laser¹ (1. Julius-Maximilians-University Würzburg Department of Pharmaceutical Biology, Germany, 2. Max Planck Institute of Molecular Plant Physiology Potsdam-Golm, Germany)

Functional analysis of IDD4, a transcription factor which regulates root growth through sugar signaling in early developmental stages

*Ryoichi Shiroma¹, Akiko Kozaki¹ (1. Shizuoka University, Japan)

bZIP1, 53 and 63 Transcription Factors are required in Starch Metabolism and Energy Homeostasis to maintain Vigorous Growth

*Raphael de Araújo Campos¹, Américo José Carvalho Viana¹, João Guilherme Portugal Vieira¹, Pamela Tavares Carlson¹, Thyelen Engel de Jesus¹, Michel Vincentz¹ (1. University of Campinas)

Extrachromosomal circular DNA in response to phosphate starvation in Arabidopsis

*Monica Rojas-Triana¹, Juan Antonio Garcia-Martin³, Miguel Miñambres⁴, Juan Carlos Oliveros³, Javier Paz-Ares² (1. Section of Ecology and Evolution, Department of Biology, University of Copenhagen, 2. Department of Plant Molecular Genetics, National Centre for Biotechnology (CNB-CSIC), 3. Bioinformatics for Genomics and Proteomics, National Centre for Biotechnology (CNB-CSIC), 4. Singlelon Biotechnologies)
[PO-260] Nitrogen-responsive SnRK1-FBH4 module affects flowering time and metabolism in Arabidopsis
*Mihoko Sanagi¹, Akio Kubo¹, Van Quoc Giang¹, Filip Rolland², Junpei Takagi¹, Takeo Sato¹ (1. Hokkaido University, Japan, 2. KU Leuven, Belgium)

[PO-262] Nitrate fluctuation impacts cytokinin biosynthesis through modification of IPT3 chromatin profiles in Arabidopsis roots.
*Fanny Bellegarde³, Olivia Tjahjono¹, Miki Shibutani¹, Hitoshi Sakakibara¹ (1. Nagoya University, Nagoya, Japan)

[PO-264] Elevated CO₂ impedes Arabidopsis N nutrition through the inhibition of the root high-affinity nitrate uptake system
*Alain Gojon¹, Océcane Cassan¹, Léa-Lou Pimparé¹, Antoine Beckers¹, Lîen Bach¹, Sophie Lèbre²,³, Antoine Martin¹ (1. IPSiM, Univ Montpellier, CNRS, INRAE, Institut Agro, Montpellier, France, 2. IMAG, Univ Montpellier, CNRS, Montpellier, France, 3. Univ Paul Valery, Montpellier, France)

[PO-266] Role of potassium-dependent alternative splicing of MYB59 in maintenance of potassium concentration in shoots of Arabidopsis thaliana
Takuo Eomoto¹, Nobuhiro Tanaka², Toru Fujiwara³, *Sho Nishida¹,⁴ (1. Faculty of Agriculture, Saga University, Japan, 2. Institute of Crop Science, NARO, Japan, 3. Graduate School of Agricultural and Life Sciences, The University of Tokyo, Japan, 4. United Graduate School of Agricultural Sciences, Kagoshima University, Japan)

[PO-268] The Necessity of SLIM1 C-Terminal Region for Sulfur Deficiency Response
*Akiko Maruyama-Nakashita¹, Yuki Jodoi¹, Justyna Piotrowska², Nguyen Ha Trang¹, Anna Wawrzynska², Hidetaka Takahashi³, Agnieszka Sirko² (1. Kyushu University, Japan, 2. Institute of Biochemistry and Biophysics Polish Academy of Sciences, Poland, 3. Michigan State University, USA)

[PO-270] FEP/IMA peptides are required for Fe regulation in vascular plants.
*Aleksandr Sorokin¹,², Gui J Lei³, Naoki Yamaji², Sheng Huang², Satoshi Okada¹, Keiichi Mochida²,³,⁴,⁵,⁶,⁷, Jian F Ma², Takashi Hirayama¹,³ (1. Group of Environmental Stress Response Systems, Institute of Plant Science and Resources, Okayama University, Okayama, Japan, 2. Group of Plant Stress Physiology, Institute of Plant Science and Resources, Okayama University, Okayama, Japan, 3. Crop Design Research Team, Institute of Plant Science and Resources, Okayama University, Okayama, Japan, 4. RIKEN Center for Sustainable Resource Science, Yokohama, Kanagawa, Japan, 5. Kihara Institute for Biological Research, Yokohama City University, Yokohama, Kanagawa, Japan, 6. Microalgae Production Control Technology Laboratory, RIKEN Baton Zone Program, RIKEN Cluster for Science, Technology and Innovation Hub, Yokohama, Japan, 7. School of Information and Data Sciences, Nagasaki University, Nagasaki, Japan, 8. Graduate School of Environmental and Life Science, Okayama University, Okayama, Japan)
[PO-272] Investigating the Biological Role of Ferroportin 3
*Jeeyon Jeong¹, Sara Omer¹, Claire Macero¹, Kelly Zheng¹, Kaitlyn Tsuyuki¹, Dayisha Daga¹, Leah Kim¹, Jenny Gallegos Iraheta¹ (1. Department of Biology, Amherst College, USA)

[PO-274] A novel Arabidopsis uptake transporter of coumarin plays a crucial role in root Fe uptake
*Shunsuke WATANABE¹, Yuri KANNO², Chérhazad BOUSTANI¹, Mitsunori SEO², Christian DUBOS¹ (1. IPSiM, Univ Montpellier, CNRS, INRAE, Institut Agro, France, 2. RIKEN, CSRS, Japan)

[PO-276] Coumarins delineate the cross-talk between manganese and iron uptake
*Yi-Hsiu Tsai¹,2, Wolfgang Schmidt² (1. Institute of Plant Biology, National Taiwan University, Taiwan, R.O.C, 2. Institute of Plant and Microbial Biology, Academia Sinica, Taiwan, R.O.C)


[PO-280] Phosphorylation/Dephosphorylation-mediated Regulation of the Polar Localization of a Borate Transporter BOR1 in Arabidopsis thaliana
*Keita Muro¹, Rintaro Yoshida¹, Yudai Shimizu², Keisuke Ohashi³, Yuka Ogino³, Koji Kasai⁴, Chiaki Hori³, Taichi Takasuka³, Toru Fujiwara⁴, Junpei Takano¹ (1. Osaka Metropolitan University, Japan, 2. Osaka Prefecture University, Japan, 3. Hokkaido University, Japan, 4. The University of Tokyo, Japan)

[PO-282] Defensin-like proteins induced by zinc deficiency are involved in Arabidopsis root elongation
Sachie Kimura¹, Aleksia Vaattovaara², Hidetaka Kaya³, Mami Kobayashi¹, Izumi C Mori⁴, Minoru Nagano¹, *Yoichiro Fukao¹ (1. Ritsumeikan University, 2. University of Helsinki, 3. Ehime University, 4. Okayama University)

[PO-284] The Arabidopsis ACR9 protein is a repressor of the glucose signaling pathways
*Hong-Sheng Liao¹, Ying-Jhu Chen¹, Wei-Yu Hsieh¹, Yi-Chiou Li¹, Ming-Hsiun Hsieh¹,² (1. Institute of Plant and Microbial Biology, Academia Sinica, Taipei 11529, Taiwan, 2. Department of Life Sciences, National Central University, Taoyuan 32001, Taiwan)

[PO-286] Nutrient sensing in plants by O-GlcNAcylation and O-Fucosylation
*Shouling Xu¹, Yang Bi¹, Ruben Shrestha¹, Zhenzhen Zhang¹, Zhiyong Wang¹ (1. Carnegie Institution at Stanford)

[PO-288] Mechanisms for phosphorylation and granule formation of a Raf-like kinase, PHOTOSYNTHESIS-RELATED RAF, in the liverwort Marchantia polymorpha
Asuka Shintaku¹, Nodoka Handa², Eri Koide¹, Megumi Iwano¹, Takayuki Kohchi¹, *Ryuichi Nishihama¹,² (1. Graduate School of Biostudies, Kyoto University, Japan, 2. Department of...
[PO-291] The Role of NTRC, 2-Cys-Peroxiredoxins and thioredoxin f in photosynthesis in Arabidopsis thaliana when acclimated to different light conditions
*Louis Poeker¹, Peter Geigenberger¹ (1. Ludwig-Maximilians-Universität München (LMU))

[PO-293] UV-B acclimation in Arabidopsis thaliana decreases the efficacy of the herbicide atrazine, which is mediated through the UVR8 signaling pathway
*Chris Groves¹, Kerry Franklin¹ (1. University of Bristol)

[PO-295] The molecular mechanisms underlying floral organ photosynthesis
*Roisin Fattorini¹, Jesse McCarthy¹, Diarmuid O'Maoileidigh²,¹ (1. University of Liverpool, 2. Maynooth University)
[PO-290] The Zinc-Finger Thylakoid-Membrane Protein FIP in involved in photosynthesis apparatus adaptation to changing light condition
*Maciej Jerzy Bernacki1, Damian Witoń1, Weronika Czarnocka1, Anna Rusaczonęk2, Piotr Gawroński1, Roshanak Zarrin Ghalami1, Muhammad Kamran1, Stanisław Karpiński1 (1. Department of Plant Genetics, Breeding and Biotechnology, Institute of Biology, Warsaw University of Life Sciences, Nowoursynowska Street 159, 02-776 Warsaw, Poland, 2. Department of Botany, Institute of Biology, Warsaw University of Life Sciences, Nowoursynowska Street 159, 02-776 Warsaw, Poland)

[PO-292] Difference between leaf and single-plant photosynthesis of Arabidopsis thaliana under fluctuating light conditions
*Kazuma Sakoda1, Sousuke Imamura1, Kazuhiro Takaya1 (1. NTT Space Environment and Energy Laboratories)

[PO-294] The function of thylakoid membrane fusion by FZL protein in sustaining optimized photosynthetic electron transfer
*Yu Ogawa1, Megumi Iwano2, Akihiro Kawamoto3, Genji Kurisu3, Toshiharu Shikanai2, Wataru Sakamoto1 (1. Okayama University, Japan, 2. Kyoto University, Japan, 3. Osaka University, Japan)

[PO-296] Chloroplast functions in photoautotrophically cultured green cells of Arabidopsis

Kotaro Ogasa1, Gen Takenaka1, Akiko Yoshihara2, Koichi Kobayashi2, *Satomi Takeda2 (1. Graduate School of Science, Osaka Prefecture University, 2. Graduate School of Science, Osaka Metropolitan University)
[PO-297] BrMYBR1, an R2R3 MYB transcription factor, directly inhibits anthocyanin biosynthesis in Chinese cabbage
*DaHye Kim$^{1,2}$, JiYeon Kim$^{1,2}$, YooJin Lee$^{1,2}$, SunHyung Lim$^{1,2}$ (1. Division of Horticultural Biotechnology, School of Biotechnology, Hankyong National University, 2. Research Institute of International Technology and Information, Hankyong National University,)

[PO-299] MHP1 and MHL generate odd-chain fatty acids from 2-hydroxy fatty acids in sphingolipids and are related to immunity in *Arabidopsis thaliana*
Marina Ushio$^1$, Toshiki Ishikawa$^2$, Takakazu Matsuura$^3$, Izumi C Mori$^3$, Maki Kawai-Yamada$^2$, Yoichiro Fukao$^1$, *Minoru Nagano$^1$ (1. Ritsumeikan University, Japan, 2. Saitama University, Japan, 3. Okayama University, Japan)

*Van Cam Nguyen$^{1,2,3,4}$, Yuki Nakamura$^{1,2,3,5,6}$ (1. Plant lipid research team, RIKEN Center for Sustainable Resource Science (CSRS), RIKEN Yokohama, 2. Institute of Plant and Microbial Biology, Academia Sinica, 128 sec.2 Academia Road, Nankang, Taipei 11529, Taiwan, 3. Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, Academia Sinica and National Chung Hsing University, Taipei 11529, Taiwan, 4. Graduate Institute of Biotechnology, National Chung Hsing University, Taichung 40227, Taiwan, 5. Biotechnology Center, National Chung Hsing University, Taichung 40227, Taiwan, 6. Department of Biological Sciences, Graduate School of Science, The University of Tokyo, Tokyo 113-8654, Japan)
Multi-omics approach to elucidate the biosynthesis of diterpene alkaloids in Aconitum japonicum

*Megha Rai1,2,3, Amit Rai2,4, Tetsuya Mori4, Ryo Nakabayashi4, Michimi Nakamura1, Hideyuki Suzuki5, Hiroki Takahashi2,6, Mareshige Kojoma7, Kazuki Saito2,3,4, Mami Yamazaki1,2 (1. Graduate School of Pharmaceutical Sciences, Chiba University, 2. Plant Molecular Science Center, Chiba University, 3. Institute for Advanced Academic Research, Chiba University, 4. RIKEN Center for Sustainable Resource Science, 5. Kazusa DNA Research Institute, 6. Medical Mycology Center, Chiba University, 7. Health Science University of Hokkaido)

LIPID RICH 1 regulates the metabolic balance between triacylglycerols and starch in plastids of Arabidopsis thaliana

Mebae Yamaguchi1, Shuji Shigenobu2, Katsushi Yamaguchi2, Yasuhiro Higashi3, Yozo Okazaki4, Kazuki Saito3, Emi Mishiro-Sato5, Keiko Kano2, Shigeo S. Sugano6, Shuichi Fukuyoshi7, Haruko Ueda8, Ikuko Hara-Nishimura8, *Takashi L. Shimada1 (1. Graduate School of Horticulture, Chiba University, 2. National Institute for Basic Biology, 3. RIKEN Center for Sustainable Resource Science, 4. Graduate School of Bioresources, Mie University, 5. Institute of Transformative Bio-Molecules, Nagoya University, 6. National Institute of Advanced Industrial Science and Technology, 7. Institute of Medical, Pharmaceutical and Health Sciences, Kanazawa University, 8. Faculty of Science and Engineering, Konan University)
[PO-303] Isolation of interactors of Agrobacterium cytokinin synthase Tmr by Proximity Labeling method (PL method)
*Shuhei Komori¹, Hitoshi Sakakibara¹, Mimi Hashimoto¹ (1. Nagoya University, Nagoya, Japan)

[PO-305] D27-like isomerases in Arabidopsis: at the crossroads of strigolactone and ABA biosynthesis?
*Vilmos Soos¹, Zoltan Tolnai¹, Zsolt Gulyas¹ (1. Centre for Agricultural Research, Martonvásár, Hungary)

[PO-307] Survey the tissue localization of brassinosteroid biosynthesis enzymes by using fluorescent labeled specific inhibitors combined with mutants of CYP90s
*Keimei Oh¹, Akio Watanabe², Sumiya Tomio¹, Tomoki Hoshi¹, Yamada Kazuhiro¹ (1. Department of Biotechnology, Akita Prefectural University, 2. Department of Bioproduction, Akita Prefectural University)

[PO-309] Genetic analysis of β-carotene isomerase genes in Arabidopsis
*Hitomi Kobuna¹, Daisuke Fukuhara¹, Yoshiya Seto², Tetsuo Kushiro², Masanori Okamoto¹,³ (1. Utsunomiya Univ., Japan, 2. Meiji Univ., Japan, 3. RIKEN CSRS, Japan)

[PO-311] Genetic mutant analysis of Arabidopsis CYP707As, which encode key enzymes for ABA catabolism.
*Masanori Okamoto¹,², Momoka Miyata¹, Ryosuke Mega³, June-Sik Kim², Mitsunori Seo², Eiji Nambara⁴ (1. Utsunomiya Univ., Japan, 2. RIKEN CSRS, Japan, 3. Yamaguchi Univ., Japan, 4. Univ. of Toronto, Canada)
[PO-302] Towards resolving the contribution of the IAOx pathway to auxin biosynthesis in *Arabidopsis thaliana*
* Mario Fenech-Torres¹, Javier Brumos¹,², Jose Alonso¹, Anna Stepanova¹ (1. North Carolina State University, 2. Institute for Plant Molecular and Cellular Biology - IBMCP (CSIC-UPV))

[PO-304] Uncovering Regulatory Mechanisms of Salicylic Acid Biosynthesis and plant systemic immunity in Brassicaceae species
Rabia Ahuja¹,², Jiyeon Hyun¹, Saborni Maiti¹, Amanda Navodani¹,², Chan Yul Yoo¹, *Heejin Yoo¹,² (1. School of Biological Science, University of Utah, Salt Lake City, UT 84112 USA, 2. Department of Plant Biology, Ecology, and Evolution, Oklahoma State University, Stillwater, OK 74078 USA, )

[PO-306] Steps catalyzed by unknown enzymes in brassinosteroid biosynthesis.
*Rikuto Hamada¹, Akira Yata², Sae Sumiya¹, Toshiyuki Ohnishi³, Kenji Miura², Takahito Nomura¹ (1. Utsunomiya Univ., Japan, 2. Univ. of Tsukuba, Japan, 3. Shizuoka Univ., Japan)

[PO-308] Initiation of root Jasmonate biosynthesis
*Yunjing Ma¹,², Debora Gasperini² (1. Martin Luther University Halle-Wittenberg, 2. Leibniz Institute of Plant Biochemistry (IPB))

[PO-310] Strigolactone biosynthesis in Arabidopsis and bryophytes
*Kozue Hiugano¹, Xiaonian Xie¹, Masaki Shimamura², Takahito Nomura¹ (1. Utsunomiya Univ., Japan, 2. Hiroshima Univ., Japan)

[PO-312] Knockout of an ER-localized HSP90 family protein impairs seedling development and cellular auxin homeostasis in Arabidopsis
*Rongmin Zhao¹, Jenan Noureddine¹, Bona Mu¹, Homaira Hamidzada¹, Wai Lam Mok¹, Diana Bonea¹, Eiji Nambara¹ (1. University of Toronto)
[PO-313] An activity of phytoene desaturase negatively regulates auxin biosynthesis and signaling


[PO-315] Genetic analysis of the TGN-localized membrane trafficking factor Sec1/Munc18 protein BEN2/VPS45 in Arabidopsis development

*Kosuke Ogita¹, Yuki Matsuura², Hirokazu Tanaka¹ (1. Life Sciences Program, Graduated School of Agriculture, Meiji University, 2. Department of Biological Sciences, Graduate School of Science, Osaka University)

[PO-317] Physiological studies on the auxinic regulation of hydrotropism in Arabidopsis thaliana

*Kotaro Akita¹, Yutaka Miyazawa¹ (1. Yamagata University, Japan)

[PO-319] Auxin-sensitive autonomous bioluminescence to visualize auxin in near-to-nature conditions

*Michael Karampelias¹, Nikola Drážná¹, Zuzana Vondrakova¹, Karel Müller¹, Karen Sarkisyan², Jan Petrasek¹ (1. Laboratory of Plant Hormonal Regulations in Plants, Institute of Experimental Botany, Prague, Czech Republic, 2. Institute of Clinical Sciences, Faculty of Medicine and Imperial College Centre for Synthetic Biology, Imperial College London, London, UK)

[PO-321] A phosphoinositide hub connects CLE peptide signaling and polar auxin efflux regulation

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[PO-323] Characterization of the BIMP family in Arabidopsis thaliana as a link between brassinosteroid signaling and cortical microtubules in plant growth

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[PO-325] brassinosteroid receptor BRI1 deubiquitination by UBP12/UBP13 fine-tunes plant growth

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[PO-327] Chemical biology study of jasmonate signaling by development of a biased agonist derived from stereoisomers of coronatine
*Kengo Hayashi1, Nobuki Kato1, Khurram Bashir2,3, Haruna Nomoto1, Misuzu Nakayama1, Andrea Chini4, Satoshi Takahashi2, Hiroaki Saito5, Raku Watanabe6, Yousuke Takaoka1, Maho Tanaka2, Atsushi J. Nagano2,8, Motoaki Seki2, Roberto Solano4, Minoru Ueda1,6 (1. Graduate School of Science, Tohoku University, Japan, 2. RIKEN, Japan, 3. Syed Babar Ali School of Science and Engineering, Lahore University of Management Sciences, Pakistan, 4. Department of Plant Molecular Genetics, Centro Nacional de Biotecnología, Consejo Superior de Investigaciones Científicas, Spain, 5. Faculty of Pharmaceutical Sciences, Hokuriku University, Japan, 6. Graduate School of Life Science, Tohoku University, Japan, 7. Faculty of Agriculture, Ryukoku University, Japan, 8. Institute for Advanced Biosciences, Keio University, Japan)

[PO-329] Transcriptome landscape under combinations of Salicylic Acid and Jasmonic Acid in various concentrations

[PO-331] Significance of EIN2 Phosphorylation Status to EIN2 Stability and CTR1-independent Ethylene Signaling
*HangWei Zhao1, Ying Zhang, Chi-Kuang Wen1 (1. CAS Center for Excellence in Molecular Plant Sciences)

[PO-333] Dissecting apical hook development with small molecules
*Kai Jiang1, Yalikunjiang Aizezi1, Xinran Xie1, Guangshuo Guo1, Yinpeng Xie1, Hongwei Guo1 (1. Southern University of Science and Technology)

[PO-335] Isolation of an Arabidopsis mutant involved in abscisic acid-independent stomatal closure

[PO-337] bHLH transcription factor AKSs mediate ABA-dependent down regulation of gene expression in guard cells and seedlings
*Yuki Hayashi1, Yohei Takahashi2, Toshinori Kinoshita1,2 (1. Division of Biological Science, Graduate School of Science, Nagoya University, 2. WPI-ITbM, Nagoya University)

[PO-339] Integrating multi-omics data reveals energy and stress signaling activated by abscisic acid in Arabidopsis
*Takuya Yoshida1,2, Julia Mergner3,4, Zhenyu Yang1, Jinghui Liu1, Alisdair R. Fernie2, Erwin Grill1 (1. Lehrstuhl für Botanik, Technische Universität München, Germany, 2. Max-Planck-Institut für Molekulare Pflanzenphysiologie, Germany, 3. Bavarian Center for Biomolecular Mass Spectrometry at Klinikum rechts der Isar (BayBioMS@MRI), Technical University of Munich, Germany, 4. Chair of Proteomics and Bioanalytics, Technical University of Munich,
[PO-341] The evolution of ABA receptors: Transition to hormone-regulated signaling.
*Assaf Mosquna¹, Yufei Sun¹, Gil Zimran¹, Michal Shpilman¹ (1. the Hebrew University of Jerusalem)

[PO-343] Abscisic acid and G-protein regulated redox proteome of Arabidopsis
*Sona Pandey¹, Amanda L Smythers², Parinita Majumdar¹, Leslie M Hicks² (1. Donald Danforth Plant Science Center, St. Louis, MO USA 63132, 2. University of North Carolina, Chapel Hill, NC USA 27599)
Poster 13 Hormone signaling

[PO-314] PIN-Interacting Protein 1 (PIP1), a phospho-lipid modifier, modulates PINs’ intracellular trafficking in Arabidopsis
*KWANG HO MAENG MAENG¹, Hyodong Lee¹, Hyung-Taeg Cho¹ (1. Department of Biological Sciences, Seoul National University)

[PO-316] SYP4 Qa-SNARE proteins redundantly regulate auxin distribution and root development in Arabidopsis
Narumi Fukasawa¹, Kosuke Ogita¹, Kaori Katagiri², Tsubasa Fujiyaki², Tomohiro Uemura³, *Hirokazu Tanaka¹,² (1. Life Sciences Program, Graduate School of Agriculture, Meiji University, 2. Department of Life Sciences, School of Agriculture, Meiji University, 3. Graduate School of Humanities and Sciences, Ochanomizu University)

[PO-318] An intronic enhancer directs stomatal lineage and epidermal-specific expression of PIN-FORMED 3 (PIN3) in Arabidopsis
*ZIMIN ZHOU¹, ON SUN LAU¹ (1. National University of Singapore)

[PO-320] ABP1-likes and TMKs are co-receptors for extracellular auxin in plants
*Tongda Xu¹, Yongqiang Yu¹, Wenxin Lin¹, Wenwei Lin², Zhenbiao Yang² (1. Fujian Agriculture and Forestry University, Fuzhou, Fujian, China, 2. University of California, Riverside)

[PO-322] MAJOR LATEX PROTEINS affect auxin signaling
*Michael Liebthal¹, Victoria Russ¹, Thuy Thanh Truong²,³, Alexander Christmann¹, Philippe Schmitt-Kopplin²,³, Erwin Grill¹ (1. Chair of Botany, TUM School of Life Sciences Weihenstephan, Technical University Munich, Freising, Germany, 2. Research Unit Analytical BiogeoChemistry (BGC), German Research Center for Environmental Health, Helmholtz Zentrum München, Neuherberg, Germany, 3. Chair of Analytical Food Chemistry, TUM School of Life Sciences Weihenstephan, Technical University Munich, Freising, Germany)

[PO-324] A signaling circuit maintains cell integrity during hormone induced cell expansion
*Ajeet Chaudhary¹, Yu Chun Hsiao, Zhuoran Lyu¹, Alice Cheung², Hen-Ming Wu², Zhiyong Wang¹ (1. Department of Plant biology, Carnegie Science Stanford, 2. Department of Biochemistry and Molecular Biology, Molecular and Cell Biology Program, Plant Biology Program, University of Massachusetts, Amherst, MA 01003, USA.)

[PO-326] Ectopic expression of a corepressor OsTPR1 in Arabidopsis to dissect the crosstalk between GA and JA signaling pathways
*Shing Lon Ho¹, Yi Wen Liu¹, Zhen Lau Bae¹, Wan Yu Hsieh¹ (1. Department of Agronomy, National Chiayi University, Taiwan)

[PO-328] Mode of action of a novel putative plant defense activator that induces the accumulation of both jasmonic acid and salicylic acid in Arabidopsis
*Kazuyuki Kuchitsu¹, Kentaro Namiki¹, Taiki Funahashi¹, Nobutaka Kitahata¹,², Yuho Saito¹, Masataka Nakano¹, Kenji Hashimoto¹, Tadao Asami², Seisuke Kimura³, Kouji Kuramochi¹ (1. Tokyo University of Science, Japan, 2. University of Tokyo, 3. Kyoto Sangyo University)
[PO-330] The carboxy terminal transmembrane domain of SPL7 mediates interaction with RAN1 at the endoplasmic reticulum to regulate ethylene signalling in Arabidopsis
*Yanzhi YANG¹, Lei Li¹ (1. Peking University)

[PO-332] The miRNA156/SPL9 module controls apical hook development via auxin responses
*Flaviani Gabriela Pierdona¹,², Ullas Pedmale², Fabio Tebaldi Silveira Nogueira¹ (1. University of Sao Paulo, 2. Cold Spring Harbor Laboratory)

[PO-334] More than just ABA receptors: Ligand spectrum of RCARs from Arabidopsis and Marchantia
*Isabel Doch¹, Daniel Hemmler²,³, Thuy Thanh Truong²,³, Alexander Christmann¹, Philippe Schmitt-Kopplin²,³, Rishikesh P Bhalaria⁴, D Magnus Eklund⁵, Erwin Grill¹ (1. Chair of Botany, TUM School of Life Sciences Weihenstephan, Technical University Munich, Freising, Germany, 2. Research Unit Analytical BioGeoChemistry (BGC), German Research Center for Environmental Health, Helmholtz Zentrum München, Neuherberg, Germany, 3. Chair of Analytical Food Chemistry, TUM School of Life Sciences Weihenstephan, Technical University Munich, Freising, Germany, 4. Umeå Plant Science Centre, Department of Forest Genetics and Plant Physiology, Swedish University of Agricultural Sciences, Umeå, Sweden, 5. Department of Ecology and Genetics, Evolutionary Biology Centre, Uppsala University, Uppsala, Sweden)

[PO-336] Guard-cell expression of abscisic acid receptors for engineering water efficient-productive plants
*Zhenyu Yang¹, Jinghui Liu¹, Lisa Groß¹, Alexander Chistmann¹, Rudi Schäufele², Bernard Genty³, Erwin Grill¹ (1. Department of Botany, Technical University of Munich, Germany, 2. Department of Grassland Science, Technical University of Munich, Germany, 3. CEA-CNRS-Aix Marseille University, Cadarache, Saint Paul lez Durance, France)

[PO-338] Structure-guided engineering of a receptor-agonist pair for inducible activation of the ABA adaptive response to drought
*Jorge Lozano-Juste¹, Lourdes Infantes², Irene García-Maquilón¹, Rafael Ruíz-Partida¹, Ebe Merilo³, Juan Luis Benavente³, Adrian Velázquez-Campoy⁴,³, Alberto Coego¹, Mar Bono¹, Javier Forment¹, Begoña Pampín⁷,⁸, Paolo Destito⁷, Adrian Monteiro⁷,⁸, Ramón Rodríguez⁷, Jacobo Cruces⁷, Pedro Luis Rodríguez¹, Armando Albert² (1. Instituto de Biología Molecular y Celular de Plantas (IBMCP-UPV-CSIC), 2. Instituto de Química Física Rocasolano (IQFR-CSIC), 3. University of Tartu, 4. Universidad de Zaragoza, 5. Fundacion Instituto de Investigacion Sanitaria Aragon, 6. Centro de Investigacion Biomédica en Red Enfermedades Hepaticas y Digestivas, 7. GalChimia S.A., 8. Agomab Therapeutics)

[PO-340] Functional analysis of DOG1-dependent ABA signaling cascade
*Noriyuki Nishimura¹, Wataru Tsuchiya¹, Nahomi Suzuki¹, Takashi Hirayama², Toshimasa Yamazaki¹ (1. National Agriculture and Food Research Organization, Japan, 2. Okayama University, Japan)

[PO-342] Phosphoproteomic analysis of Arabidopsis guard cells for screening of SnRK2 substrates
*Kota Yamashita¹, Anzu Oishi¹, Mizuki Saigusa¹, Sotaro Katagiri¹, Yoshiaki Kameda¹, Yangdan Li¹, Shota Yamauchi², Atsushi Takemiya², Taishi Umezawa¹ (1. BASE, Tokyo Univ. Agric. Tech., 2. Yamaguchi Univ.)
[PO-344] Characterization of the PEAPOD Jas domain to understand their interaction partner specificity
*Michele Schneider1,2, Issl Kimpe1,2, Dominique Eeckhout1,2, Geert De Jaeger1,2, Dirk Inzé1,2, Alexandra Baekelandt1,2 (1. Department of Plant Biotechnology and Bioinformatics, Ghent University, 9052 Ghent, Belgium, 2. Department of Plant Systems Biology, Vlaams Instituut voor Biotechnologie (VIB), 9052 Ghent, Belgium)
[PO-345] Analysis of a nuclear lamina protein CRWN and its interacting proteins
*Sachihiro Matsunaga¹, Yoshiuki Akiyama¹, Takuya Sakamoto²,⁵, Mio Shibuta³, Hikaru Sato¹, Yuki Sakamoto² (¹. Graduate School of Frontier Sciences, The University of Tokyo, Japan, ². Faculty of Science, Kanagawa University, Japan, ³. Faculty of Science, Yamagata University, Japan, ⁴. Graduate School of Science, Osaka University, Japan, ⁵. Faculty of Technology, Tokyo University of Science, Japan)

[PO-347] Light-dependent nuclear relocation in land plants: differences and similarities between Arabidopsis thaliana and the liverwort Marchantia polymorpha
*Ikuko Hara-Nishimura¹, Kosei Iwabuchi¹, Hiroki Yagi¹, Kenta Moriya³, Nanaka Oki¹, Reina Yokohata¹, Asami Nakata¹, Saya Hiromoto¹, Aino Komatsu³,⁴, Yuuki Sakai⁵, Shingo Takagi⁶, Tomoo Shimada³, Ryuichi Nishihama⁷, Takayuki Kohchi³, Yo-hei Watanabe¹, Haruko Ueda¹ (¹. Konan Univ., ². Osaka Med. Pharm. Univ., ³. Kyoto Univ., ⁴. Tohoku Univ., ⁵. Kobe Univ., ⁶. Osaka Univ., ⁷. Tokyo Univ. Sci.)

[PO-349] Localization dynamics of BGLU18, a β-glucosidase that releases ABA from its glucose conjugates, in Arabidopsis leaf cells under dehydration stress
*Yutong Song¹, Tayebeh Abedi¹, Yuma Mitsuzono¹, Hiroshi Shimada¹, Atsushi Sakamoto¹ (¹. Graduate School of Integrated Sciences for Life, Hiroshima University, Japan)

[PO-351] MAIGO3-dependent mechanism underlying dynamic capture-and-release process of ER exit sites by Golgi stacks in Arabidopsis

[PO-353] Elucidating the final stages of plant Clathrin-Mediated Endocytosis in vivo and in vitro
*Nataliia Gnyliukh¹, Alexander Johnson¹, Marie-Kristin Nagel¹, Annamaria Hlavata¹, Erika Isono², Martin Loose¹, Jiří Friml¹ (¹. Institute of Science and Technology Austria (ISTA), ². University of Konstanz, Konstanz, Germany)

[PO-355] Location, location, location: a system-wide assessment of subcellular protein localization in Arabidopsis roots by mass-spectrometry
*Monique van Schie¹, Mark Roosjen¹, Dolf Weijers¹ (¹. Wageningen University, the Netherlands)

[PO-357] Functional characterization of Arabidopsis thaliana Synaptotagmin1 domains using Tricalbin3 chimeras in Saccharomyces cerevisiae.
*Francisco Benitez-Fuente¹, Javier Collado², Vito Amorim-Silva³, Ruben Fernández-Busnadiego², Miguel Angel Botella¹ (¹. Departamento de Biologia Molecular y Bioquimica, Instituto de Hortofruticultura Subtropical y Mediterranea “La Mayora”, Universidad de Malaga-CSIC, Malaga 29071, Spain, ². Institute of Neuropathology, University Medical
SEED LIPID DROPLET PROTEIN 1 and 2 and LD-PLASMA MEMBRANE ADAPTOR form a lipid droplet-plasma membrane contact site that might play a role under stress
*Janis Dabisch\(^1\), Till Ischebeck\(^1\) (1. Uni Münster)

Defining and dissecting mitochondrial specific stress signalling pathways in *Arabidopsis thaliana*
*Cunman He\(^{1,2,3}\), Oliver Berkowitz\(^2\), James Whelan\(^{1,2,3}\) (1. College of Life Science, Zhejiang University, Hangzhou, Zhejiang 310058, P.R. China., 2. Department of Animal, Plant and Soil Science, School of Agriculture, Biomedical and Environmental Sciences, La Trobe University, Bundoora, 3086, VIC, Australia., 3. International Science and Technology Cooperation Base on Engineering Biology, International Campus of Zhejiang University, Haining, Zhejiang 314400, P.R. China.)

Overexpression of the transcription factor ANAC017 results in a genomes uncoupled phenotype under lincomycin
*Yanqiao Zhu\(^{1,2}\), Reena Narsai\(^3\), Cunman He\(^{1,2,3}\), Oliver Berkowitz\(^3\), Lim Chee Liew\(^3\), James Whelan\(^{1,2,3}\) (1. College of Life Science, Zhejiang University, Hangzhou, Zhejiang 310058, P.R. China, 2. International Science and Technology Cooperation Base on Engineering Biology, International Campus of Zhejiang University, Haining, Zhejiang 314400, P.R. China, 3. Department of Animal, Plant and Soil Science, School of Agriculture, Biomedical and Environmental Sciences, La Trobe University, Bundoora 3086, Vic, Australia)

Analysis for the molecular mechanism of chloroplast development via BPGs, novel brassinosteroid signaling factors
*Ryo Tachibana\(^1\), Susumu Abe\(^2\), Momo Marugami\(^2\), Ayumi Yamagami\(^1\), Shohei Nosaki\(^3\), Takuya Miyakawa\(^4\), Takehito Inaba\(^5\), Minami Matsui\(^5\), Kentaro Ifuku\(^1\), Ryuichi Tanaka\(^6\), Tetsuo Kushiro\(^7\), Tadao Asami\(^8\), Takeshi Nakano\(^1\) (1. Kyoto University, Japan, 2. Meiji University, Japan, 3. Tsukuba University, Japan, 4. Miyazaki University, Japan, 5. RIKEN, Japan, 6. Hokkaidou University, Japan, 7. University of Tokyo, Japan)

Comparative transcriptomic analysis to characterize Stromule Regulatory Genes
*Jongchan Woo\(^1\), Ashley Park\(^1\), Ji Yoon Guk\(^2\), Solhee In\(^1\), Seungil Kim\(^2\), Eunsook Park\(^1\) (1. University of Wyoming, 2. University of Seoul)

Nanotechnology research in Arabidopsis for developing precision agriculture and plant biomanufacturing tools
*Juan Pablo Giraldo\(^1\) (1. University of California, Riverside)

Linkage between ADP-ribosylation and chloroplast stress response under thylakoid proteostasis perturbation
*Kenji Nishimura\(^1\), Reiko Nakagawa\(^2\), Ken Tamaru\(^1\), Yuri Nakajima Munekage\(^1\) (1. Kwansei Gakuin University, Japan, 2. RIKEN BDR, Japan)

A tonoplast-localized magnesium transporter is crucial for stomatal opening in Arabidopsis under high Mg\(^{2+}\) condition
*Shin-ichiro Inoue\(^1\), Maki Hayashi\(^1\), Sheng Huang\(^2\), Kengo Yokosho\(^2\), Eiji Gotoh\(^3\), Shuka Ikematsu\(^1\), Masaki Okumura\(^1\), Takamasa Suzuki\(^1\), Takumi Kamura\(^1\), Toshinori Kinoshita\(^1\), Jian Feng Ma\(^1\) (1. Nagoya University, Japan, 2. Okayama University, Japan, 3. Kyushu University, Japan, 4. Chubu University, Japan)
[PO-375] An Arabidopsis Rab GTPase regulates ER association of ATG18a to promote ER-phagy in response to carbon starvation
*Jiaqi Sun1,2, Yang Shao1, Huanquan Zheng2 (1. Shandong University, China, 2. McGill University, Canada)

[PO-377] Dissecting the plant ATG9 vesicle trafficking in autophagy pathway
*KA KIT CHUNG1, Xiaohong ZHUANG1 (1. Centre for Cell &Developmental Biology and State Key Laboratory of Agrobiotechnology, School of Life Sciences, The Chinese University of Hong Kong, Hong Kong, China)

[PO-379] Chloroplast chaperone HSP90C C-terminal extension regulates client binding and plant stress resilience
*Bona Mu1, Adheip Monikantan Nair1, Wei-tse Tseng2, Rongmin Zhao1 (1. University of Toronto, Scarborough, 2. University of Melbourne)
[PO-346] The nuclear pore complex is involved in the two-step regulation of centromere arrangement in Arabidopsis thaliana

[PO-348] A pair of phosphoinositide-binding proteins act downstream of the IRE1-bZIP60 pathway and function redundantly in the unfolded protein response
* Chao-Yuan Yu¹, Yuki Nakamura¹, Kazue Kanehara² (1. RIKEN Center for Sustainable Resource Science, Yokohama, Japan, 2. Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan)

[PO-350] Endoplasmic reticulum body in the lateral root cap: Visualization of direct transport of β-glucosidase to the vacuole by correlative light and electron microscopy
* Kiminori Toyooka¹, Yumi Goto¹, Kei Hashimoto¹, Mayumi Wakazaki¹, Mayuko Sato¹, Masami Yokota Hirai¹ (1. RIKEN Center for Sustainable Resource Science)

[PO-352] Nanobody-epitope interaction-based intracellular in vivo immunotracing reveals the bidirectional trafficking of vacuolar sorting receptors
* Peter Pimpl¹²³⁴, Xiaoyu Shao¹²³⁴, Hao XU¹²³⁴, Zeming Liang¹²³⁴, Xuewen Wang¹²³⁴, Yizhan Li¹²³⁴, Wenyu Yao¹²³⁴, Xiaodi Zhao¹²³⁴, Huangjinzi Li¹²³⁴, Merlinda Terana¹²³⁴ (1. Southern University of Science and Technology (SUSTech), 2. Key Laboratory of Molecular Design for Plant Cell Factory of Guangdong Higher Education Institutes, 3. Institute of Plant and Food Science, 4. School of Life Sciences)

[PO-354] Subcellular localization of NPR1 shifts between chloroplast and nucleus in accordance with the circadian rhythm
* So Yeon Seo¹, Ky Young Park (1. Sunchon national university)

[PO-356] The role of DGK1 and DGK2 in Membrane Contact Sites and Stress Tolerance
* Selene Garcia-Hernandez¹, Noemi Ruiz-Lopez¹, Miguel A. Botella Mesa¹ (1. Instituto de Hortofruticultura Subtropical y Mediterránea, Universidad de Málaga-Consejo Superior de Investigaciones Científicas (IHSM-UMA-CSIC))

[PO-358] 405nm Photostimulation of the Endoplasmic Reticulum-Chloroplast Contact Site in Arabidopsis Hypocotyls Causes Rapid Cytoskeletal Depolymerization, Elevated Cytoplasmic Calcium, and Elevated Organellar ROS
* Sara Maynard¹, Lawrence R Griffing¹ (1. Texas A&M University)

[PO-360] Balanced activities of chloroplasts and mitochondria is crucial for optimal plant growth
* Boon Leong Lim¹ (1. The University of Hong Kong)
**[PO-362]** Title: The ANAC017 transcription factor links transcriptional and post-translational regulation of mitochondrial biogenesis and signalling.

*James Whelan Whelan¹, Yang Zhao¹,², Ghazanfar Abbas Khan², Cunman He¹,², Reena Narsai², Ronghui Pan¹, Jianping Hu³, Yan Wang² (1. Zhejiang University, China, 2. La Trobe University, Australia, 3. Michigan State University, USA)

**[PO-364]** An isoform of the plastid RNA polymerase-associated protein FSD3 affects chloroplast development

Yang Do Choi¹, Young Hee Joung², *Geupil Jang² (1. The National Academy of Sciences, Republic of Korea, 2. Chonnam National University, Republic of Korea)

**[PO-366]** Sensory plastids in growth- and defense-related epigenetic phenotype adjustment

*Ha Eun Jeh¹, Jesús Beltrán¹,², Robersy Sanchez¹, Xiaodong Yang¹,², Isaac Dopp¹, Yashitola Wamboldt³,², Hardik Kundariya¹, Alenka Hafner¹, Sally A Mackenzie¹ (1. Pennsylvania State University, PA, USA, 2. University of Nebraska, Lincoln, NE, USA, 3. MatMaCorp, Lincoln, NE, USA, 4. University of California, Riverside, CA, USA, 5. Yangzhou University, Yangzhou, China)

**[PO-368]** Light-induced chloroplast biogenesis: photobodies control alternative promoter selection as a mechanism of nucleus-chloroplast communication

Jaehyung Lee¹, Sandhya Senthilkumar¹, Scott Perkins¹, Heejin Yoo¹, *Chan Yul Yoo¹ (1. School of Biological Sciences, University of Utah, Salt Lake City, UT, 84112, USA)

**[PO-370]** Fluorescent staining of the chloroplast outer envelope membrane in living plant cells

*Shintaro Ichikawa¹, Yutaka Kodama¹ (1. Utsunomiya University, Japan)

**[PO-372]** Molecular mechanism for peroxisomal protein transport via the ubiquitin system

*Shoji Mano¹,², Shino Goto-Yamada³, Yasuko Hayashi³, Kazumi Hikino¹, Masatake Kanai¹, Mikio Nishimura⁵ (1. National Institute for Basic Biology, Japan, 2. The Graduate University for Advanced Studies, Japan, 3. Jagiellonian University, Poland, 4. Niigata University, Japan, 5. Konan University, Japan)

**[PO-374]** IntEResting: RHD3 and RTN3/4 Oppose in ER network connectivity but cooperate in ER-phagy in response to environmental stresses

Weina Wang¹, Jiaqi Sun¹, *Huanquan Zheng¹ (1. McGill University)

**[PO-376]** KNO1-mediated autophagic degradation of the Bloom syndrome complex component RMI1 promotes homologous recombination

*Poyu Chen¹, Nancy De Winne³,³,⁴, Geert De Jaeger³,³,⁴, Masaki Ito¹, Heese Maren², Arp Schnittger² (1. Kanazawa University, School of Biological Science and Technology, 2. University of Hamburg, Institute of Plant Science and Microbiology, 3. Ghent University, Department of Plant Biotechnology and Bioinformatics, 4. VIB Center for Plant Systems Biology)

**[PO-378]** A novel reciprocal regulation mechanism for SH3P2 in crosstalk between endocytosis and autophagy

*Kai Ching Law¹, Lanlan Feng¹, Hongbo Li², Caiji Gao², Xiaohong Zhuang¹ (1. The Chinese University of Hong Kong, Hong Kong China, 2. South China Normal University, China)
[PO-381] Microtubule-dependent phase separation tunes cell wall spacing in xylem vessels
Takeshi Higa\textsuperscript{1}, Saku Kijima\textsuperscript{2}, Takema Sasaki\textsuperscript{2}, Shogo Takatani\textsuperscript{2}, Yohei Kondo\textsuperscript{3,4,5}, Mayumi Wakazaki\textsuperscript{6}, Mayuko Sato\textsuperscript{6}, Kiminori Toyooka\textsuperscript{6}, Taku Demura\textsuperscript{7}, Hiroo Fukuda\textsuperscript{8}, *Yoshihisa Oda\textsuperscript{2} (1. The University of Tokyo, Japan, 2. Nagoya University, Japan, 3. Exploratory Research Center on Life and Living Systems, Japan, 4. National Institute for Basic Biology, Japan, 5. SOKENDAI, Japan, 6. RIKEN Center for Sustainable Resource Science, Japan, 7. Nara Institute of Science and Technology, Japan, 8. Kyoto University of Advanced Science, Japan)

[PO-383] Elucidating molecular mechanisms of anchoring complexes that stabilize the association of daughter microtubule minus end to their nucleation sites
Noriyoshi Yagi\textsuperscript{1}, *Masayoshi Nakamura\textsuperscript{1} (1. Nagoya University, Japan)

[PO-385] GraFT - Robust spatiotemporal filament disentanglement using a network theoretic framework
*Isabella Østerlund\textsuperscript{1,2}, Staffan Persson\textsuperscript{1}, Zoran Nikoloski\textsuperscript{2,3} (1. Department of Plant and Environmental Sciences, University of Copenhagen, 1871 Frederiksberg C, Denmark, 2. Bioinformatics, Institute of Biochemistry and Biology, University of Potsdam, 14476 Potsdam, Germany, 3. Systems Biology and Mathematical Modeling, Max Planck Institute of Molecular Plant Physiology, 14476 Potsdam, Germany)

[PO-387] Functional Differentiation among the lipid signaling producing Genes PIP5K1, PIP5K2, and PIP5K3 in Arabidopsis
*Machiko Watari\textsuperscript{1}, Mariko Kato\textsuperscript{1}, Branc-Mathieu Roman\textsuperscript{2}, Tomohiko Tsuge\textsuperscript{1}, Hiroyuki Ogata\textsuperscript{1}, Takashi Aoyama\textsuperscript{1} (1. Institute for Chemical Research, Kyoto university, Japan, 2. Laboratoire Physiologie Cellulaire &Vegetale, University of Grenoble Alpes, IRIG, INRA, CNRS, CEA, France)

[PO-389] Evolution of RHO cell polarity signalling in plants
*Hugh Mulvey\textsuperscript{1}, Liam Dolan\textsuperscript{1} (1. Gregor Mendel Institute (GMI), Austria)
[PO-380] *Arabidopsis* MPK6 Phosphorylates MAP18 to Mediate Root Growth Control in Response to Salt Stress  
Mingzhi Zheng¹, Liyuan Xu¹, Takashi Hashimoto², Lei Zhu¹, *Ying Fu¹ (1. China Agricultural University, China, 2. NAIST, Japan)

[PO-382] NIMA-related protein kinases regulate microtubule response to tensile stress in *Arabidopsis thaliana*  
*Yumeko Nomura¹, Shogo Takatani²,³, Olivier Hamant², Hiroyasu Motose¹ (1. Department of Biological Science, Faculty of Science, Okayama University, Japan, 2. ENS-Lyon, France, 3. Graduate School of Science, Nagoya University, Japan)

[PO-384] Enzymatic activities and tissue-specific expression of *Arabidopsis thaliana* class XI and VIII myosins  
*Shizuha Ito¹, Takeshi Haraguchi¹, Zhongrui Duan², Sa Rula¹, Kento Takahashi¹, Yuno Shibuya³, Nanako Hagino³, Yuko Miyatake³, Rie Matsumoto¹, Kei Sato⁴, Akihiko Nakano⁴,⁵, Motoki Tominaga²,³, Kohji Ito¹ (1. Department of Biology, Graduate School of Science, Chiba University, Japan, 2. Faculty of Education and Integrated Arts and Sciences, Waseda University, Japan, 3. Department of Integrative Bioscience and Biomedical Engineering, Graduate School of Science and Engineering, Waseda University, Japan, 4. Department of Biological Sciences, Graduate School of Science, University of Tokyo, Japan, 5. Live Cell Molecular Imaging Research Team, RIKEN Center for Advanced Photonics, Wako, Saitama, Japan)

[PO-386] Structure and regulation of *Arabidopsis* Myosin XI, MYA2  
*Takeshi Haraguchi¹, Masanori Tamanaha¹, Kano Suzuki², Kohei Yoshimura¹, Takuma Imi¹, Takamitsu Morikawa³, Nao Shoji¹, Atsushi Kimura¹, Motoki Tominaga⁴,³, Hidetoshi Sakayama⁶, Tomoki Nishiyama⁷, Mitsuhiko Iwaki³, Takeshi Murata²,⁸,⁹, Kohji Ito¹,⁸ (1. Department of Biology, Graduate School of Science, Chiba University, Japan, 2. Department of Chemistry, Graduate School of Science, Chiba University, Japan, 3. RIKEN Center for Biosystems Dynamics Research, RIKEN, Japan, 4. Faculty of Education and Integrated Arts and Sciences, Waseda University, Japan, 5. Department of Integrative Bioscience and Biomedical Engineering, Graduate School of Science and Engineering, Waseda University, Japan, 6. Department of Biology, Graduate School of Science, Kobe University, Japan, 7. Research Center for Experimental Modeling of Human Disease, Kanazawa University, Japan, 8. Membrane Protein Research and Molecular Chirality Research Center, Chiba University, Japan, 9. Structure Biology Research Center, Institute of Materials Structure Science, High Energy Accelerator Research Organization (KEK), Japan)

[PO-388] Molecular mechanisms underlying rapid cell growth in the root epidermis  
*Hirotomo Takatsuka¹, Naoki Takahashi², Michitaro Shibata³, Keiko Sugimoto³,⁴, Maho Tanaka³,⁵, Motoaki Seki³,⁵, Masaaki Umeda² (1. Kanazawa University, Japan, 2. Nara Institute of Science and Technology, Japan, 3. RIKEN Center for Sustainable Resource Science, Japan, 4. The University of Tokyo, Japan, 5. RIKEN Cluster for Pioneering Research, Japan)
[PO-390] Mechanisms underlying polar membrane targeting of SOSEKI protein
*Andriy Volkov¹, Dolf Weijers¹ (1. Laboratory of Biochemistry, Wageningen University, Netherlands)
[PO-391] Mutations in Golgi-localised proton pyrophosphatase, AVP2;1 enhances root growth under limited boron supply by changes in cell wall stability
*Amarachukwu Faith ONUH¹, Kyoko MIWA¹ (1. Hokkaido University, Japan)

[PO-393] Hormone-regulated expansins localization and their putative role in cell wall biomechanics controlling the Arabidopsis root growth
*Marketa Samalova¹,², Alesia Melnikava², Kareem Elsayad³, Alexis Peaucelle⁴, Evelina Gahurova¹, Jaromir Gumulec³, Jan Hejatko² (1. Masaryk University, Czech Republic, 2. CEITEC MU, Czech Republic, 3. Medical University of Vienna, Austria, 4. INRAE, France)

[PO-395] Contribution of Epidermis and Vasculature to the Mechanical Integrity of Arabidopsis Inflorescence Stem
*Mariko Asaoka¹,²,³, Shingo Sakamoto⁴, Shizuka Gunji¹, Nobutaka Mitsuda⁴, Hirokazu Tsukaya⁵, Shinichiro Sawa⁶, Olivier Hamant², Ali Ferjani¹ (1. Tokyo Gakugei University, Tokyo, Japan, 2. ENS de Lyon, France, 3. Present address, Kanagawa University, Japan, 4. National Institute of Advanced Industrial Science and Technology, Japan, 5. The University of Tokyo, Japan, 6. Kumamoto University, Japan)

[PO-397] CALCIUM-DEPENDENT PROTEIN KINASE32 regulates cellulose biosynthesis through post-translational modification of cellulose synthase
*Ying Gu¹, Donghui Wei¹, Xiaoran Xin¹, Lei Lei¹, Haiyan Zheng, Ian Wallace, Shundai Li³ (1. Pennsylvania State University)

[PO-399] Periodicity and disorder in protoxylem secondary cell wall of Arabidopsis is orchestrated by an ABA-ROP11 toggle switch
*Shaul Yalovsky¹, Valentina Alberti¹, Erik Gengel¹ (1. School of Plant Sciences and Food Security, Tel Aviv University)

[PO-401] Cloning and Functional Analyses of SET Gene Whose Loss-of-Function Suppresses de-etiolatedt3-1 Inflorescence Stem Dwarfism
*Shizuka Gunji¹, Ryosuke Kizu¹,², Hiromu Kimura¹, Reina Hashimoto¹, Natsuko Ishizuki¹, Mao Ichikawa¹, Tamae Motoike¹, Hiroyuki Koga³, Kenya Hanai¹, Tomonari Hirano⁴, Yusuke Kazama⁵, Tomoko Abé⁵, Nobutaka Mitsuda⁶, Shingo Sakamoto⁶, Gorou Horiguchi⁸,⁹, Shinichiro Sawa¹⁰, Hirokazu Tsukaya³, Ali Ferjani¹ (1. Department of Biology, Tokyo Gakugei University, 2. Department of Life Sciences, Graduate School of Arts and Sciences, The University of Tokyo, 3. Department of Biological Sciences, Graduate School of Science, The University of Tokyo, 4. Faculty of Agriculture, University of Miyazaki, 5. Faculty of Bioscience and Biotechnology, Fukui Prefectural University, 6. Nishina Center for Accelerator-Based Science, RIKEN, 7. Plant Gene Regulation Research Group, Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), 8. Department of Life Science, College of Science, Rikkyo University, 9. Research Center for Life Science, College of Science, Rikkyo University, 10. International Research Center for Agriculture and Environmental Biology, Kumamoto University)
[PO-403] Elucidating the role of lignification during silique development in *Arabidopsis thaliana*

*Justin Nichol¹, Logan Skori¹, Marcus Samuel¹ (¹. University of Calgary)
[PO-392] Analysis of regulatory mechanisms of cell wall construction during fruit morphological changes under calcium deficiency conditions in Tomato (Solanum lycopersicum) cv. 'Micro Tom'
*Kiei Soyama¹, Akari Miyakoshi², Momoko Miyachi², Haruka Sugiyama², Manatsu Itano², Takumi Higaki³, Shinobu Sato³, Jun Furukawa³, Hiroaki Iwai³ (1. Graduate School of Science and Technology, University of Tsukuba, Japan, 2. Institute of Life and Environmental Science, University Tsukuba, Japan, 3. Faculty of Advanced Science and Technology, Kumamoto University, Japan)

[PO-394] TMK-based cell-surface auxin signalling activates cell-wall acidification
*Wenwei Lin¹² (1. Fujian Agriculture and Forestry University, 2. Prof.)

[PO-396] Transcriptional Control of Hypocotyl Cell Elongation by SHORT-ROOT
*Jun Lim¹, Seung Woo Kim¹, Souvik Dhar¹, Jinkwon Kim¹, Jiyeong Oh¹ (1. Dept. of Systems Biotechnology, Konkuk University, Seoul 05029, Korea)

[PO-398] A cell wall-modifying gene-dependent CLE peptide transport in conferring drought resistance

[PO-400] Proper synthesis of Secondary Cell Wall in Arabidopsis requires regulation by copper-miRNAs and the miRNA-processing protein Dicer-like 1
*Alessandro Giannetti¹, Staffan Persson¹ (1. University of Copenhagen)

[PO-402] An Evolutionarily Conserved Long-distance Migrating Peptide Regulates Lignin Biosynthesis Pathway and Plant Immunity
Chang-Hung Chen¹², Pin-Chien Liou¹², Kuan-Hao Huang¹, Ying-Chung Jimmy Lin², Ying-Lan Chen¹ (1. Department of Biotechnology and Bioindustry Sciences, College of Bioscience and Biotechnology, National Cheng Kung University, Tainan, Taiwan, 2. Department of Life Sciences and Institute of Plant Biology, College of Life Science, National Taiwan University, Taipei, Taiwan)

[PO-404] Redox partner preference of monolignol cytochrome P450 monooxygenases C4H and F5H
*Xianhai Zhao¹, Yunjun Zhao³, Mingyue Gou¹, Chang-Jun Liu³ (1. Brookhaven National Laboratory)
Changes in plasmodesmal stress responses across development
*Emma C. Raven¹, Catherine Walker¹, Annalisa Bellandi¹, Christine Faulkner¹ (1. John Innes Centre, Norwich, United Kingdom)

The primary PD density is reduced in brood cells of the moss *Physcomitrium patens*
*Chiyo Jinno¹, Satoshi Naramoto¹, Tomomichi Fujita¹ (1. Hokkaido University, Japan)

AGP polysaccharide chains are required for normal biogenesis of plasmodesmata
Ryoya Okawa¹, Yoko Hayashi¹, Yasuko Yamashita¹, Yoshikatsu Matsubayashi¹, *Mari Ohnishi Ogawa¹ (1. Nagoya university)

Arabidopsis cyclophilins direct intracellular transport of mobile mRNA via organelle hitchhiking
*Tien-Shin Yu¹, Kai-Ren Luo³, Nien-Chen Huang¹, Yu-Hsin Chang¹,², Yu-Wen Jan¹ (1. Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan, 2. Institute of Plant Biology, National Taiwan University, Taipei, Taiwan)
[P] 17 Symplasmic signaling/Plasmodesmata

Wed. Jun 7, 2023 9:00 AM - 6:00 PM Poster 17 (Meeting Room 10)

[PO-406] Reaction Without Diffusion: Role Of Plasmodesmata in Floral Pigmentation Patterning
*Steven Harmon-Jarsen¹, Yaowu Yuan¹, Ya Min¹ (1. University of Connecticut)

[PO-408] A novel mechanism for plasmodesmata mediated cell-cell communication in plants
*Marija Smokvarska¹, Jessica Perez Sancho¹, Marie Glavier¹, Ziqiang Li¹, Magali Grison¹, Laetitia Fouillen¹, Patrick Moreau¹, Matthieu Platre², Yaowei Yang³, Yongming Luo³, Wolfgang Busch², Eugenia Russinova³, Emmanuelle Bayer³ (1. Laboratoire de Biogenèse Membranaire, UMR5200, CNRS, Université de Bordeaux, Villenave d’Ornon, France, 2. Salk Institute for Biological Studies, La Jolla, California, 3. Department of Plant Biotechnology and Bioinformatics, Ghent University, Ghent, Belgium. Center for Plant Systems Biology, VIB, Ghent, Belgium)

[PO-410] Exploring the intercellular plasmodesmal protein transport in Marchantia polymorpha
*Kuan-Ju Lu¹, Chia-Yun Hsu¹, Pin-Lun Lin¹, Chia-Huan Hsu¹, Hui-Yu Chang¹ (1. Graduate Institute of Biochemistry, National Chung Hsing University)

[PO-412] A cell wall-modifying enzyme controls symplastic movement of RNA silencing in aerial Arabidopsis tissues
*Florence Brioudes¹, Florian Brioudes¹, André Imboden¹, Lazar Novaković², Yoselin Benitez-Alfonso², Olivier Voinnet¹ (1. Swiss Federal Institute of Technology (ETH-Zürich), Switzerland, 2. Centre for Plant Science, School of Biology, University of Leeds, United Kingdom)

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[P] 18 Circadian & biotic rhythms
Tue. Jun 6, 2023 9:00 AM - 6:00 PM Poster 18(Meeting Room 10)

[PO-415] Microfocus X-ray CT Analysis of Arabidopsis Petioles for Leaf Movement
*Maika Hayashi¹, Tadashi Kunieda¹, Ryo Kumagai¹, Makito Haruta¹, Yoshito Otake¹, Hirokazu Kato¹, Hiroyuki Shima³, Taku Demura¹ (1. NAIST, Japan, 2. Univ. of Yamanashi, Japan)

[PO-417] Association of NPR1 with ROS and ethylene signaling pathways in relation to the circadian rhythm
*Yumi Kim¹, So Yeon Seo¹, Ky young Park¹ (1. Sunchon national university)

[PO-419] Identifying E3 ubiquitin ligases interacting with Arabidopsis circadian clock regulators
*Chen-An Chen¹, Yi-Tsung Tu¹, Joshua M Gendron², Chin-Mei Lee¹ (1. Institute of Plant Biology, National Taiwan University, Taipei, Taiwan, 2. Department of Molecular, Cellular and Developmental Biology, Yale University, New Haven, USA)

[PO-421] Quantity regulation of TOC1 and PRR5 for temperature compensation in the Arabidopsis circadian clock
*Akari Maeda¹, Hiromi Matsuo¹, Norihito Nakamichi¹ (1. Nagoya university, Japan)

[PO-423] Long-distance circadian coordination via a phloem-delivered mobile transcript
*András Székely¹, Eleftheria Saplaoura¹, Dorothee Staiger², Friedrich Kragler¹ (1. Max Planck Institute of Molecular Plant Physiology, 2. Bielefeld University)

[PO-425] BIG regulates the circadian clock and development
*Dora Luz Cano Ramirez¹², Elena Bidash², Sally Ward¹, Ottoline Leyser¹, Alex Webb² (1. Sainsbury Laboratory, University of Cambridge, Bateman Street, Cambridge CB2 1LR, UK, 2. Department of Plant Sciences, University of Cambridge, Downing Street, Cambridge CB2 3EA, UK)

[PO-427] Assessing the impacts of genetic defects on starch metabolism in Arabidopsis plants using the carbon homeostasis model
*Shuichi Kudo¹, Anthony Artins², Carolina C. M. Bello², Camila Caldana², Akiko Satake¹ (1. Kyushu Univ., Japan, 2. Max Planck Inst. of Mol. Plant Physiol., German)

[PO-429] Comparing circadian activity of CAM plant Kalanchoë laxiflora promoters in their native environment and in the C₃ Arabidopsis thaliana
*Jessica Harding Pritchard¹, James Hartwell¹ (1. University of Liverpool)

[PO-431] Identification of LWD1-interacting proteins reveals novel regulators for Arabidopsis circadian clock
*Chun-Kai Huang¹, Shu-Hsing Wu¹ (1. Institute of Plant and Microbial Biology, Academia Sinica, Taiwan, ROC)
[PO-414] Weather-dependent flower movement: the functions and mechanisms for downward-facing of flowers during rain
*Akari Shibata¹, Hanako Shimizu¹, Mie N. Honjo¹, Hiroshi Kudoh¹ (1. Kyoto university, Japan)

[PO-416] CIRCADIAN CLOCK-ASSOCIATED1 (CCA1) controls resistance to aphid by altering indole glucosinolate production
*Keyan Zhu Salzman¹, Jiaxin Lei¹ (1. Texas A&M University)

[PO-418] Circadian-period variation underlies the local adaptation of photoperiodism
*Tomoaki Muranaka¹, Shogo Ito², Hiroshi Kudoh², Tokitaka Oyama² (1. Nagoya University, Japan, 2. Kyoto University, Japan)

[PO-420] The essential role of TOC1 phosphorylation in selective circadian clock gene regulation
*David Somers¹, Jiapei Yan¹ (1. Ohio State University, USA)

[PO-422] Circadian rhythms under controlling light irradiation in accordance with lunar rhythm.
*Naoki Seki¹, Yoko Hattori¹ (1. Toyota Boshoku Corporation)

[PO-424] Imaging and functional analysis of 24-h rhythmic interactions of circadian core oscillators in Arabidopsis
Li Yuan¹, Mingming Liu¹, Qiguang Xie¹, *Xiaodong Xu¹ (1. Henan University, China)

[PO-426] ROLE OF THE ARABIDOPSIS AtbZIP63 TRANSCRIPTION FACTOR STABILITY IN ENERGY MANAGEMENT
*Pamela Carlson¹, Luis Felipe Correa da Silva², João Guilherme Portugal Vieira¹, Raphael de Araújo Campos¹, Thyelen Engel de Jesus¹, Nubia Barbosa Eloy², Cleverson Carlos Matioli³, Michel Vincentz¹ (1. University of Campinas, 2. University of São Paulo, 3. UNIVERSIDADE NOVA DE LISBOA)

[PO-428] ROS around the clock: Superoxide as a metabolic signal affecting circadian rhythms and growth
*Mike Haydon¹ (1. University of Melbourne)

[PO-430] Multiple uORFs-mediated Light-dependent Translational Repression in the Arabidopsis Clock Gene LHY
*Haruka Aoyama¹, Yuma Ise¹, Akinori Takahashi², Tadashi Yamamoto², Yukako Chiba¹,³ (1. Graduate School of Life Science, Hokkaido University, Japan, 2. OIST, Japan, 3. Faculty of Science, Hokkaido University, Japan)

[PO-432] Investigating the circadian regulation of TAG biosynthesis in nitrogen-starved Arabidopsis seedlings
*Kristen Edgeworth Edgeworth¹, Sang-Chul Kim²,³, Xuemin Wang²,³, Dmitri A Nusinow² (1. Washington University in St. Louis, 2. Donald Danforth Plant Science Center, 3. University of Missouri - St. Louis)
[PO-433] Light-induced SUMOylation of NF-YC3 regulates stepwise histone modification switch for inhibition of hypocotyl elongation
Mengxia Zhang¹, Jinchao Chen¹,³, Hua Jing²,³, Long Zhao¹,³, Yiman Yang⁴, Doris Wagner⁵, Jiafu Jiang⁴, Jingbo Jin²,³, *Jun Xiao¹,³,⁶ (1. Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, P.R.China, 2. Institute of Botany, Chinese Academy of Sciences, P.R.China, 3. University of Chinese Academy of Sciences, P.R. China, 4. Nanjing Agricultural University, P.R. China, 5. University of Pennsylvania, USA, 6. CAS-JIC Centre of Excellence for Plant and Microbial Science (CEPAMS), UK)

[PO-435] Understanding the role of DNA-DNA interactions in regulating de- etiolation in Arabidopsis
*Laila Dabab Nahas¹, Miguel De-Lucas¹ (1. Durham University)

[PO-437] Investigation of PCH1 in promoting liquid-liquid phase separation of photoreceptor photobodies in Arabidopsis thaliana
*Sarah Pardi¹,², Matt King², Kirk Czymmek¹, Alex Holehouse², Dmitri Nusinow¹,² (1. Donald Danforth Plant Science Center, 2. Washington University in St. Louis)

[PO-439] Phosphorylation of two Thr residues in the C-terminal auto-inhibitory domain of plasma membrane H⁺-ATPase is crucial for light-induced stomatal opening
*Saashia Fuji¹, Shota Yamauchi¹, Naoyuki Sugiyama², Takayuki Kohchi³, Ryuichi Nishihama³,⁴, Ken-ichiro Shimazaki⁵, Atsushi Takemiya¹ (1. Department of Biology, Graduate School of Sciences and Technology for Innovation, Yamaguchi University, Japan, 2. Department of Molecular &Cellular BioAnalysis, Graduate School of Pharmaceutical Sciences, Kyoto University, Japan, 3. Graduate School of Biostudies, Graduate School of Pharmaceutical Sciences, Kyoto University, Japan, 4. Department of Applied Biological Science, Faculty of Science and Technology, Tokyo University of Science, Japan, 5. Department of Biology, Faculty of Science, Kyushu University, Japan)

[PO-441] Phosphorylation of WD-repeat protein WDR by phototropins is essential for starch degradation to promote stomatal opening
*Shota Yamauchi¹, Naoyuki Sugiyama², Yutaka Kodama³, Luca Distefano⁴, Haruki Fujii⁵, Mika Nomoto⁶,⁷, Yasuomi Tada⁶,⁷, Kazuhiro Hotta⁸, Diana Santelia⁴, Ken-ichiro Shimazaki⁹, Atsushi Takemiya¹ (1. Department of Biology, Graduate School of Sciences and Technology for Innovation, Yamaguchi University, Yamaguchi, Japan, 2. Department of Molecular &Cellular BioAnalysis, Graduate School of Pharmaceutical Sciences, Kyoto University, Kyoto, Japan, 3. Center for Bioscience Research and Education, Utsunomiya University, Tochigi, Japan, 4. Institute of Integrative Biology, ETH Zürich, Zürich, Switzerland, 5. Department of Electrical and Electronic Engineering, Graduate School of Science and Technology, Meijo University, Nagoya, Aichi, Japan, 6. Center for Gene Research, Nagoya University, Nagoya, Japan, 7. Division of Biological Science, Graduate School of Science, Nagoya University, Aichi, Japan, 8. Department of Electrical and Electronic Engineering, Faculty of Science and Technology, Meijo University, Nagoya, Aichi, Japan, 9. Department of Biology, Faculty of Science, Kyushu University, Fukuoka, Japan)
*Shogo Kuwayama¹, Koji Takahashi¹, Maki Hayashi¹,², Ayato Sato³, Toshinori Kinoshita¹,³ (1. Grad. Sch. Sci., Nagoya University, Japan, 2. Grad. Sch. Life Sci., Tohoku University, Japan, 3. ITbM, Nagoya University, Japan)
[P] 19 Light signaling
Wed. Jun 7, 2023 9:00 AM - 6:00 PM Poster 19(Meeting Room 10)

[PO-434] Dynamic H3K27me3 regulatory mechanism mediated by histone demethylase REF6 responding to red light
*Yan Yan¹, Jiaping Zhu¹, Jigang Li², Xian Deng¹, Xiaofeng Cao¹ (1. Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, 2. China Agricultural University)

[PO-436] Complex genetic interactions among MYC transcription factors underlie seedling photomorphogenesis in Arabidopsis
*Vikas Garhwal¹, Sreeramaiah N. GanGappa¹ (1. Department of Biological Sciences, Indian Institute of Science Education and Research Kolkata, Mohanpur 741246 West Bengal, India)

[PO-438] Phenotypic analysis in suppressors of phototropin double mutant
*Taku Sakakibara¹, Shogo Kuwayama¹, Kyomi Taki¹, Toshinori Kinoshita¹ (1. Nagoya University, Japan)

*Kohei Fukatsu¹, Yuki Hayashi¹, Takamasa Suzuki², Keiko Kuwata³, Toshinori Kinoshita¹,³ (1. Devison of Biological Science, Nagoya University, Japan, 2. Devison of Biological Chemistry, Chubu University, Japan, 3. ITbM, Nagoya University, Japan)

[PO-442] Functional analysis of novel compounds that inhibit stomatal opening
*Kwang Chul Shin¹, Yusuke Aihara¹, Shigeo Toh², Ayato Sato³, Toshinori Kinoshita¹,³ (1. Graduate School of Science, Nagoya, University, Japan, 2. Department of Environmental Bioscience, Faculty of Agriculture, Meijo University, Japan, 3. WPI-ITbM, Nagoya University, Japan)
[PO-445] The role of AtDRIFs in the promotion of flowering under long days
*Ana Cunha¹, João Raimundo¹, Sara Laranjeira¹, Rómulo Sobral¹, Maria Manuela Costa¹ (1. University of Minho)

[PO-447] A B-Box protein suppresses flowering in Arabidopsis through multi-level regulation of the photoperiod pathway
*Rahul Puthan Valappil¹, Yadukrishnan Premachandran¹, Sourav Datta¹ (1. Plant Cell and Developmental Biology Laboratory, Indian Institute of Science Education and Research (IISER) Bhopal, Madhya Pradesh - 462066, India)

[PO-449] A study on the florigen transport mechanisms around the shoot apical meristem in Arabidopsis
*Yusuke Murata¹, Mitsutomo Abe¹ (1. Graduate School of Arts and Sciences, The University of Tokyo)

[PO-451] Beyond FD: the bZIP AREB3 mediates FT signalling and floral transition at the Arabidopsis shoot apical meristem
*Damiano Martignago¹, Vitor da Silveira Falavigna², Alessandra Lombardi¹, He Gao², Paolo Korwin Kurkovski¹, Massimo Galbiati¹, Chiara Tonelli¹, George Coupland², Lucio Conti¹ (1. University of Milan, 2. Max Planck Institute for Plant Breeding Research)

[PO-453] Arabidopsis EAF6 is part of the NuA4 Histone Acetyl Transferase complex and participates in plant developmental control
Loreto Espinosa-Cores³, María Guillém-Bernal¹, Javier Barrero-Gil¹, Verónica Jiménez-Suárez¹, Alfonso Mouriz¹, José Antonio Jarillo¹, *Manuel Piñeiro¹ (1. Centro de Biotecnología y Genómica de Plantas (CBGP; UPM-INIA/CSIC))

[PO-455] WRKY63 transcriptional activation of COOLAIR and COLDAIR regulates vernalization-induced flowering
*Keqiang Wu¹, Fu-Yu Hung¹, Yuan-Hsin Shih¹, Pei-Yu Lin¹, Yun-Ru Feng¹ (1. Institute of Plant Biology, National Taiwan University)

[PO-457] CBFs have a function to directly activate the expression of COOLAIR, an antisense RNA of FLC, during vernalization
*Ilha Lee¹,², Myeongjune Jeon¹,², Goowon Jeong¹,², Yupeng Yang³, Xiao Luo³, Daesong Jeong¹,², Jinsel Kyung¹,², Youbong Hyun¹,², Yuehui He³ (1. Seoul National University, 2. Research Center for Plant Plasticity, Seoul National University, 3. Peking University Institute of Advanced Agricultural Sciences, Weifang 261325, China)

[PO-459] An Arabidopsis nucleoporin acts as a regulator for photoperiodic flowering
*Jae-Hyeok Park¹, Young-Cheon Kim¹, Jeong Hwan Lee¹ (1. Division of Life Sciences, Jeonbuk National University, 567 Baekje-daero, Deokjin-gu, Jeonju, Jeollabuk-do 54896, Republic of Korea)

[PO-461] The size of the Arabidopsis inflorescence meristem and stem is regulated in response to photoperiod by the bZIP transcription factor bZIP13
*Vitor da Silveira Falavigna¹, Sara Cioffi¹, Latifah Bimpe Azeez¹, Pedro de los Reyes¹, He
Gao¹, Yohanna Evelyn Miotto¹, Martina Cerise¹, George Coupland¹ (1. Max Planck Institute for Plant Breeding Research)

[PO-463] Insights into polycarpic plant development through natural variation in longevity phenotypes in Arabidopsis thaliana
*Thalia Luden¹, Marieke Koekkoek¹, Remko Offringa¹ (1. Universiteit Leiden, the Netherlands)

[PO-465] TERMINAL FLOWER 1, a FT homolog interacts with FD in shoot apical meristem during floral transition
*Momoka Matsuoka¹, Mitsutomo Abe¹ (1. The University of Tokyo)

[PO-467] Degradation of SHORT VEGETATIVE PHASE (SVP) at high temperature is mediated by the CUL3A–LFH1–UBC15 ubiquitin ligase complex in Arabidopsis
*Geummin Youn¹, Suhyun Jin¹, Ji Hoon Ahn¹ (1. Korea university, Republic of Korea)
[PO-444] Changes in daily temperature control the expression patterns of FT to optimize flowering time in nature
*Akane Kubota¹, Ryosuke Ozaki¹, Yoshinori Kondo¹, Motomu Endo¹, Takato Imaizumi² (1. Nara Institute of Science and Technology, 2. University of Washington)

[PO-446] A cryptic role of BASIC PENTACYSTEINEs in the temporal development of Arabidopsis
Jing-Fen Wu², Yi-Chen Lee¹, Pei-Ting Tsai¹, Xun-Xian Huang¹, *Huang-Lung Tsai¹, Shu-Hsing Wu² (1. Institute of Molecular and Cellular Biology, National Taiwan University, Taiwan, 2. Institute of Plant and Microbial Biology, Academia Sinica, Taiwan)

[PO-448] Arabidopsis MAC3A and MAC3B integrate environmental signals in modulating flowering time
*Yu-Wen Huang¹, Yu-Sen Wang¹, Chin-Wei Lee¹ (1. Institute of Plant Biology, National Taiwan University, Taiwan)

[PO-450] Multilevel interactions of drought signals with the floral genes network
*Lucio Conti¹, Alice Robustelli Test¹, Sara Colanero¹, Paolo Korwin Krukowski¹, Damiano Martignago¹, Aldo Sutti¹, Giorgio Perrella¹, Thomas E. Juenger² (1. University of Milan, Italy, 2. University of Texas at Austin, USA)

[PO-452] For identification of factors on early flowering in ddm1 mutant of C24 accession in Arabidopsis thaliana
*KOHEI KUNITA¹, Motoki Shimizu², Ryo Fujimoto¹ (1. Kobe University, Japan, 2. Iwate Biotechnology research center)

[PO-454] UNRAVELING THE ROLE OF INHIBITOR OF GROWTH FACTOR (ING) PROTEINS IN THE REGULATION OF FLOWERING TIME IN ARABIDOPSIS
Alfonso Mouriz¹, Raquel Piqueras¹, Javier Barrero-Gil¹, Manuel Piñeiro¹, *Jose Antonio Jarillo¹ (1. Centro de Biotecnología y Genómica de Plantas, Universidad Politécnica de Madrid (UPM) – Centro Nacional Instituto de Investigación y Tecnología Agraria y Alimentaria (INIA-Csic), Madrid)

[PO-456] Erasure of Epigenetic Memory in Arabidopsis Flowering Control
*Toshiro Ito¹, Nana Otsuka¹, Makoto Shirakawa¹ (1. Nara Institute of Science and Technology)

[PO-458] Retrotransposon-induced epigenetic regulation of FLC accelerates Arabidopsis life cycling in response to herbicide
Mathieu Raingeval¹, Basile Leduque¹, Pierre Baduel², Vincent Colot², *Leandro Quadrana¹ (1. Institute of Plant Sciences Paris-Saclay, CNRS, 2. Institut de Biologie de l'Ecole Normale Supérieure, CNRS)

[PO-460] Mutual repression of AP2 and SOC1 couples changes in shoot apical meristem morphology with floral transition in Arabidopsis
*Enric Bertran García de Olalla¹, Alice Vayssières¹, Martina Cerise¹, Gabriel Rodríguez Maroto¹, Edouard Severing¹, Yaiza López Sampere¹, Pau Casanova-Ferrer¹, Sabine Schäfer¹, Pau Formosa-Jordan¹, George Coupland¹ (1. Max Planck Institute for Plant Breeding)
[PO-462] TWAS coupled with eQTL analysis reveals the genetic connection between gene expression and flowering time in Arabidopsis
Pei-Shan Chien¹, Pin-Hua Chen¹, *Tzyy-Jen Chiou¹, Cheng-Ruei Lee² (1. Academia Sinica, Taiwan, 2. National Taiwan University, Taiwan)

[PO-464] CRISPR/Cas9-mediated genomic editing of crucial gene regulating flowering time in lettuce (Lactuca sativa L.)
*Young jae YUN¹, Jeong Hwan LEE¹, Young Cheon KIM¹ (1. Jeonbuk national university)

[PO-466] Transcriptional repression of FLOWERING LOCUS C by LUMINIDEPENDENS involved in the autonomous pathway for flowering
*Daesong Jeong¹, Ramin Bahmani¹, Ilha Lee¹ (1. Seoul National University)

[PO-468] C-TERMINAL DOMAIN PHOSPHATASE-LIKE 1 protein interacts with TAF15b and together promote the repression of FLOWERING LOCUS C.
*Jinseul Kyung¹, Ilha Lee¹ (1. Seoul National University, Republic of Korea)
[PO-469] To ventral or not to ventral, it may depend on SISTER-OF-PIN1
*Ya Min¹, Qiaoshan Lin¹, Yaowu Yuan¹ (1. Department of Ecology and Evolutionary Biology, University of Connecticut)

[PO-471] Molecular dissection of floral proximal-distal patterning in Torenia fournieri
*Shihao Su¹,², Yawan Lei³, Xuan Zhou¹, Takamasa Suzuki¹, Wei Xiao¹, Tetsuya Higashiyama²,⁵ (1. Sun Yat-sen University, China, 2. Nagoya University, Japan, 3. Guangdong Academy of Science, China, 4. Chubu University, Japan, 5. The University of Tokyo, Japan)

[PO-473] Effects of mechanical forces on the floral development in Arabidopsis thaliana using a novel experimental system
*Akitoshi Iwamoto¹, Yuna Yoshioka², Oiko Okabe², Yohei Tanoue¹, Ryuta Karube¹, Sumire Yamamoto¹, Mizuki Negishi¹, Toshiyuki Ohno¹, Yuma Sumitomo¹, Ryoka Nakamura¹, Takeshi Yajima¹, Wakana Inoue¹, Kaho Nagakura¹ (1. Kanagawa University, 2. Tokyo Gakugei University)

[PO-475] SPATULA's role in radial symmetry establishment via cell-cycle coordination.
*Samuel Wee Han Koh¹, Laila Moubayidin¹ (1. John Innes Centre, UK)

[PO-477] Comparing the fruit development between Arabidopsis thaliana and other Brassicaceae species
*Binghan Wang¹, Andrea Gómez-Felipe¹, Jean-Sébastien Parent², Daniel Kierzkowski¹ (1. Institut de Recherche en Biologie Végétale, Département de Sciences Biologiques, Université de Montréal, Canada, 2. Agriculture and Agri-Food Canada, Canada)

[PO-479] The molecular origin of sensitive stigmas: using Torenia fournieri as a model
*Xuan Zhou¹, Shihao Su¹ (1. Sun Yat-sen University, China)

[PO-481] Auxin and gibberellic acid coordinate gene expression networks during receptacle growth
Xiong Liao³,², Yin Zhang³,², Zhongtian Xu³, Tianxinag Li³,², Xiaoyue Gao³,², Renyi Liu⁴, *Chizuko Yamamuro¹,² (1. College of Life Science, Fujian Agriculture and Forestry University, Fuzhou 350002, Fujian, China, 2. FAFU-UCR Joint Center for Horticultural Biology and Metabolomics, Haixia Institute of Science and Technology, Fujian Agriculture and Forestry University, Fuzhou 350002, Fujian, China, 3. College of Horticulture, Fujian Agriculture and Forestry University, Fuzhou 350002, Fujian, China, 4. Center for Agroforestry Mega Data Science, Haixia Institute of Science and Technology, Fujian Agriculture and Forestry University, 13 Fuzhou 350002, China, 5. Fujian Agriculture and Forestry University, Fuzhou 350002, Fujian, China)

[PO-483] A ZINC FINGER PROTEIN plays a role in mediating silique development through integration of phytohormone signaling
Pui Man Low¹, Que Kong¹, Trisha Quek¹, Peng Ken Lim¹, Yuzhou Yang¹, Wan Ting Tee¹, Marek Mutwil¹, Staffan Persson², Ling Yuan³, *Wei Ma¹ (1. School of Biological Sciences, Nanyang Technological University, Singapore 637551, Singapore, 2. Department of Plant and
[PO-485] Characteristics of a Radish Mutant with Longer Siliques
*shisheng li¹ (1. Huanggang Normal University, China)
[PO-470] Organ-specific transcriptome analysis reveals candidate genes involved in floral organogenesis in wild barley
*Gang Chen\textsuperscript{1,2}, Mishina Kohei\textsuperscript{1}, Qi Wang\textsuperscript{2}, Hongjing Zhu\textsuperscript{1,2}, Akemi Tagiri\textsuperscript{1}, Shinji Kikuchi\textsuperscript{2}, Hidenori Sassa\textsuperscript{2}, Youko Oono\textsuperscript{1,2}, Takao Komatsuda\textsuperscript{1,2,4} (1. Institute of Crop Science, National Agriculture and Food Research Organization, Tsukuba, JAPAN, 2. University of Chiba, Matsudo, JAPAN, 3. Key Laboratory of Fishery Biotechnology, Chinese Academy of Fishery Sciences, Beijing, CHINA, 4. Crop Research Institute, Shandong Academy of Agricultural Sciences, Shandong, CHINA)

[PO-472] Molecular mechanisms patterning the petal of \textit{Hibiscus trionum}
*Elena Salvi\textsuperscript{1}, Stefano Gatti\textsuperscript{1}, May Yeo\textsuperscript{1}, Lucie Riglet\textsuperscript{1}, Edwige Moyroud\textsuperscript{1} (1. Sainsbury Laboratory - University of Cambridge)

[PO-474] Histone Demethylases ELF6 and JMJ13 Antagonistically Regulate Self-Fertility in Arabidopsis
*Charlie Keyzor\textsuperscript{1}, Benoit Mermaz\textsuperscript{1}, Efstathios Trigazis\textsuperscript{1}, SoYoung Jo\textsuperscript{1}, Jie Song\textsuperscript{1} (1. Imperial College London)

[PO-476] Investigating the role of CYCLIN-P3s in \textit{Arabidopsis} style development
*Iqra Jamil\textsuperscript{1}, Laila Moubayidin\textsuperscript{1} (1. John Innes Centre)

[PO-478] Competing developmental gradients coordinate gynoecium morphogenesis in \textit{Arabidopsis thaliana}
*Andrea Gomez Felipe\textsuperscript{1}, Marco Marconi\textsuperscript{2}, Elvis Branchini\textsuperscript{1}, Bingham Wang\textsuperscript{1}, Hanna Bertrand-Rakusova\textsuperscript{1}, Teodora Stan\textsuperscript{1}, Jeromme Burkiewicz\textsuperscript{1}, Stefan de Folter\textsuperscript{3}, Anne-Lise Routier-Kierzkowska\textsuperscript{1}, Krzyszek Wabnik\textsuperscript{2}, Daniel Kierzkowski\textsuperscript{1} (1. Institut de Recherche en Biologie Végétale, Département des Sciences Biologiques, Université de Montréal, Canada, 2. Centro de Biotecnología y Genómica de Plantas (Universidad Politécnica de Madrid—Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria), Spain, 3. Unidad de Genómica Avanzada (UGA-LANGEBIO), Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional (CINVESTAV-IPN), Mexico)

[PO-480] Sugars on SPATULA: The Bitter and Sweet of Symmetry Establishment During Plant Organogenesis
*Seamus Curran\textsuperscript{1}, Yuxiang Jiang\textsuperscript{1}, Luca Argiro\textsuperscript{2}, Carlo Martins\textsuperscript{1}, Gerhard Saabach\textsuperscript{1}, Laila Moubayidin\textsuperscript{1} (1. John Innes Centre, 2. Max Planck Institute for Plant Breeding Research)

[PO-482] Jasmonate biosynthesis gene \textit{SIDAD1} regulates reproductive development in tomato
*Yukako Nomura\textsuperscript{1}, Yu Lu\textsuperscript{2}, Hirofumi Enomoto\textsuperscript{3}, Keiichiro Harada\textsuperscript{1}, Yoshihito Shinozaki\textsuperscript{2}, Ryoichi Yano\textsuperscript{4}, Mikiko Kojima\textsuperscript{5}, Yumiko Takebayashi\textsuperscript{5}, Hitoshi Sakakibara\textsuperscript{6}, Hiroshi Ezura\textsuperscript{2,7}, Tohru Arizumi\textsuperscript{2,7} (1. Graduate School of Life and Environmental Sciences, University of Tsukuba, Japan, 2. Faculty of Life and Environmental Sciences, University of Tsukuba, Japan, 3. Department of Biosciences, Teikyo University, Japan, 4. Advanced Analysis Center, National Agriculture and Food Research Organization (NARO), Japan, 5. RIKEN Center for Sustainable Resource Science, Japan, 6. Graduate School of Bioagricultural Sciences, Nagoya, JAPAN)
Fruit indehiscence mutation increases seed size in Arabidopsis

*Song Somin¹, Jeong Eun Park¹,², Jin Hoe Huh¹,²,³ (1. Department of Agriculture, Forestry and Bioresources, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 08826, Republic of Korea, 2. Plant Genomics and Breeding Institute, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 08826, Republic of Korea, 3. Research Institute for Agriculture and Life Sciences, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 08826, Republic of Korea)
[PO-487] The Plant Pontin and Reptin Homologues, RUVBL1 and RUVBL2A, are involved in plant gametophyte development
*Petra Prochazkova Schrumpfova1, Eva Dvorak Tomastikova2, Fen Yang2, Kristina Mlynarova1, Said Hafidh1, Alzbeta Kusova1, Marketa Pernisova1, Tereza Prerovska1, David Honys2, Jiri Fajkus1, Ales Pecinka2 (1. Masaryk University, Czech Rep., 2. Czech Acad Sci, Czech Rep.)

[PO-489] Cell-cycle synchronized organelles clustering in meiocytes
*Yuki Hamamura1, Shinichiro Komaki2, Nancy De Winne3,4, Geert De Jager3,4, Arp Schnittger1 (1. University of Hamburg, Germany, 2. NAIST, Japan, 3. Ghent University, Belgium, 4. VIB, Belgium)

[PO-491] A cytological framework of female meiosis in Arabidopsis by live-cell imaging
*Bingyan Hu1, Maria Ada Prusicki1, Arp Schnittger1 (1. University of Hamburg, Germany)

[PO-493] Identification of a novel U-chromosomal gene required for egg cell differentiation in Marchantia polymorpha
*Yen-Ting Lu1, Yihui Cui1, Masaki Shimamura2, Emiko Yoro3, Sakiko Ishida4, Tomoaki Kajiwara4, Tetsuya Hisanaga1,5, Takayuki Kohchi6, Keiko Sakakibara7, Tatsuaki Goh1, Keiji Nakajima1 (1. Graduate School of Biological Science, Nara Institute of Science and Technology (NAIST), Ikoma 630-0192 Japan, 2. Graduate School of Integrated Science for Life, Hiroshima University, Hiroshima, 739-8528 Japan, 3. Department of Life Science, Rikkyo University, Tokyo, 171-8501 Japan, 4. Graduate School of Biostudies, Kyoto University, Kyoto 606-8502 Japan, 5. Gregor Mendel Institute of Molecular Plant Biology, Dr. Bohr-Gasse 3, 1030 Vienna, Austria)

[PO-495] Functions of serine from the phosphorylated pathway on growth, male gametogenesis, and metabolism in Marchantia polymorpha
*Mengyao Wang1,2, Hiromitsu Tabeta1,3,4, Kinuka Ohtaka1,2,5, Ayuko Kuwahara1, Ryuichi Nishihama6,7, Toshiki Ishikawa8, Kiminori Toyouka1, Mayuko Sato1, Mayumi Wakazaki1, Hiromichi Akashi1, Hiroshi Tsugawa1,2, Tsubasa Shoji1, Okazaki Yozo1, Keisuke Yoshida10, Ryoichi Sato1, Ali Ferjani4, Takayuki Kohchi6, Masami Yokota Hirai1,2 (1. RIKEN Center for Sustainable Resource Science, Japan, 2. Nagoya University, Japan, 3. The University of Tokyo, Japan, 4. Tokyo Gakugei University, Japan, 5. Japan Women’s University, Japan, 6. Kyoto University, Japan, 7. Tokyo University of Science, Japan, 8. Saitama University, Japan, 9. Tokyo University of Agriculture and Technology, Japan, 10. Tokyo Institute of Technology, Japan)

[PO-497] Live imaging of chromosome behavior in pollen mother cells of Arabidopsis meiotic mutant
*Yoshitaka Azumi1 (1. Faculty of Science, Kanagawa University)

[PO-499] Effect of callose on symplast and apoplast related events in controlling proper meiosis initiation in rice anther locules
*Harsha Somashekar1,2, Ken-Ichi Nonomura1,2, Keiko Takanami3, Rie Hiratsuka4 (1. Plant Cytogenetics Laboratory, National Institute of Genetics, Mishima, Japan, 2. School of Life sciences, The Graduate University for Advanced studies (SOKENDAI), 3. Department of...
Environmental Health, Faculty of Human Life and Environmental Sciences, National Nara
Women's University, 4. Faculty of Medicine School of Medicine, The Jikei University school
of Medicine)

[PO-501] KNOLLE/SYP111 and SYP112 cooperate in cytokinesis during
gametogenesis in Arabidopsis thaliana

*Kazuo Ebine1,2, Daisuke Kurihara3, Shohei Yamaoka4, Tetsuya Higashiyama5, Takashi Ueda1,2
Tokyo, Japan)

[PO-503] Cytosolic phosphoglucose isomerase is essential for microsporogenesis and
embryogenesis in Arabidopsis

*Hung-Chi Liu1, Hsiu-Chen Chen1, Tzu-Hsiang Huang1, Wei-Ling Lue2, Jychian Chen2, Der-Fen
Suen1 (1. Agricultural Biotechnology Research Center, Academia Sinica, Taipei, Taiwan, 2.
Institute of Molecular Biology, Academia Sinica, Taipei, Taiwan)

[PO-505] DNA demethylases act together to regulate reproductive development
in Arabidopsis

*Joo Young Lim1,2, Seung Hwa Yu3, Jin Hoe Huh1,2,3,4 (1. Department of Agriculture,
Forestry and Bioresources, College of Agriculture and Life Science, Seoul National
University, Seoul 08826, South Korea, 2. Plant Genomics and Breeding Institute, Seoul
National University, Seoul 08826, South Korea, 3. Interdisciplinary Program in Agricultural
Genomics, Seoul National University, Seoul 08826, South Korea, 4. Research Institute for
Agriculture and Life Sciences, Seoul National University, Seoul 08826, South Korea)

[PO-507] A novel Arabidopsis thaliana protein, POTI, plays an important role in
maintaining pollen tubes’ integrity

*Natalia Julia Rzepecka1, Emi Ito2, Yoko Ito2, Tomohiro Uemura1 (1. Graduate School of
Humanities and Sciences, Ochanomizu University, Japan, 2. Institute for Human Life
Sciences, Ochanomizu University, Japan)

[PO-509] Proposed molecular mechanism for persistent growth capability in
physiologically anuclear pollen tubes

*Kazuki Motomura1,2, Naoya Sugi3, Atsushi Takeda1, Shohei Yamaoka4, Daisuke Maruyama3
City Univ., Japan, 4. Kyoto Univ., Japan)

[PO-511] Investigation of genes involved in species-specific pollen tube
guidance and gametophyte development.

*Masahiro Kanaoka1,2, Nao Kamiya2, Kana Hisabayashi2, Tetsuya Higashiyama3 (1.
Prefectural University of Hiroshima, 2. Nagoya University, 3. University of Tokyo)

[PO-513] Quantification of species-preferential pollen tube guidance by the
ovule in Arabidopsis species

*Takuya T Nagae1, Hidenori Takeuchi2, Shiori Nagahara2, Yoko Mizuta2,3, Tetsuya
Higashiyama4 (1. Graduate School of Agricultural and Life Sciences, The University of
Tokyo, 2. Institute of Transformative Bio-Molecules (WPI-ITbM), Nagoya University, 3.
Institute for Advanced Research (IAR), Nagoya University, 4. Graduate School of Science,
The University of Tokyo)

[PO-515] Roles of cytoskeleton in Arabidopsis synergid cells

*Daichi Susaki1, Rie Izumi1, Takao Oi2, Hidenori Takeuchi2, Ji Min Shin3, Naoya Sugi1, Tetsu
Kinoshita1, Tetsuya Higashiyama4, Tomokazu Kawashima3, Daisuke Maruyama1 (1.
[PO-517] Analysis of a key factor regulating cell fusion between early endosperm and persistent synergid.
*Daisuke Maruyama¹, Kaoru Ohta¹, Daichi Susaki¹, Tetsu Kinoshita¹ (1. Kihara Institute for Biological Research, Yokohama City University)

[PO-519] Molecular control of dominance/recessivity interactions between self-incompatibility alleles in Arabidopsis
Rita A Batista¹, Eléonore Durand¹, Manu Dubin¹, Samson Simon¹, Nicolas Burghgraeve¹, Jacinthe Azevedo-Favory², Xavier Vekemans¹, *Vincent Castric¹ (1. CNRS - University of Lille, 2. CNRS - University of Perpignan)

[PO-521] Studies toward unveiling the molecular scenario of double fertilization in Arabidopsis thaliana
*Tomoko Igawa¹, Taro Takahashi¹, Yuka Shiba¹, Jin Sugimoto¹ (1. Chiba University, Japan)

[PO-523] Sperm nuclear fusion is not required for the onset of embryogenesis
*Shuh-ichi Nishikawa¹, Yuri Takagi¹, Yuna Takamatsu¹, Hikari Matsumoto², Minako Ueda² (1. Faculty of Science, Niigata University, 2. Graduate School of Life Sciences, Tohoku University)
**[P] 22 Meiosis/Gamete/Fertilization**

**Wed. Jun 7, 2023 9:00 AM - 6:00 PM Poster 22 (Meeting Room 10)**

**[PO-486] DGK2 and DGK4 are the essential kinase for gametogenesis and eukaryotic phospholipid metabolism**
*Artik Elisa Angkawijaya1,2, Van Cam Nguyen1,2, Farrel Gunawan2, Yuki Nakamura1,3 (1. Center for Sustainable Resource Science, RIKEN, Yokohama, 230-0045 Japan, 2. Institute of Plant and Microbial Biology, Academia Sinica, 128 sec.2 Academy Rd., Nankang, Taipei 11529, Taiwan, 3. Graduate School of Science, The University of Tokyo, Tokyo 113-8654, Japan)

**[PO-488] Deciphering the molecular mechanism of sporogenesis mediated by SPOROCYTELESS/NOZZLE**
*Heecheol Yu1,2, Youbong Hyun1,2 (1. Seoul National University, South Korea, 2. Research Center for Plant Plasticity, Seoul National University, South Korea)

**[PO-490] Molecular dynamics of rice MEL2 as a component of cytoplasmic RNP granules regulating proper meiosis initiation**
Manaki Mimura1, Seijiro Ono1, Harsha Somashekar1,2, *Kenichi Nonomura1,2 (1. Plant Cytogenetics, Dept. Gene Function & Phenomics, National Institute of Genetics, 2. Genetics course, School of Life Science, The Graduate University for Advanced Studies (SOKENDAI))

**[PO-492] DNA methylation profiling in Arabidopsis egg cells**
*Hiroki Tsutsui1,2, Marc W Schmid3, Ueli Grossniklaus1 (1. Department of Plant and Microbial Biology & Zurich-Basel Plant Science Center, University of Zurich, Zurich, Switzerland, 2. Okinawa Institute of Science and Technology (OIST), Okinawa, Japan, 3. MWSchmid GmbH, Glarus, Switzerland)

**[PO-494] Distinct chromatin signatures in the Arabidopsis male gametophyte**
*Zhe Wu1, Danling Zhu1, Yi Wen1, Xi Chen1 (1. School of Life Sciences, Southern University of Science and Technology, China)

**[PO-496] Extensive N4 Cytosine Methylation is Essential for Marchantia Transcriptional Programming and Sperm Function**
*James M Walker1,2, Jingyi Zhang2, Yalin Liu2, Shujuan Xu2, Martin Vickers2, Judit Talas2, Liam Dolan3, Keiji Nakajima4, Xiaoi Feng2 (1. Salk Institute, 2. John Innes Centre, 3. Gregor Mendel Institute, 4. Nara Institute of Science and Technology)

**[PO-498] Control of meiosis under heat stress**
Joke de Jaeger-Braet1, Lev Boettger1, Yinqi Wang1, *Arp Schnittger1 (1. University of Hamburg, Germany)

**[PO-500] Arabidopsis novel proteins required for the construction of pollen exine reticulate structure**
Kota Suzuki1, *Sumie Ishiguro1 (1. Nagoya University, Japan)

**[PO-502] Ca2+-induced removal of inner vegetative plasma membrane in Arabidopsis sperm cells**
*Naoya Sugi1, Daichi Susaki1, Kazuo Ebine2,3, Tetsu Kinoshita1, Daisuke Maruyama1 (1. KIBR, Yokohama City Univ., 2. Div. Cellular Dynamics, NIBB, 3. Sch. Life Sci., SOKENDAI)

**[PO-504] Gene expression dynamics in developing pollen of Arabidopsis thaliana addressed by multi-omics approaches**
*Božena Klodová¹², David Potěšil³, Lenka Steinbachová¹, Christos Michailidis¹, Dieter Hackenberg⁴, Jörg Dieter Becker⁵, David Honys¹², David Twell⁴ (1. Institute of Experimental Botany of the Czech Academy of Sciences, Laboratory of Pollen Biology, Czech Republic, 2. Faculty of Science, Department of Experimental Plant Biology, Charles University, Czech Republic, 3. Mendel Centre for Plant Genomics and Proteomics, Central European Institute of Technology, Masaryk University, Czech Republic, 4. Department of Genetics and Genome Biology, University of Leicester, Leicester, United Kingdom, 5. Instituto de Tecnologia Química e Biológica António Xavier, Universidade Nova de Lisboa, Oeiras, Portugal)

[PO-506] Requirement of Non-specific Phospholipase C (NPC) in Plant Viability
*Anh Hai Ngo¹²³⁶, Debayan Bose²³⁴, Ying-Chen Lin²³⁴, Yu-chi Liu², Katharina Gutbrod⁶, Helga Peisker⁵, Van C. Nguyen¹²³⁴, Peter Dörmann⁵, Kazue Kannehara²³⁶, Yuki Nakamura¹²³⁶⁷ (1. RIKEN Center for Sustainable Resource Science (CSRS), 2. Institute of Plant and Microbial Biology, Academia Sinica, Taipei 11529, Taiwan, 3. Molecular and Biological Agricultural Sciences Program, Academia Sinica, Taiwan International Graduate Program, Taipei 11529, Taiwan, 4. Graduate Institute of Biotechnology, National Chung-Hsing University, Taichung 40227, Taiwan, 5. Institute of Molecular Physiology and Biotechnology of Plants, University of Bonn, D-53115 Bonn, Germany, 6. Biotechnology Center, National Chung-Hsing University, Taichung 40227, Taiwan, 7. Graduate School of Science, The University of Tokyo, Tokyo 113-8654, Japan)

[PO-508] Analysis of a Rab GTPase in pollen tube guidance
*Kumi Matsuura-Tokita¹², Kazuo Ebine³, Tomohiro Uemura⁴, Takashi Ueda³, Akihiko Nakano², Tetsuya Higashiyama¹ (1. The University of Tokyo, Japan, 2. RIKEN, Japan, 3. National Institute for Basic Biology, Japan, 4. Ochanomizu University, Japan)

[PO-510] The Regulation of Arabidopsis MALE STERILITY1 (MS1) in Pollen Development
*Helen White¹, Wenzhe Yin¹, Zoe Wilson¹ (1. University of Nottingham)

[PO-512] Tip-localized receptor modules orchestrate pollen tube behavior in angiosperms
*Hidenori Takeuchi¹, Takuya T. Nagae², Miki Imoto¹, Nozomi Naikï¹, Shiori Nagahara³, Kanako Bessho-Uehara³, Tetsuya Higashiyama² (1. Nagoya University, Japan, 2. The University of Tokyo, Japan, 3. Tohoku University, Japan)

[PO-514] Novel function of cuticles as a reproductive barrier in Brassicaceae
*Yoshinobu Kato¹², Yuka Kimura¹, Seiji Takayama¹, Sota Fujii¹³ (1. Grad. Sch. Agric. Lif. Sci., The University of Tokyo, 2. JST-PRESTO, 3. Suntory-SunRiSE)

[PO-516] Type II arabinogalactans play important roles in pollen - pistil interactions
Diana Moreira¹, Jessy Silva², Ana Marta Pereira¹, Maria João Ferreira¹, Sara Pinto¹, Sara Mendes¹, Dasmeet Kaur⁴, Frederico Lopez-Hernandez⁵, Michael Held⁶, Matthew Tucker⁷, Allan Showalter³, Paul Dupree⁵, Manuela Costa⁸, *Sílvia Coimbra¹ (1. LAQV/REQUIMTE, Departamento de Biologia, Faculdade de Ciências, Universidade do Porto, Rua Campo Alegre s/n, 4169-007 Porto, Portugal, 2. Department of Biology, University of Minho, Campus de Gualtar, 4710-057 Braga, Portugal, 3. Department of Environmental &Plant Biology, Ohio University, Athens, OH 45701-2979, USA, 4. Molecular and Cellular Biology Program, Ohio University, Athens, OH 45701, USA, 5. Department of Biochemistry, University of
Cytological Analysis of Cell Invasion during Gametophyte Interactions in Arabidopsis
*Nicholas James Desnoyer\(^1\), Ueli Grossniklaus \(^1\) (1. University of Zurich)

Molecular basis of multi-phased pistil defense mechanism against foreign pollen
*Sota Fujii\(^1,2\), Hiroki Miura\(^1\), Eri Yamamoto\(^1\), Seiji Takayama\(^1\) (1. The University of Tokyo, 2. Suntory Rising Stars Encouragement Program in Life Sciences (SunRISE))

Identification and analysis of the putative GCS1-interacting proteins in Arabidopsis
*Ari Yoshimura\(^1\), Yuki Yanagawa\(^1\), Amane Mimuro\(^1\), Tomoko Igawa\(^1\) (1. Chiba University, Japan)

The female gametes expressed protein FOG3 is required for gamete fusion in *Arabidopsis thaliana*
*Yuan Wang\(^1\), Zi jun Lan\(^1\), Ji xuan Yang\(^1\), Tian xu Liu\(^1\), Sheng Zhong\(^1\), Li -Jia Qu\(^1,2\) (1. State Key Laboratory of Protein and Plant Gene Research, Peking-Tsinghua Center for Life Sciences at College of Life Sciences, Peking University, China, 2. The National Plant Gene Research Center (Beijing), China)
[PO-525] Approach to elucidate the molecular mechanism regulating the basal meristem of hornwort sporophytes
*Kazune Ezaki¹, Keiko Sakakibara² (1. Rikkyo university)

[PO-527] Quantification of zygote polarization dynamics for body axis formation in Arabidopsis
*Minako Ueda¹,2, Zichen Kang³, Tomonobu Nonoyama³, Hikari Matsumoto², Sakumi Nakagawa¹, Yuki Take Ishimoto³, Satoru Tsugawa³, Yusuke Kimata¹, Takumi Higaki⁴, Yuuki Matsushita⁵, Naoya Kamamoto³, Koichi Fujimoto⁵ (1. Tohoku University, Japan, 2. SunRiSE, Japan, 3. Akita Prefectural University, Japan, 4. Kumamoto University, Japan, 5. Hiroshima University, Japan)

[PO-529] Antagonistic effects on Arabidopsis hybrids exhibiting endosperm based post-zygotic hybridization barriers
*Renate Marie Alling¹, Katrine Bjerkan¹, Ida Velle Myking¹, Anne Krag Brysting³, Paul Eivind Grini¹ (1. University of Oslo)

[PO-531] The identification of type I MADS box genes as the upstream activators of an endosperm-specific invertase inhibitor in Arabidopsis
*Dongfang Wang¹ (1. Spelman College)

[PO-533] "Identification and functional investigation of diversifying seed genes at the maternal-offspring interface in Arabidopsis thaliana"*Caroline Anne Martin¹,2, Alesandra Pusey¹,2, Rebecca Povilus², Souraya Khouider², Mary Gehring¹,2 (1. MIT, USA, 2. Whitehead Institute for Biomedical Research, USA)

[PO-535] Impact of LYSOPHOSPHATIDIC ACID ACYLTRANSFERASE 2 (LPAT2) in de novo glycerolipid metabolism and developmental control: Two sides of the same coin?
*Nina Alyssa Barroga¹,2,3,4, Yuki Nakamura¹,5 (1. Center for Sustainable Resource Science, RIKEN, Yokohama 230-0045, Japan, 2. Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, Academia Sinica and National Chung Hsing University, Taipei 11529, Taiwan, 3. Institute of Plant and Microbial Biology, Academia Sinica, Taipei 11529, Taiwan, 4. Graduate Institute of Biotechnology, National Chung Hsing University, Taichung 40227, Taiwan, 5. Graduate School of Science, The University of Tokyo, Tokyo 113-8654, Japan)

[PO-537] Molecular basis of the key regulator WRINKLED1 in plant oil biosynthesis
Zhu Qiao¹,2, *Que Kong¹, Wan Ting Tee¹, Audrey R.Q. Lim¹, Miao Xuan Teo¹, Vincent Olieric³, Pui Man Low¹, Yuzhou Yang⁵, Guoliang Qian⁵, Wei Ma¹, Yong-Gui Gao¹,² (1. School of Biological Sciences, Nanyang Technological University, SinGapore 637551, SinGapore., 2. NTU Institute of Structural Biology, Nanyang Technological University, SinGapore 63921, SinGapore., 3. Swiss Light Source, Paul Scherrer Institute, 5232 Villigen PSI, Switzerland., 4. College of Plant Protection (Key Laboratory of Integrated Management of Crop Diseases and Pests), Nanjing Agricultural University, Nanjing, 210095, China.)
[PO-541] Apetala 2 regulates seed longevity through lipid polyester accumulation
*Eduardo Bueso Rodenas¹, Joan Renard¹, Isabel Molina², Gaetano Bissoli¹, Maria Dolores Planes¹, Eduardo Burillo¹ (1. Instituto de Biología Molecular y Celular de Plantas, Universitat Politecnica de València, 46022 Valencia, Spain, 2. Department of Biology, Algoma University, Sault Ste Marie, ON, Canada, P6A 2G4)

[PO-543] AtC3H59/ZFWD3, an Arabidopsis nuclear protein, interacts with Desi1 and is involved in seed germination, seedling development, and seed development
*Hye-Yeon Seok¹, Hyungjoon Bae¹, Taehyoung Kim¹, Syed Muhammad Muntazir Mehdi¹, Linh Vu Nguyen¹, Sun-Young Lee¹, Md Bayzid¹, Mairaj Bibi¹, Swarnali Sarker¹, Yong-Hwan Moon¹ (1. Pusan National University, Republic of Korea)

[PO-545] Constructing and testing a genetic network for controlling seed germination in Arabidopsis
*Ming Yang¹, Yixing Wang¹ (1. Department of Plant Biology, Ecology, and Evolution, Oklahoma State University, Stillwater, OK 74078, USA)

[PO-547] AtC3H12, an Arabidopsis non-TZF transcriptional activator, negatively affects seed germination and seedling development
*Mairaj Bibi --¹, Hye-Yeon Seok¹, Taehyoung Kim¹, Sun-Young Lee¹, Md Bayzid¹, Swarnali Sarker¹, Yong-Hwan Moon¹ (1. PUSAN NATIONAL UNIVERSITY)

[PO-549] Heterosis in Intraspecific Hybrid of Arabidopsis thaliana during Early Development
*Putri Wijayanti¹, Yuko Wada¹, Kazuaki Utsugi¹, Arei Isaka¹, Yuya Tanaka¹, Tatsuya Nunohira¹, Yuki Hane¹, Seiji Takayama², Toshiro Ito¹ (1. Division of Biological Science, Graduate School of Science and Technology, Nara Institute of Science and Technology, Japan, 2. Graduate School of Agricultural and Life Science, Tokyo University, Japan)
Delayed embryo-proper development triggers suspensor derived polyembryony in Arabidopsis  
*Honglei Wang¹, Ben Scheres¹, Renze Heidstra³ (1. Wageningen University & Research, The Netherlands)

Elucidation of elongation mechanism of Arabidopsis zygote using image analysis methods based on live-cell imaging  
*Hikari Matsumoto¹, Zichen Kang², Tomonobu Nonoyama², Sakumi Nakagawa¹, Yukitaka Ishimoto², Satoru Tsugawa², Minako Ueda¹,³ (1. Tohoku University, Japan, 2. Akita Prefectural University, Japan, 3. Suntory Rising Stars Encouragement Program in Life Sciences (SunRiSE), Japan)

Endosperm cellularization is initiated by a family of auxin related factors  
*Nicolas Butel¹, Wenjia Xu², Juan Santos-González², Claudia Köhler¹,² (1. Max Planck Institute of Molecular Plant Physiology, Potsdam-Golm, Germany, 2. Department of Plant Biology, Uppsala BioCenter, Swedish University of Agricultural Sciences and Linnean Centre for Plant Biology, Uppsala, Sweden)

Natural variation in WHITE-CORE RATE 1 regulates redox homeostasis in rice endosperm to affect grain quality  
*Bian Wu¹, Yuqing He² (1. Food Crops Institute, Hubei Academy of Agricultural Sciences, Wuhan, China, 2. National Key Laboratory of Crop Genetic Improvement and Hubei Hongshan Laboratory, Huazhong Agricultural University, Wuhan, China)

The plant hormone ABA alleviates the interploidy barrier  
*Hikaru Sato¹,³, Wenjia Xu¹,², Heinrich Bente¹,⁴, Juan Santos-González¹, Claudia Köhler¹,⁴ (1. Swedish University of Agricultural Sciences, Sweden, 2. National Institute of Agricultural Research, France, 3. University of Tokyo, Japan, 4. Max Planck Institute, Germany)

Comparative Omics of Arabidopsis Developing Seed with Enhanced Fatty Acid Synthesis  
*Brian P Mooney¹, Amr Kataya¹, Jose Roberto S Nascimento¹, Chunhui Xu¹, Somnath Koley³, Athen Kimberlin¹, Matthew G Garneau², Dong Xu¹, Abraham Koo¹, Philip D Bates², Doug Allen³, Jay J Thelen¹ (1. University of Missouri, 2. Washington State University, 3. Donald Danforth Plant Science Center)

A MYB transcription factor regulates the biosynthesis of very-long-chain fatty acids in Arabidopsis  
*Yuzhou Yang¹, Que Kong¹, Sitakanta Pattanaik², Ling Yuan², Wei Ma¹ (1. School of Biological Sciences, Nanyang Technological University, 2. Department of Plant and Soil Sciences, Kentucky Tobacco Research and Development Center, University of Kentucky)

Exploring RRT1 function in the synthesis of Arabidopsis seed mucilage RG1  
*Yuki Aoi¹,², Abdelilah Benamar¹, Luc Saulnier², Marie-Christine J. Ralet², Helen M. North¹ (1. INRAE, Institut Jean-Pierre Bourgin, Université Paris-Saclay, AgroParisTech, 78000, Versailles, France, 2. INRAE, UR1268 BIA, 3 impasse Yvette Cauchois, CS71627, 44316
[PO-542] Rational approaches to synchronizing germination in seed populations
*Liam Walker¹, Iain G. Johnston², George W. Bassel¹ (1. School of Life Sciences, University of Warwick, 2. Department of Mathematics, University of Bergen)

[PO-544] AtC3H12, an Arabidopsis non-TZF transcriptional activator, negatively affects seed germination and seedling development
Hye-Yeon Seok¹, Taehyoung Kim¹, Sun-Young Lee¹, Md Bayzid³, Mairaj Bibi --¹, Swarnali Sarker¹, *Yong-Hwan Moon¹ (1. Pusan National University)

[PO-546] Arabidopsis INDETERMINATE DOMAIN 4 is involved in the control of seed germination by light
*Akiko Kozaki¹, Takuya Aoyanagi¹, Ryoichi Shiroma¹, shun Ikeya¹ (1. Shizuoka University, Japan)

[PO-548] Structure-function analysis of TMB-RESISTANT1, a B2 Raf-like kinase in Arabidopsis thaliana
*Eunsun Kim¹, Soobin Choi¹, Hyunjin Lim¹, Sumin Lee¹, Moon-Soo Soh¹ (1. Sejong University, Republic of Korea)

[PO-550] Identification and characterization of soybean KIX genes by comparative analysis with Arabidopsis thaliana
*MI-SUK SEO¹, Gyu-Tae Park¹, Soo-Kwon Park¹, Yu-Na Kim¹, Dool-Yi Kim¹, Hyeon Jung Kang¹, Jung Kyung Moon¹ (1. National institute of crop science, Republic of Korea)
[P] 24 Stem cell/Regeneration

[PO-551] Analysis of a blue light receptor CRY1 during plant regeneration
*Min Li¹, Hikaru Sato¹, Takuya Sakamoto², Yayoi Inui¹, Kazunari Yamamoto¹, Tomonao Matsushita³, Sachihiro Matsunaga¹ (1. University of Tokyo, Japan, 2. Tokyo University of Science, Japan, 3. University of Kyushu, Japan)

[PO-553] HY5-mediated light signals determine the new meristem fate during plant regeneration
*Yu Chen¹², David S. Favero², Ayako Kawamura², Takamasa Suzuki³, Keiko Sugimoto¹² (1. Department of Biological Sciences, The University of Tokyo, Japan, 2. Center for Sustainable Resource Science, RIKEN, Japan, 3. College of Bioscience and Biotechnology, Chubu University, Japan)

[PO-555] Hyperosmotic stress-induced somatic embryogenesis and its continuous culture in Japanese honewort (Cryptotaenia japonica; Apiaceae)
*Sana Takahashi¹, Mugito Kato¹, Hajime Shiota¹ (1. Yokohama City University, Japan)

[PO-557] Roles of At2-MMP during tissue reunion in incised Arabidopsis inflorescence stem
*Afiifah Machfuudzoh¹, Ryo Koshiba¹, Yusuke Ohba¹, Hirotaka Yokogawa², Weerasak Pitaksaringkar², Keita Matsuoka³, Masashi Asahina⁴, Rakwal Randep⁶, Takumi Higaki⁷, Shinobu Satoh³, Hiroaki Iwai³ (1. Graduate School of Science and Technology, University of Tsukuba, Japan, 2. Graduate School of Life and Environmental Sciences, University of Tsukuba, Japan, 3. Institute of Life and Environmental Sciences, University of Tsukuba, Japan, 4. Department of Biosciences, Teikyo University, Japan, 5. Advanced Instrumental Analysis Center, Teikyo University, Japan, 6. Faculty of Health and Sport Sciences, University of Tsukuba, Japan, 7. Faculty of Advanced Science and Technology, Kumamoto University, Japan)

[PO-559] Mechanistic analysis of the improvement of shoot regeneration ability by gamma irradiation
*Ryuhei Hashimasa¹, Hikaru Sato¹, Takuya Sakamoto², Yuki Sakamoto³, Takamasa Suzuki⁴, Sachihiro Matsunaga¹ (1. The University of Tokyo, Japan, 2. Tokyo University of Science, Japan, 3. The University of Osaka, Japan, 4. Chubu University, Japan)

[PO-561] Utilization of Arabidopsis thaliana developmental regulator genes for differentiation control of transgenic plant cells
*Shohei Koyama¹, Yuka Sato¹, Berbudi Bingtang Pratama¹, Tomoko Igawa¹ (1. Chiba University, Japan)

[PO-563] Genetics and Multi-Omics Integration Analyses Identified Cell Differentiation State Maintenance Mechanisms in hope-1 Mutant Hypocotyls
*Ali Ferjani¹, Mizuki Shiratori¹², Kazuki Takahashi¹, Hiromitsu Tabe⁴, Hiroyuki Koga⁴, Shizuka Gunji¹, Munen Sato³, Gorou Horiguchi⁵, Masami Yokota Hirai³, Hirokazu Tsukaya⁴ (1. Department of Biology, Tokyo Gakugei University, 2. Department of Life Sciences, Graduate School of Arts and Sciences, The University of Tokyo, 3. RIKEN Center for
[PO-565] Finding the sweet spot – How brassinosteroids interfere with shoot regeneration processes
*Luiselotte Rausch1, Robin Jourot1, Yu Chen1,2, Hatsune Morinaka1, Ayako Kawamura1, Akira Iwase1, Keiko Sugimoto1,2 (1. RIKEN Center for Sustainable Resource Science, Tsurumi, Yokohama, Kanagawa 230-0045, Japan, 2. Department of Biological Sciences, Graduate School of Science, The University of Tokyo, Tokyo 113-0033, Japan)

[PO-567] Functional analysis of histone methyltransferase required for shoot regeneration
*Masako Migihashi1, Takuya Sakamoto2, Hikaru Sato1, Satoyo Oya1, Soichi Inagaki1, Yutaka Suzuki1, Tetsuji Kakutani1,3, Sachihito Matsunaga1 (1. The University of Tokyo, Japan, 2. Tokyo University of Science, Japan, 3. National Institute of Genetics, Japan)

[PO-569] Functional analysis of a chromatin remodeling factor involved in the process of plant regeneration
*Ayaka Horie1, Takuya Sakamoto2, Hikaru Sato1, Mariana Diaz3, Yayoi Inui1, Daniel Slane1, Yutaka Suzuki1, Sachihito Matsunaga1 (1. University of Tokyo, Japan, 2. Tokyo University of Science, Japan, 3. University of Zurich, Switzerland)

[PO-571] Molecular mechanisms underlying local histone modification changes during stem cell formation in the moss Physcomitrium patens
*Masaki Ishikawa1,2, Mitsuyasu Hasebe1,2 (1. National Institute for Basic Biology, Japan, 2. SOKENDAI (The Graduate University for Advanced Studies), Japan)

[PO-573] Cytokinin-dependent regulation of plant cell dedifferentiation via pre-mRNA splicing in Arabidopsis
*Ami Takeuchi1, Kenji Nagamiya1, Takuyuki Ikeda1, Iwai Ohbayashi2, Munetaka Sugiyama1, Misato Ohtani1,3,4 (1. The University of Tokyo, Japan, 2. National Cheng Kung University, Taiwan, 3. Nara Institute of Science and Technology, Japan, 4. RIKEN, Japan)

[PO-575] Transcriptional Regulation of Cell-cell Movement During Root Tip Regeneration
*Itay Cohen1, Idan Efroni1 (1. Hebrew University of Jerusalem)

[PO-577] An induced pluripotent stem cell (iPS) tool to overcome regenerative recalcitrance in plants
*Jana Wittmer1, Menno Pijnenburg1, Ben Scheres1, Renze Heidstra1 (1. Wageningen University and Research)

[PO-579] Confocal microscopy-enabled morphometric reverse tracking of Arabidopsis callus development from leaf mesophyll protoplasts
*Patience Chatukuta1, Detlef Weigel1 (1. Max Planck Institute for Biology Tübingen, Germany)

[PO-581] CLE peptides modulate shoot development through WUS regulation
*Nadiatul A. Mohd-Radzman1, Siyu Miao1, Heather McLaughlin1, Henrik Jönsson1 (1. Sainsbury Laboratory Cambridge University (SLCU), Bateman Street, CB2 1LR, Cambridge, United Kingdom)

[PO-583] Functional analysis of JINGASA transcription factor in stem cell dynamics in Marchantia polymorpha
*Go Takahashi¹, Tomohiro Kiyosue¹, Yuki Hirakawa¹ (1. Gakushuin University, Japan)

[PO-585] Budding Heads: Activation and Competition of Arabidopsis Axillary Buds

*Zoe Nahas¹, Torkel Loman¹, James Locke¹, Ottoline Leyser¹ (1. Sainsbury Laboratory, University of Cambridge)
[P] 24 Stem cell/Regeneration
Wed. Jun 7, 2023 9:00 AM - 6:00 PM  Poster 24(Meeting Room 10)

[PO-552] Molecular Mechanisms of Light-Mediated Regulation of Plant Regeneration
*Yetkin Caka Ince1, Keiko Sugimoto1 (1. RIKEN)

[PO-554] ASHH2 regulates plant regeneration through regulation of photosynthesis and glucose metabolic pathways
*Kana Yoshida, Takuya Sakamoto2, Yuki Katsuyama2, Yayoi Inui1, Sachihiro Matsunaga1 (1. University of Tokyo, Japan, 2. Tokyo University of Science, Japan)

[PO-556] Molecular identities of wounding signals that promote plant regeneration and their perception mechanisms
*Yosuke Sasai1,2, Akira Iwase2,3, Keiko Sugimoto1,2 (1. The University of Tokyo, Japan, 2. RIKEN, Japan, 3. JST, Japan)

[PO-558] Exposure to long-term cold enhances callus formation in Arabidopsis
*Fu-Yu Hung1, Keiko Sugimoto1 (1. RIKEN, CSRS)

[PO-560] Brassinosteroid receptor-mediated regulation of tissue regeneration in Arabidopsis
*Ye Zhang1, Kazuki Suita1, Naoki Takahashi1, Masaaki Umeda1 (1. Nara Institute of Science and Technology, Japan)

[PO-562] Transcriptome and metabolome profiles during cellular differentiation of tobacco transgenic cells expressing Arabidopsis developmental regulator genes
*Yuka Sato1, Mai Minamikawa1, Tomoko Igawa1 (1. Chiba University, Japan)

[PO-564] It’s All in the Timing: Enhancing Regeneration Efficiency Using Morphogenic Factors
*Bastiaan Bargmann1, Kelsey Reed1 (1. Virginia Tech)

[PO-566] Submergence promotes auxin-induced callus formation through ethylene-mediated post-transcriptional control of auxin receptors
*Seung Yong Shin1,2, Yuri Choi3, Sang-Gyu Kim3, Su-Jin Park1,4, Ji-Sun Park1, Ki-Beom Moon1, Hyun-Soon Kim1,4, Jae Heung Jeon1, Hye Sun Cho1,4, Hyo-Jun Lee1,2,5 (1. Plant Systems Engineering Research Center, Korea Research Institute of Bioscience and Biotechnology, Korea, 2. Department of Functional Genomics, KRIBB School of Bioscience, University of Science and Technology, Korea, 3. Department of Biological Sciences, Korea Advanced Institute of Science and Technology, Korea, 4. Department of Biosystems and Bioengineering, KRIBB School of Biotechnology, University of Science and Technology, Korea, 5. Department of Biological Sciences, Sungkyunkwan University, Korea)

[PO-568] Checkpoints in cellular programming during root regeneration
*Bruno Guillotin1, Ramin Rahni1, Kenneth Brinbaum1,2 (1. New York University, Center for Genomics and Systems Biology, 2. New York University Abu Dhabi, Center for Genomics and Systems Biology)

[PO-570] WIND1 controls site-specific histone acetylation/deacetylation and promotes somatic embryogenesis in Arabidopsis
*Akira Iwase1,2, Arika Takebayashi1, Ayako Kawamura1, Fu-Yu Hung1, Takamasa Suzuki3,
Keiko Sugimoto$^{1,4}$ (1. RIKEN CSRS, Japan, 2. JST PRESTO, Japan, 3. Chubu University, Japan, 4. The University of Tokyo, Japan)

[PO-572] Single-nuclei transcriptome and chromatin accessibility analyses reveal gene regulatory networks underlying stem cell formation in the moss *Physcomitrium patens*
* Ruan Morne De Villiers$^1$, Gergo Palfalvi$^2$, Mitsuyasu Hasebe$^1$, Masaki Ishikawa$^1$ (1. National Institute for Basic Biology, Japan, 2. Max Planck Institute for Plant Breeding Research, Germany)

[PO-574] Single-nucleus RNA-seq revealed transcriptomic landscapes of epidermal reprogramming

[PO-576] Plant Regeneration: To Cell and Back
* Kelsey Reed$^1$, Bastiaan Bargmann$^1$ (1. Virginia Tech, USA)

[PO-578] Uncovering the transcriptional regulatory network involved in boosting wheat regeneration and transformation
* Xuemei Liu$^1$, Xiaomin Bie$^2$, Xuelei Lin$^1$, Xiansheng Zhang$^2$, Jun Xiao$^1$ (1. Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, 2. Shandong Agricultural University, Tai’an 271018, Shandong, China)

[PO-580] Molecular genetic analysis of the role of BTAF1, a TBP-associated factor, in shoot regeneration
* Takaaki Yonekura$^1$, Hatsune Morinaka$^2$, Ryu Morikawa$^1$, Akihito Mamiya$^3$, Munetaka Sugiyama$^1$ (1. University of Tokyo, Japan, 2. RIKEN, Japan, 3. Kobe University, Japan)

[PO-582] Analysis of stem cell-promoting CLE peptide signaling in the shoot apical meristems of land plants
* Yuki Hirakawa$^1$, Go Takahashi$^1$, Tomohiro Kiyosue$^1$ (1. Gakushuin University, Japan)

[PO-584] Conserved expression of a core plant stem cell regulator despite extreme divergence in cis-regulatory sequence and organization
* Danielle Ciren$^1$, Zachary Lippman$^{1,2}$ (1. Cold Spring Harbor Laboratory, 2. Howard Hughes Medical Institute)
Poster | 25 Leaf development

Tue. Jun 6, 2023 9:00 AM - 6:00 PM Poster 25 (Meeting Room 10)

[PO-587] Spiralling out of Control: Regulation of Phyllotactic Stability
*Merijn Kerstens¹, Ben Scheres¹,² Viola Willemsen¹ (1. Plant Developmental Biology, Wageningen University and Research, 2. Rijk Zwaan Breeding BV)

[PO-589] Multi-platform Metabolomics Identified Key Metabolites that Coordinate Cell Number and Size During Leaf Morphogenesis
*Hiromitsu TABETA¹,², Hiroyuki Koga³, Muneo Sato¹, Hirokazu Tsukaya³, Masami Yokota Hirai¹, Ali Ferjani² (1. RIKEN Center for Sustainable Resource Science, 2. Department of Biology, Tokyo Gakugei University, 3. Department of Biological Sciences, Graduate School of Science, The University of Tokyo Department of Applied Biosciences, 4. Graduate School of Bioagricultural Science, Nagoya University)

[PO-591] TCP transcription factors regulate cell expansion in leaf development
*Tomotsugu Koyama¹, Nobutaka Mitsuda², Motoaki Seki³, Koji Takahashi⁴,⁵ Toshinori Kinoshita⁶,⁷, Ayumu Bessho⁶, Tadashi Kunieda⁶,⁷, Taku Demura⁶,⁷, Masaru Ohme-Takagi⁸ (1. Suntory Foundation for Life Sciences, 2. AIST, Bioproduction Research Institute, 3. RIKEN, Center for Sustainable Resource Science, 4. Nagoya University, Graduate School of Science, 5. Nagoya University, ITbM, 6. Nara Institute of Science and Technology, Division of Biological Science, 7. Nara Institute of Science and Technology, Center for Digital Green-innovation, 8. Saitama University, Graduate School of Science and Engineering)

[PO-593] Analysis of gene expression patterns in specific meristems of one-leaf plant Monophyllaea glabra by whole-mount in situ hybridization
*Shunji Nakamura¹, Ayaka Kinoshita¹, Hiroyuki Koga¹, Hirokazu Tsukaya¹ (1. Grad. Sch. Sci., Univ. Tokyo, Japan)

[PO-595] Identification of interacting factors of the TARANI/ Ubiquitin-specific protease 14 (UBP14) in Arabidopsis thaliana
*Anjana S Hegde⁵, Dr. Utpal Nath¹ (1. Department of Microbiology and Cell Biology, Indian Institute of Science, Bengaluru, India)

[PO-597] A quantitative study of pavement cell shape in the upper leaf epidermis
*Jacqueline Nowak¹ (1. University of Potsdam, Germany)

[PO-599] Fluorescence imaging analysis of the structure and development of hydathodes in Arabidopsis
*Hiroki Yagi¹, Iori Mihara¹, Kentarou Tamura², Tomonao Matsushita³, Ikuko Hara-Nishimura¹, Haruko Ueda¹, Tomoo Shimada³ (1. Konan Univ., 2. Univ. of Shizuoka, 3. Kyoto Univ.)
[PO-586] Competition for resources during semi-sequential growth of developmental units drive allometric patterns in the grass *Setaria*
*Renée Dale¹, Darshi Banan², Ivan Baxter¹, Shankar Mukherji³ (1. Donald Danforth Plant Science Center, USA, 2. University of Washington, USA, 3. Washington University Saint Louis, USA)

[PO-588] Temporal expression of *BLADE-ON-PETIOLE 1* and 2 in successive leaves define the shape of their lamina
*Mingli Xu¹, Tiejiang Hu¹, Darren Manuela¹ (1. University of South Carolina, USA)

[PO-590] Molecular functions of AS2, a plant-specific AS2/LOB domain protein essential for leaf development and differentiation
*Sayuri Ando¹, Mika Nomoto², Hidekazu Iwakawa¹, Simon Vial-Pradel¹, Yasuomi Tada², Kotaro Yamamoto³, Yasunori Machida², Shoko Kojima¹, Chiyoko Machida¹ (1. Chubu University, Japan, 2. Nagoya University, Japan, 3. Hokkaido University, Japan)

[PO-592] ORESARA15 and ANGUSTIFOLIA3: Key Regulators of Cell Proliferation during Arabidopsis Leaf Growth
*Sang Eun Jun¹, Jin Hee Kim², Thi Mnh Hue Cao¹, Adenia Arih Utarini¹, Gyung-Tae Kim¹ (1. Dong-A University, Republic of Korea, 2. Jeju National University, Republic of Korea)

[PO-594] What did the grasses gain by losing PEAPOD?
*Evolution and conserved functionality of organ size and shape regulator PEAPOD*
*Ruth Cookson¹, Somrutai Winichayakul¹, Hong Xue¹, Kim Richardson¹, Roger Moraga², Aurelie Laugraud², Ambarish Biswas², Greg Bryan¹, Nick Roberts¹ (1. Plant Biotechnology, Grasslands Research Centre, AgResearch Ltd., Palmerston North, New Zealand, 2. Bioinformatics and Statistics, Grasslands Research Centre, AgResearch Ltd., Palmerston North, New Zealand)

[PO-596] Genetic interaction of Arabidopsis ELP4 and DRL1 in the regulation of cell proliferation and establishment of leaf dorsoventral polarity
*Sang Eun Jun¹, Kiu-Hyung Cho², Muhammad Aamir Manzoor², Tae Young Hwang³, Youn Soo Kim¹, Raffael Schaffrath⁴, Gyung-Tae Kim¹ (1. Dong-A University, Republic of Korea, 2. Gyeongbuk Institute for Bioindustry, Republic of Korea, 3. Anhui Agricultural University, China, 4. University of Kassel, Germany)

[PO-598] Puzzle-shaped plant cells are developmental constraints driven by mechanical stress
*Nicola Trozzi¹, Mateusz Majda¹, Brendan Lane¹, Adam Runions³, Mylan Ansel⁴, Corentin Mollier⁴, Alice Malivert⁴, Olivier Hamant⁴, Arezki Boudaoud⁵, Dorota Kwiatkowska⁵, Richard S. Smith¹ (1. John Innes Centre, United Kingdom, 2. University of Lausanne, Switzerland, 3. University of Calgary, Canada, 4. University of Lyon, France, 5. Polytechnic Institute of Paris, France, 6. University of Silesia in Katowice, Poland)

[PO-600] Thallus development controlled with *Marchantia*-specific peptide hormone-receptor pair
*Hidefumi Shinohara¹ (1. Fukui Prefectural University, Japan)
**Poster 2 | Poster | 26 Root development**

** Tue. Jun 6, 2023 9:00 AM - 6:00 PM Poster 26 (Meeting Room 10)**

**[PO-601]** A group of C2H2 Zinc Finger proteins coordinates the developmental reprogramming mediated by danger signals in the *Arabidopsis* root meristem

*Souvik Dhar¹, Ji-Young Lee¹,²,³ (1. School of Biological Sciences, Seoul National University, Korea, 2. Plant Genomics and Breeding Institute, Seoul National University, Korea, 3. Plant Immunity Research Center, Seoul National University, Korea)

**[PO-603]** Does LHP1 act independently of Polycomb in roots?

*Gabriela Guzmán-Favila¹, Diego Ornelas-Ayala¹, María Teresa Alejo-Vinogradova³, Rosario Vega-León¹, José Olvera-Herrera¹, Bénédicte Desvoyes², Laura Rodríguez-Casillas², Berenice García-Ponce³, Adriana Garay-Arroyo⁴, Elena Alvarez-Buyl¹, Crisanto Gutierrez⁵, María de la Paz Sanchez¹ (1. Laboratorio de Genética Molecular, Epigenética, Desarrollo y Evolución de plantas. Instituto de Ecología, Universidad Nacional Autónoma de México, México, 2. Centro de Biología Molecular Severo Ochoa, Madrid, Spain)

**[PO-605]** SCF^{FBS1} Regulates Root Quiescent Center Cell Division via Protein Degradation of APC/C^{CCS2A2}

*Kyoung Rok Geem¹, Hojin Ryu¹ (1. Chungbuk National University, Korea)

**[PO-607]** Uncovering the hidden aspects of cell division and elongation dynamics at the tip of growing Arabidopsis roots using 4D-microscopy, AI-assisted image processing, and data sonification


**[PO-609]** A comprehensive developmental atlas of suberized tissues at the single cell level

*Charlotte Noelle Miller¹, manisha v haag¹, ling Zhang¹, Sean jarell hurtado¹, Wolfgang Busch¹ (1. The Salk Institute of Biological studies)

**[PO-611]** An inquiry into the origin of radial patterning of root-hair-cell distribution

*Kyeonghoon Lee¹, Hyung-Taeg Cho¹ (1. Department of Biological Sciences, Seoul National University)

**[PO-613]** Auxin biosynthesis inhibitors impair auxin-induced directional nuclear migration in lateral root founder cells in *Arabidopsis thaliana*

*Sanae Kaneta¹, Tatsuo Kakimoto¹ (1. Osaka University, Japan)

**[PO-615]** Functional Analysis of RLF, a Cytochrome *b₅*-Like Heme Binding Protein, in Plant Organ Development

*Kentaro Iwata¹, Chieko Goto¹, Hinatamaru Fukumura¹, Takayuki Shimizu², Kaisei Maruyama³, Tomoyuki Furuya¹, Yuki Kondo¹, Hiroyuki Kasahara³,³, Tatsuru Masuda¹, Kimitsune Ishizaki¹, Hidehiro Fukaki¹ (1. Grad. Sch. of Sci., Kobe Univ., Japan, 2. Grad. Sch. of Arts and Sci.,
[PO-617] Coordinating root system architecture: the intersection of CEP and Cytokinin hormone pathways in Arabidopsis

*Michael Taleski¹, Kelly Chapman¹, Ondřej Novák⁴, Thomas Schmülling³, Manuel Frank², Michael Djordjevic¹ (1. ANU, Australia, 2. Aarhus University, Denmark, 3. Freie Universität Berlin, Germany, 4. The Czech Academy of Sciences, Czech Republic)

[PO-619] MYB93-mediated Very Long-Chain Fatty Acid Signaling networks in lateral root primordium development

*Yuta Uemura¹, Saori Kimura¹, Tomomichi Ota¹, Kosuke Mase¹, Kazuhiro Hotta¹, Takamasa Suzuki², Atsushi Morikami¹, Hironaka Tsukagoshi¹ (1. Meijo University, Japan, 2. Chubu University, Japan)
[PO-602] Roles of XAL2, SOC1 and AGL24 MADS-box genes in *Arabidopsis thaliana* root development and osmotic stress responses

*Claudio Augusto Castañón-Suárez¹, Maite Arrizubieta¹, Estephânia Zluhan-Martínez³, Diana Belén Sánchez-Rodríguez¹, Sandra C. Patiño-Olvera¹, Natalia Castelán-Muñoz³, J. Arturo Arciniega-González², Berenice García-Ponce³, María de la Paz Sánchez³, Elena R. Álvarez-Buylla¹,², Adriana Garay-arrooyo¹,² (1. Laboratorio de Genética Molecular, Epigenética, Desarrollo y Desarrollo de Plantas, Instituto de Ecología, Universidad Nacional Autónoma de México, Ciudad de México, México, 2. Centro de Ciencias de la Complejidad (C3), Universidad Nacional Autónoma de México, Ciudad de México, México., 3. Postgrado en Recursos Genéticos y Productividad-Fisiología Vegetal, Colegio de Postgraduados, Texcoco, Estado de México, México.)

[PO-604] As above so below? ULTRAPETALA1 regulation in *Arabidopsis* root development

*Carlos Emiliano Cortés-Quiñones¹, Diego Arturo Ornelas-Ayala¹, Berenice García-Ponce³, Adriana Garay-arrooyo¹, Elena Álvarez-Buylla¹, María De La Paz Sánchez¹ (1. Laboratorio de Genética Molecular, Epigenética, Desarrollo y Evolución de Plantas, Instituto de Ecología, Universidad Nacional Autónoma de México (UNAM), México)

[PO-606] Combined Approach of GWAS and Phylogenetic Analyses to Identify New Candidate Genes That Participate in *Arabidopsis thaliana* Primary Root Development Using Cellular Measurements and Primary Root Length

*Brenda Anabel Lopez-Ruiz¹, Elsa H. Quezada-Rodríguez², Alma Piñeyro-Nelson², Hugo Tovar³, Berenice García-Ponce³, María De la Paz Sánchez¹, Elena R. Álvarez-Buylla¹, Adriana Garay-arrooyo¹ (1. Laboratorio de Genética Molecular, Desarrollo y Evolución de Plantas, Departamento de Ecología Funcional, Instituto de Ecología, UNAM, 2. Departamento de Producción Agrícola y Animal, UAM-X, 3. División de Genómica Computacional, INMEGEN)

[PO-608] Dissecting the role of miR160-dependent regulation of *ARF* gene expression in root cap differentiation

*Keita Tanaka¹, Asuka Furukawa¹, Seiya lida¹, Hiroki Saito¹, Yoko Okushima², Hidehiro Fukaki², Tatsuki Goh¹, Shunsuke Miyashima¹, Keiji Nakajima¹ (1. Nara Institute of Science and Technology, Graduate School of Science and Technology, Division of Biological Science, 2. Kobe University, Graduate School of Science, Department of Biology)

[PO-612] SUPERROOT2-dependent Fine-tuning of Local Auxin Distribution for *Arabidopsis* Lateral Root Formation


[PO-614] Dimorphism of LR growth regulated by auxin and cytokinin

*Feiyang Lin¹, Hidehiro Fukaki², Masaaki K Watahiki¹,³ (1. Grad. Sch. Life Sci., Hokkaido
[PO-616] Two-step regulation of lateral root spacing in *Arabidopsis thaliana*

[PO-618] Transcriptional network to synchronize alteration in the developing lateral root primordium (LRP) and LRP-overlay cells
*Kosuke Mase¹, Honomi Mizuno¹, Koki Tomida¹, Keigo Nakamura¹, Nanari Furukawa¹, Shiho Ueno¹, Takamasa Suzuki², Atsuhi Morikami¹, Hironaka Tsukagoshi¹ (1. Faculty of Agriculture, Meijo University, 2. College of Bioscience and Biotechnology, Chubu University)
[PO-621] Cell proliferation control mediated by ANAC082 in response to nucleolar stress in Arabidopsis thaliana
*Tai-yin Hsu1, Akitoshi Iwamoto2, Munetaka Sugiyama3, Iwai Ohbayashi1 (1. National Cheng Kung University, Taiwan, 2. Kanagawa University, Japan, 3. The University of Tokyo, Japan)

[PO-623] A GRAS family transcription factor, SCARECROW-LIKE28, regulates cell size by inhibiting G2 progression in Arabidopsis
Yuji Nomoto1, Hirotomo Takatsuka1, Kesuke Yamada1, Keito Mineta1, Po-yo Chen1, Hidekazu Iwakawa1, Takumi Nishiuchi1, *Masaki Ito1 (1. Sch. Biol. Sci. Tech., Col. Sci. Eng., Kanazawa Univ., Japan)

Mika Yoshimura1, Tomoya Isayama1, *Takashi Ishida1 (1. Kumamoto University, Japan)

[PO-627] CDKG2 and SKIP act downstream of UBP14 to control endoreduplication and cell growth in Arabidopsis
*Shan Jiang1, Na Li1, Yunhai Li1,2 (1. Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, China, 2. College of Advanced Agricultural Sciences, University of Chinese Academy of Sciences, China.)

[PO-629] Keeping it together: The role of scaffold proteins during division plane control
*Jonas Buhl1, Pradeep Dahiya1, Gina Stamm1, Katharina Bürstenbinder1 (1. Leibniz-Institute of Plant Biochemistry, Halle (Saale), Germany)

[PO-631] Plant-specific mitotic microtubule structures and cell division modes
*Takema Sasaki1, Kimitsune Ishizaki2, Hiroyasu Motose3, Yoshihisa Oda1 (1. Graduate School of Science, Nagoya University, Japan, 2. Graduate School of Science, Kobe University, Japan, 3. Graduate School of Natural Science and Technology, Okayama University, Japan)

[PO-633] Shaping root architecture
*V Willemsen1, Merijn Kerstens1, Kavya Yalamanchili1, Zhuang Yang1, Vera Hesen1, Andrea Bimbo1, Jordi Floriach-Clark1, Jiawei Yao1 (1. Cluster Plant Developmental Biology, Wageningen University &Research, Droevendaalsesteeg 1, Wageningen, The Netherlands)
[PO-620] Two Arabidopsis cyclins are sensitive targets to intracellular acidification acting as a hub between perception and stress response
*Gaetano Bissoli¹, María D. Planes¹, Iñigo de Martín-Aguirre¹, Ramón Serrano¹, Eduardo Bueso¹ (1. Universitat Politècnica Valencia, Spain)

[PO-622] Control of DNA replication by histone methyltransferases ATXR5 and ATXR6 in Arabidopsis thaliana
*Kar Yee Moo¹, Akiko Masada¹, Haruka Manabe¹, Hirotomo Takatsuka², Shiori S Aki¹, Masaaki Umeda¹ (1. Graduate School of Science and Technology, Nara Institute of Science and Technology, Japan, 2. School of Biological Science and Technology, College of Science and Engineering, Kanazawa University, Japan)

[PO-624] CRISPR/Cas9-mediated mutagenesis of SAMBA gene alters growth and development in plants.
*Nubia Eloy¹, Perla Novais Oliveira¹, Carlos Barrera Rojas¹, Marina Lyra Soriano Saleme¹, Fabio Tebaldi Silveira Nogueira¹ (1. Universidade de São Paulo, Department of Biological Sciences, Escola Superior de Agricultura ‘Luiz de Queiroz’)

[PO-626] Analysis of the effect of autopolyploidization on root growth in Arabidopsis thaliana with spatial reference to “high-ploidy syndrome”

[PO-628] Expanding the kinetochore universe in flowing plants
Pettkó-Szandtner Aladár², Zoltán Magyar², *Shinichiro Komaki¹ (1. Nara Institute of Science and Technology, Graduate School of Biological Sciences, Japan, 2. Institute of Plant Biology, Biological Research Centre, Szeged, Hungary)

[PO-630] Novel plant cell division inhibitors identified by chemical screening using Arabidopsis zygote
*Yusuke Kimata¹, Moë Yamada², Takashi Murata³, Keiko Kuwata⁴, Ayato Sato⁵, Takamasa Suzuki⁵, Daisuke Kurihara²,³, Mitsuyasu Hasebe⁶,⁷, Tetsuya Higashiyama⁸,⁹, Minako Ueda¹,⁹ (1. Tohoku University, Japan, 2. Nagoya University, Japan, 3. Kanagawa Institute of Technology, Japan, 4. WPI-ITbM, Japan, 5. Chubu University, Japan, 6. National Institute for Basic Biology, Japan, 7. The Graduate University for Advanced Studies, Japan, 8. The University of Tokyo, Japan, 9. Suntory Rising Stars Encouragement Program in Life Sciences (SunRISE), Japan)

[PO-632] GRAS Family Transcription Factor Is A New Regulator Of Asymmetric Cell Division And Polarity In Moss Physcomitrium Patens
*Alisa Vyacheslavova¹, Teh Ooi-Kock³, Renqi Wang¹, Mitsuyasu Hasebe⁴, Tomomichi Fujita² (1. Hokkaido University, Graduate School of Life Science, 2. Hokkaido University, School of Science, 3. Institute of plant and microbial biology, Academia Sinica, 4. National Institute for Basic Biology, Division of Evolutionary Biology)
[P] 28 Cell & tissue differentiation

[PO-635] CRISPR activation (CRISPRa) as a powerful tool for engineering gene regulatory networks in plants
*Anaxi Houbaert¹, Valérie Tendon Dénervaud¹, Niko Geldner¹ (1. UNIL - DBMV)

[PO-637] Light regulates xylem cell differentiation via PIF in Arabidopsis
Shraboni Ghosh¹, Nelson Joseph¹, Cobb Geoffrey¹, Etchells Peter¹, *Miguel de Lucas¹ (1. Durham University - UK)

[PO-639] A zinc-finger transcription factor, LGA1, negatively regulates lateral growth in Arabidopsis and trees
*Wiktoria Fatz¹, George Malcolm Woodward¹, Ari Pekka Mähönen¹, Melis Kucukoglu-Topcu¹ (1. Organismal and Evolutionary Biology Research Programme, Faculty of Biological and Environmental Sciences, Viikki Plant Science Centre (ViPS), University of Helsinki, 00790, Helsinki, Finland)

[PO-641] Ubiquitination-mediated xylem vessel element formation in response to pathogen in plants
*Ya MA¹, Rune Kurokawa¹, Ryosuke Sano², Taku Demura², Kei Hiruma³, Misato Ohtani¹,²,⁴ (1. Grad Sch Front Sci, Univ Tokyo, 2. Div Biol Sci, NAIST, 3. Grad Sch Art Sci, Univ Tokyo, 4. RIKEN, CSRS)

[PO-643] Investigation of the function of Clade B AT-hook motif nuclear-localized proteins in the root xylem development
*Hee-Ji Shin¹, Minji Seo¹, Souvik Dhar¹, Hyoujin Kim¹, Sooyoun Kim¹, Ji-young Lee¹ (1. Seoul national university)

[PO-645] Characterization of NAC-REGULATED SEED MORPHOLOGY1 transcription factor for regulating the root phloem development
*Jongsung Park¹, Hyoujin Kim¹, Ji-young Lee¹ (1. School of Biological Sciences, College of Natural Science, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 08826, Korea)

[PO-647] Phloem cells - from single cell transcriptomics to development and function
*Jiyun Kim¹, Diana Weidauer¹, Shahrzad Majari Kasmaei¹, Marcela Renger¹, Wolf B. Frommer¹,² (1. Institute for Molecular Physiology, Heinrich-Heine-University Düsseldorf, Düsseldorf 40225, Germany, 2. Institute of Transformative Bio-Molecules (WPI-ITbM), Nagoya University, Chikusa, Nagoya 464-8601, Japan)

[PO-649] Revealing autolytic mechanisms of sieve elements by an improved induction system
*Yuki Sugiyama¹, Ilya Belevich², Satoshi Fujita³, Kaori Furuta¹, Bernhard Blob⁵, Eija Jokitalo², Sebastian Schornack³, Yoshihisa Oda⁶, Ykä Herariutta⁷ (1. Institute for Advanced Research, Nagoya University, 2. Electron Microscopy Unit, Institute of Biotechnology, Helsinki Institute of Life Science, University of Helsinki, 3. Laboratoire de Recherche en Sciences Végétales, UMR5546 CNRS, Toulouse-INP, University of Toulouse , 4. Graduate School of Science and Technology, Nara Institute of Science and Technology, 5. Sainsbury Laboratory, University of Cambridge, 6. Department of Biological Science, Graduate School of Science, Nagoya University, 7. Institute of Biotechnology, HiLIFE/Organismal and
Evolutionary Biology Research Programme, Faculty of Biological and Environmental Sciences, Viikki Plant Science Centre, University of Helsinki)

[PO-651] Leaf epidermal patterning and fate determination
*Chin-Min Kimmy Ho1 (1. Institute of plant and microbial biology, Academia Sinica)

[PO-653] Cell type-specific attenuation of brassinosteroid signaling precedes stomatal asymmetric cell division
*Boyu Guo1,2,3, Eun-Ji Kim1,2, Cheng Zhang1,2, Thomas Eekhout1,2,4, Anaxi Houbarta1,2, Jos Wendrich1,2, Niels Vandamme4, Manish Tiwari1,2, Claire Simon-Vezo1,2, Isabelle Vanhoutte1,2, Yvan Saesy1,5, Kun Wang1,2,3, Yuxian Zhu3, Bert De Rybel1,2, Eugenia Russinova1,2 (1. Ghent University, Belgium, 2. Center for Plant Systems Biology, VIB, Belgium, 3. Wuhan University, China, 4. VIB Single Cell Core, Belgium, 5. Center for Inflammation Research, VIB, Belgium)

[PO-655] The epigenetic regulation of the master stomatal regulator SPEECHLESS by the Arabidopsis VAL family of transcriptional repressors
*Li Cong Chua1, On Sun Lau1 (1. National University of SinGapore)

[PO-657] HOMEODOMAIN-LIKE protein (HDL) mediated chromatin organization modulates leaf epidermal patterning
*Ansar Alii1,2, Chi Kuan1, Hui Chun1, Chin-Min Kimmy Ho1,2 (1. Institute of Plant and Microbial Biology, Academia Sinica, 2. National Chung Hsing University, Taichung, Taiwan)

[PO-659] Experimental Validation of the Mechanism of Stomatal Development Diversification
*Yuki Doll1, Hiroyuki Koga2, Hirokazu Tsukaya2 (1. NAIST, Japan, 2. The University of Tokyo, Japan)

[PO-661] Comparative analysis of airspace formation process between Arabidopsis and Duckweed
*Kyungyoon Kim1, Min Kim1, Yasuyo Yamaoka1,2, Thanh Ha Thi Do1, Yuree Lee3 (1. Research Institute of Basic Sciences, Seoul National University, Seoul 08826, Republic of Korea, 2. Department of Biotechnology, The Catholic University of Korea, Bucheon 14662, Republic of Korea, 3. School of Biological Sciences, Seoul National University, Seoul 08826, Republic of Korea)

[PO-663] De novo specification of epidermal cells in Arabidopsis abscission zone
*Xiaohong Wen1, Chan Woong Lee2, Sung hwon Kim1, Dong Gon Cha1, Eun min Lee1, Yoon Ha Choi2, Teak Han Yoon1, Jieun Jeon1, Jiyoun Lee1, Yuree Lee3, Aeung Hwang1, Soonki Han1, Jong Kyoung Kim2, June M. Kwak1 (1. Department of New Biology, DGIST, Daegu 42988, Republic of Korea, 2. Department of Life Science, POSTECH, Pohang 37673, Republic of Korea, 3. School of Biological Sciences, Seoul National University, Seoul 08826, Republic of Korea)

[PO-665] MnSOD fine-tunes the root growth and floral organ abscission by modulating ROS metabolism in Arabidopsis
*Jinsu Lee1, Huize Chen, Gisuk Lee, Aurélie Emonet, Sang-Gyu Kim, Donghwan Shim, Yuree Lee1 (1. Seoul national university, Republic of Korea)
[PO-634] PBLs and their role in defining root endodermis signaling specificity  
*Irene Guzmán-Benito, Niko Geldner (1. University of Lausanne, Switzerland)

[PO-636] Patterning in 3D: imaging three-dimensional anatomy and epidermal cell fate in Arabidopsis roots  
*George Janes, Hayley Smith, Dylan Jones, Anthony Bishopp, Natasha Savage (1. University of Nottingham, School of Biosciences, UK, 2. University of Liverpool, Institute of Systems, Molecular and Integrative Biology, UK)

[PO-638] Visualization of spatiotemporal dynamics of cytokinin responses and its role in secondary growth initiation in Arabidopsis roots  
*Shunji Shimadzu, Shusei Mori, Nuran Alif Meem, Kazuki Yamada, Kyomi Shibata, Tomoyuki Furuya, Kyoko Ohashi-Ito, Kimitsu Ishizaki, Hidehiro Fukaki, Masashi Asahina, Soichi Inagaki, Tetsuji Katakura, Hiroo Fukuda, Yuki Kondo (1. University of Tokyo, Japan, 2. Kobe University, Japan, 3. Teikyo University, Japan, 4. Ritsumeikan University, Japan, 5. Akita Prefectural University, Japan)

[PO-640] Towards elucidation of the molecular mechanisms of tuberous root development in cassava  
*Yoshinori Utsumi, Chikako Utsumi, Mao Tanaka, Prat Salomé, Motoaki Seki (1. RIKEN CSRS, 2. RIKEN CPR, 3. Centro Nacional de Biotecnología-CSIC, 4. Yokohama City Univ.)

[PO-642] FLY Ubiquitin E3 Ligases Are Transcriptionally Regulated by VND7 during Xylem Vessel Cell Differentiation  
*Tadashi Kunieda, Mitsuki Jifuku, George W. Haughn, Ikuko Hara-Nishimura, Taku Demura (1. NAIST, Japan, 2. UBC, Canada, 3. Konan Univ., Japan)

[PO-644] A long-distance top-down movement of a transcription factor regulating the root phloem development  
*Ji-Young Lee, Hyoujin Kim, Jongsung Park, Heewon Shin, Sooyoun Kim (1. Seoul National University)

[PO-646] Cellular adaptations for long-distance transport through the phloem sieve tube  
*Lothar Kalmbach, Yka Helariutta (1. University of Lausanne, Department of Plant Molecular Biology)

[PO-648] Regulatory Functions of NAC domain Transcription Factors for Root Phloem Development in Arabidopsis thaliana  
*Heewon Shin, Hyoujin Kim, Sooyoun Kim, Ji-Young Lee (1. School of Biological Sciences, College of Natural Science, Seoul National University, Seoul 08826, Republic of Korea, 2. Plant Genomics and Breeding Institute, Seoul National University, Seoul 08826, Republic of Korea)

[PO-650] Specification of epidermal cell fate in plant shoots  
Hiroyuki Iida, Ayaka Yoshida, Ari Pekka Mähönen, Gerd Jürgens, Shinobu Takada (1. Osaka University, Japan, 2. University of Helsinki, Finland, 3. University of Tübingen, Germany)
Identification and expression analysis of six CsCPC genes in tea leaves (*Camellia sinensis*).
*Juri WAKAMATSU¹, Mina YAMAMOTO¹, Wakana TANAKA¹, Rumi TOMINAGA¹ (1. Hiroshima University, Japan)

Abscisic acid regulates stomatal production by imprinting a SnRK2 kinase–mediated phosphocode on the master regulator SPEECHLESS
*XIN YANG¹, Lalitha Gavya S¹, Zimin Zhou¹, Daisuke Urano¹,², On Sun Lau¹ (1. National University of SinGapore, SinGapore, 2. Temasek Life Sciences Laboratory, SinGapore)

A ROADMAP TO GUARD CELL: HOW THE CIS-TRANS REGULOME DRIVES FATE TRANSITIONS
*Ao Liu¹, Andrea Mair¹, Dominique Bergmann¹ (1. Stanford University)

Turn over a new leaf: A single cell view of leaf epidermis in *Arabidopsis*
*Chi Kuan¹,², Chin-Ming Kimmy Ho¹ (1. Institute of Plant and Microbial Biology, Academia Sinica, Taiwan, 2. Department of Biology, Duke University, USA)

Stomata-derived intercellular signaling that directs mesophyll air space formation
*Yuki Yoshida¹, Shinichiro Sawa¹ (1. Kumamoto University, Japan)

Co-option of the conserved and reduced stomatal transcriptional network FAMA-WASABI MAKER for the myrosinase-glucosinolate defense system
*Makoto Shirakawa¹,², Tomoki Oguro¹, Shigeo S. Sugano³, Shohei Yamaoka⁴, Mayu Sagara¹, Mai Tanida¹, Kie Kumaishi⁵, Soma Yoshida⁶, Mutsumi Watanabe¹, Takayuki Tohge¹, Takamasa Suzuki⁷, Yasunori Ichihashi²,³, Atsushi Takemiya⁶, Nobutoshi Yamaguchi¹, Takayuki Kohchi⁴, Toshiro Ito¹ (1. Nara Institute of Science and Technology, Japan, 2. Precurorsry Research for Embryonic Science and Technology, Japan Science and Technology Agency, Japan, 3. National Institute of Advanced Industrial Science and Technology, Japan, 4. Kyoto University, Japan, 5. RIKEN BioResource Research Center, Japan, 6. Yamaguchi University, Japan, 7. Chubu University, Japan)

Conserved (Epi)Genetic Mechanisms of Aging in Plants: Insights from Laminopathies in *Arabidopsis thaliana*
*Oscar Juez², Hidetoshi Saze¹ (1. Okinawa Institute of Science and Technology)
[PO-667] MBD10 is involved in ABA-inducible leaf senescence in Arabidopsis
*Yangdan Li¹, Yoshiaki Kamiyama¹, Fuko Minegishi¹, Yuki Tamura¹, Kota Yamashita¹, Sotaro Katagiri¹, Takamasa Suzuki², Naoto Kawakami², Taishi Umezawa¹ (1. Tokyo University of Agriculture and Technology, 2. Chubu University, 3. Meiji University)

[PO-669] Uncovering the possible link between cytosolic and apoplastic glutathione degradation
*Takehiro Ito¹,², Naoko Ohkama-Ohtsu¹ (1. Tokyo University of Agriculture and Technology, Japan, 2. RIKEN Center for Sustainable Resource Science, Japan)

[PO-671] Genetic Variants Driving Distinct Senescence Programs in Arabidopsis Accessions from the Kyrgyz-Tajik Mountainous Region
*PHAN PHUONG THAO DOAN¹, Hyosub Chu², Jae Il Lyu², Jin Hee Kim³, Jeongsik Kim¹,³,⁴ (1. Interdisciplinary Graduate Program in Advanced Convergence Technology &Science, Jeju National University, Jeju 63243, Republic of Korea, 2. Center for Plant Aging Research, Institute for Basic Science, Daegu 42988, South Korea, 3. Subtropical Horticulture Research Institute, Jeju National University, Jeju 63243, Republic of Korea, 4. Faculty of Science Education, Jeju National University, Jeju 63243, Republic of Korea)
[PO-666] PLTs and VNDs oppositely regulate ZAT transcription factors to control cell death in the *Arabidopsis* root

[PO-668] Multiple N-conjugated forms of Cytokinins are Involved in Delaying Natural and Abiotic Stress Senescence
*Aaron M Rashotte*¹, *Risheek Khanna*¹, *Omar Hasannin*¹ (1. Auburn University)

[PO-670] Comprehensive transcriptomic analysis of age-, dark-, and salt-induced senescence reveals underlying mechanisms and key regulators of leaf senescence in *Zoysia japonica*
*Lanshuo Wang*¹, *Phan Phuong Thao Doan*¹, *Nguyen Nguyen Chuong*¹, *Hyo-Yeon Lee*², *Jin Hee Kim*², *Jeongsik Kim*¹,²,⁴ (1. Interdisciplinary Graduate Program in Advanced Convergence Technology &Science, Jeju National University, Jeju, South Korea, 2. Subtropical Horticulture Research Institute, Jeju National University, Jeju, South Korea, 3. Department of Biotechnology, Jeju National University, Jeju 63243, Republic of Korea, 4. Faculty of Science Education, Jeju National University, Jeju, South Korea)

[PO-672] Genetic variants of *Accelerated Cell Death 6* drive natural diversity of age-induced leaf senescence through accession-dependent cell death process in Arabidopsis
*Jin Hee Kim*¹, *Jae Il Lyu*², *Hyosub Chu*², *Phan Phuong Thao Doan*³, *Jeongsik Kim*¹,³,⁴ (1. Subtropical Horticulture Research Institute, Jeju National University, Republic of Korea, 2. Institute for Basic Science, South Korea, 3. Interdisciplinary Graduate Program in Advanced Convergence Technology &Science, Jeju National University, Republic of Korea, 4. Faculty of Science Education, Jeju National University, Republic of Korea)
Poster 30 Genetic variation/Population

PO-673 Altitudinal genetic differentiation in the leaf wax-mediated flowering bud protection against frost in an early-spring flowering herb, Arabidopsis halleri
*Hiroshi Kudoh1, Genki Yumoto1, Biva Aryal1,2, Mie N. Honjo1, Yuko Sasaki-Sekimoto3, Wataru Shinohara4, Hiroyuki Ohta5 (1. Kyoto University, Japan, 2. Tribhuvan University, Nepal, 3. Tokyo Institute of Technology, Japan, 4. Kagawa University, Japan)

PO-675 Genetic basis of semi-dwarfism and increased branching phenotypes in Tibetan Arabidopsis thaliana
*Jixuan Yang1, Tianshu Sun1,2, Hongya Gu1,3 (1. State Key Laboratory of Protein and Plant Gene Research, School of Life Sciences, Peking University, China, 2. Department of Plant Sciences, University of Cambridge, United Kingdom, 3. The National Plant Gene Research Center (Beijing), China)

PO-677 Seasonal dynamics of epigenome in a natural population of Arabidopsis halleri

PO-679 The genetic diversity provided by natural Arabidopsis accessions to identify potentially adaptive differences in root morphology and soil resource capture
Christopher I Vincent1, Taraka Ramji Moturu2, Thomas Drouet de la Thibauderie2, Silvana Porco2, Florence Reyé2, Hugues De Gernier3,4, Takehiro Kamiya5, Natsuko Kobayashi5, Keitaro Tanō5, Malcolm Bennett6, Dirk Inzé3,4, Mark Aarts7, Arthur Korte8, *Christian RM Hermans2 (1. University of Florida, USA, 2. Université libre de Bruxelles, Belgium, 3. Ghent University, Belgium, 4. VIB Center for Plant Systems Biology, Belgium, 5. University of Tokyo, Japan, 6. University of Nottingham, United Kingdom, 7. Wageningen University, the Netherlands, 8. University of Würzburg, Germany)

PO-681 Remote-sensing-combined haplotype analysis using MAGIC population reveals the characters of phenology QTLs for canopy height in rice
*Daisuke Ogawa1, Toshihiro Sakamoto2, Hiroshi Tsunematsu1, Noriko Kanno1, Yasunori Nonoue1, Jun-ichi Yonemaru1 (1. Institute of Crop Science, National Agriculture and Food Research Organization, 2. Institute for Agro-Environmental Sciences, National Agriculture and Food Research Organization)

PO-683 Staying alive: resistant evaluation to acetolactate synthesis-inhibitors herbicides in Amaranthus palmeri recombinant proteins.
*Alfredo Manicardi1, Joel Torra1, Jorge Lozano Juste2 (1. Department of Forestry and Agricultural Science and Engineering, Agrotecnio-CERCA Center, University of Lleida, Lleida, Spain, 2. Institute of Plant Molecular and Cellular Biology (IBMCP), Polytechnic University of Valencia (UPV), Higher Council for Scientific Research (CSIC), 46022, Spain)
Valencia, Spain.)
[P] 30 Genetic variation/Population
Wed. Jun 7, 2023 9:00 AM - 6:00 PM Poster 30(Meeting Room 10)

[PO-674] Altitudinal divergence of cold tolerance in Arabidopsis halleri and their genetic background: investigation of the key leaf traits and genome in F2 population
*Naofumi Yoshida¹, Shin-ichi Morinaga², Yuu Ishii¹, Kazumasa Shirai³, Shosei Kubota⁴, Kousuke Hanada³, Kouki Hikosaka¹ (1. Tohoku University, 2. Teikyo University of Science, 3. Kyutech University, 4. FASMAC Co., Ltd.)

[PO-676] Larger genomes evolve under temperature-stable environments in allohexaploid Rorippa indica (Brassicaceae)
*Ting-Shen Han¹ (1. Xishuangbanna Tropical Botanical Garden, the Chinese Academy of Sciences)

[PO-678] Seasonally distinct controls of leaf senescence in response to self-shading and sink demand in Arabidopsis helleri
*Genki Yumoto¹, Tomoaki Muranaka¹,², Jiro Sugisaka¹, Mie N Honjo¹, Hiroshi Kudoh¹ (1. Kyoto university, Japan, 2. Kagoshima university, Japan)

[PO-680] Field transcriptome dynamics of barley during winter cultivation
*June-Sik Kim¹,², Jun Ito³, Kotaro Takahagi³, Asaka Kanatani¹, Minami Shimizu¹, Yukiko Uehara-Yamaguchi¹, Komaki Inoue¹, Satoshi Okada²,³, Takakazu Matsuura², Koosuke Hattori⁵, Yoko Ikeda², Daisuke Saisho², Hiroyuki Tsuji³, Takashi Hirayama², Kazuhiro Sato², Keiichi Mochida¹,²,³,⁶,⁷ (1. RIKEN Center for Sustainable Resource Science, Japan, 2. Okayama University, Japan, 3. Yokohama City University, Japan, 4. Nagoya University, Japan, 5. Chubu University, Japan, 6. Nagasaki University, Japan, 7. RIKEN Cluster for Science, Japan)

[PO-682] Rapid evolution in Arabidopsis thaliana in global field experiments in the pan-genomic era
*Xing Wu¹, Yunru Peng¹, Lucas Czech¹, Tati Bellagio²,¹, Meixi Lin¹, Francois Vasseur⁴, Niek Scheepens³, Moises Exposito-Alonso¹,² (1. Carnegie Institution for Science, USA, 2. Stanford University, USA, 3. Goethe University, Germany, 4. University of Tübingen, Germany)

[PO-684] 1001 Phenomes: a community resource
*Almudena Mollá Morales¹, Pieter Clauw¹, Ethan Stewart², Sebastian Seitner², Jakub Jez², Magnus Nordborg¹ (1. Gregor Mendel Institute of Molecular Plant Biology, Austrian Academy of Sciences, Vienna BioCenter, Austria, 2. Plant Sciences Facility, Vienna BioCenter Core Facilities GmbH, Austria)
**[PO-685] Construction of Genetic Engineering System for Robust and Versatile Inter-species Gene Function Analysis in *Viola*  
*Donghyeon Kim¹,², Jong-Yoon Park¹, Jihyun Won¹,², Adil Muhammad¹,², Ju Young Bang¹,², Seula Lee¹, Youbong Hyun¹,² (1. Seoul National University, Korea, 2. Research Center for Plant Plasticity, Seoul National University, South Korea)*

**[PO-687] Functional annotation of proteins for signaling network inference in non-model species  
*Lisa Van den Broeck¹, Dinesh Bhosale¹, Kuncheng Song¹, Cássio Fonseca de Lima³, Tingting Zhu³, Jonas Alper⁴, Peter Lootens⁴, Anna M Locke², Ise De Smet³, Rosangela Sozzani¹ (1. North Carolina State University, US, 2. USDA-ARS Soybean & Nitrogen Fixation Research Unit, US, 3. VIB Center for Plant Systems Biology, Belgium, 4. Flanders Research Institute for Agriculture Fisheries and Food (ILVO), Belgium)*

**[PO-689] Controlling transcription from within transcribed regions in plants  
*Yoav Voichek¹, Gabriela Hristova¹, Almudena Molla Morales¹, Detlef Weigel², Magnus Nordborg¹ (1. Gregor Mendel Institute (GMI), Vienna, 2. Department of Molecular Biology, Max Planck Institute for Developmental Biology, Germany)*

**[PO-691] Development of a unified theory for molecular biology  
*Ryoichi Sato¹, Masami Hirai¹ (1. RIKEN Center for Sustainable Resource Science)*

**[PO-693] A single-nucleus transcriptome atlas of seed-to-seed development in Arabidopsis  
*Travis Lee¹,²,³, Tatsuya Nobori¹,², Natanella Illouz-Eliaz¹,², Bruce Jow¹,², Joseph Nery¹,², Joseph Ecker¹,²,³ (1. Plant Biology Laboratory, Salk Institute for Biological Studies, La Jolla, CA 92037, 2. Genomic Analysis Laboratory, Salk Institute for Biological Studies, La Jolla, CA 92037, 3. Howard Hughes Medical Institute, Salk Institute for Biological Studies, La Jolla, CA 92037)*

**[PO-695] Phylogenetic profiling in *Arabidopsis thaliana* as a new annotation platform for revealing gene functions in plants  
*Elad Sharon¹,², Alexander Vainstein¹, Yuval Tabach² (1. The Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture, The Hebrew University of Jerusalem, Israel, 2. Department of Developmental Biology and Cancer Research, Institute of Medical Research-Israel-Canada, The Hebrew University of Jerusalem, Jerusalem, Israel.)*

**[PO-697] Application of a method detecting functionally diversified duplicate pairs from Arabidopsis duplicate genes to wheat homoeologous genes  
*Akihiro Ezoe¹, Daisuke Todaka¹, Kousuke Hanada², Motoaki Seki¹ (1. Riken, 2. Kyushu Institute of Technology)*

**[PO-699] Optimization of sampling conditions for predicting gene expression in rice  
*Dan Eiju¹, Yoichi Hasida², Daisuke Kyogoku³, Taro Maeda⁴,⁵, Nagano Atsushi⁴,⁵,⁶ (1. Keio University Faculty of Environment and Information Studies, 2. Takasaki University of Health and Welfare Faculaty of Agriculture, 3. The Museum of Nature and Human*
Activitiesb, 4. Keio University, The Institute for Advanced Biosciences, 5. Ryukoku University, Research Institute of food and agriculture, 6. Ryukoku University Faculty of Agriculture
[PO-686] Col-CC: An Updated Reference Genome of Arabidopsis thaliana
*Xiao Dong¹, Raúl Wijfjes², The Community-Consensus Arabidopsis Assembly Consortium
(¹Max Planck Institute for Plant Breeding Research, ²Ludwig Maximilian University of Munich)

[PO-688] New elements of cis-regulatory code of plant genes revealed by deep learning models
Fritz Frobang Peleke², Simon Maria Zumkeller¹, *Jedrzej Szymanski Szymanski¹² (¹Forschungszentrum Juelich, CEPLAS, BioSC, Institute of Bio- and Geosciences, IBG4 Bioinformatic, 52428 Juelich, Germany, 2. Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Correnstraße 3, D-06466 Seeland, OT Gatersleben, Germany)

[PO-690] Improve the coverage of Arabidopsis proteome by alternative proteases and mass spectrometry data independent acquisition mode
*Runxuan Zhang Zhang¹, Sophia Pluiasis¹, Dominika Lowandowska¹, Piers Hemesley² (¹The James Hutton Institute, ²University of Dundee)

[PO-692] Inference of developmental trajectories from single-cell sequencing data
*Philip Shushkov¹ (¹Indiana University)

[PO-694] Implementation of the single-nucleus atlas of Arabidopsis thaliana to the entire plant research
*Jaewook Kim¹, Bae Young Choi¹, Donghwan Shim¹ (¹Department of Biological Sciences, Chungnam National University, Daejeon 34134, Republic of Korea)

[PO-696] Updated phylogeny and protein structure predictions revise the hypothesis on the origin of MADS-box transcription factors in land plants
*Yichun Qiu¹², Zhen Li³⁴, Dirk Walther¹, Claudia Köhler¹² (¹Max Planck Institute of Molecular Plant Physiology, Germany, 2. Swedish University of Agricultural Sciences &Linnean Center for Plant Biology, Uppsala BioCenter, Sweden, 3. Department of Plant Biotechnology and Bioinformatics, Ghent University, Belgium, 4. VIB Center for Plant Systems Biology, Belgium, )

[PO-698] Single-plant omics: profiling individual plants in a field to identify processes affecting yield
Sam De Meyer¹², Michael Van de Voorde¹², Daniel Felipe Cruz¹², Stijn Hawinkel¹², Tom De Swaef³, Peter Lootens³, Jolien De Block¹², Kevin Bird¹²⁴, Heike Sprenger¹², Tom Van Hautegem¹², Dirk Inzé¹², Hilde Nelissen¹², Isabel Roldán-Ruiz³, *Steven Maere¹² (¹Department of Plant Biotechnology and Bioinformatics, Ghent University, Technologiepark 71, 9052 Ghent, Belgium, 2. VIB Center for Plant Systems Biology, Technologiepark 71, 9052 Ghent, Belgium, 3. Plant Sciences Unit, Flanders Research Institute for Agriculture, Fisheries and Food (ILVO), Caritasstraat 39, 9090 Melle, Belgium, 4. Department of Plant Sciences, University of California-Davis, Davis, California 95616, USA)

[PO-700] Cellular Clarity: A Logistic Regression Approach to Identify Root Epidermal Regulators of Iron Deficiency Response
*Selene R Schmittling¹, DurreShahwar Muhammad², Samiul Haque³, Terri A. Long⁴, Cranos M Williams¹ (1. Department of Electrical &Computer Engineering, NC State University, 2. Department of Biosciences, Rice University, 3. SAS Institute, 4. Department of Plant &Microbial Biology, NC State University)
The simple and useful Agrobacterium-mediated infiltration method for transient expression assays and single-cell genome editing in Arabidopsis thaliana
*Miho Ikeda¹, Jun Nakayama², Tsubasa Yamagata² (1. Fukui Prefectural University, Japan, 2. Saitama University, Japan)

Single-cell targeted chemical or genetic boosting of genome editing in maize
*Ling Meng¹ (1. KWS Group)

Pooled CRISPR/Cas9-induced perturbations followed by single-cell RNA-sequencing in Arabidopsis thaliana protoplasts
*Graeme Oliver Vissers¹ (1. New York University)

Insights into the molecular mechanisms of CRISPR/Cas9-mediated gene targeting at multiple loci in Arabidopsis
*Daisuke Miki¹ (1. Shanghai Center for Plant Stress Biology, CAS Center for Excellence in Molecular Plant Sciences, Chinese Academy of Science)

Targeted A-to-G base editing in chloroplast and mitochondrial genomes in Arabidopsis thaliana
*Chang Zhou¹, Issei Nakazato¹, Yoshiko Tamura¹, Reiko Masuda¹, Nobuhiro Tsutsumi¹, Shin-ichi Arimura¹ (1. Tokyo University, Japan)

The development of a new gene editing technology based on Brassica rapa microspore regeneration system and carbon nanotube
*Jinhee Kim Kim¹, Hwa Hyun Jeong¹, Solhee Bae¹, Eun-young Yang¹, Hye-Eun Lee¹, Jun Ho Lee¹, Yoonah Jang¹ (1. Institute of horticultural and herbal science, Korea)
[PO-704] Generating minimum set of gRNA to cover multiple targets in multiple genomes with MINORg
*Rachelle R. Q. Lee, Wei Yuan Cher, Jinge Wang, Yujie Chen, Eunyoung Chae (1. National University of Singapore, 2. Xi’an Jiaotong University)

[PO-706] Allelic Variations in GA20ox1 via CRISPR-Mediated Base Editing Lead Quantitative Clines of Growth in Arabidopsis
*Jun-Hyuk Kim, Sang-Tae Kim (1. The Catholic University of Korea, Republic of Korea)

[PO-708] Developing tools for targeted C-to-T base editing in the plastid and mitochondrial genome of Arabidopsis thaliana
*Issei Nakazato, Miki Okuno, Yoshiko Tamura, Chang Zhou, Takehiko Itoh, Nobuhiro Tsutsumi, Hideki Takanashi, Shin-ichi Arimura (1. Graduate School of Agricultural and Life Sciences, The University of Tokyo, 2. Division of Microbiology, Department of Infectious Medicine, Kurume University School of Medicine, 3. School of Life Science and Technology, Tokyo Institute of Technology)

[PO-710] PRIMA: PRobe-Induced heteroduplex Mobility Assay, a reliable method to detect single-nucleotide variations time- and cost-effectively
*Misako YAMAZAKI, Hiroyuki Kakui, Kentaro K. Shimizu (1. Department of Evolutionary Biology and Environmental Studies, University of Zurich, Switzerland, 2. Kihara Institute of Biological Research, Yokohama City University, Japan)

[PO-712] Establishing transformation protocols for efficient genome editing and transgene expression across the Brassicaceae family
*Evelyn Cassandra Alferez, Prashanth Ramachandran, Andrea Ramireez, Jose Dinneny (1. Faculty/Staff, 2. Stanford University Biology Department Dinneny Lab, United States, 3. Post Doc, 4. Biology PhD Candidate, 5. PI)
[P] 33 Imaging/Quantification
Tue. Jun 6, 2023 9:00 AM - 6:00 PM Poster 33(Meeting Room 10)

[PO-713] Plant Accessible Tissue Clearing Solvent System for 3-D Imaging of Whole Plant
*Hantao Zhang¹ (1. China Agricultural University)

[PO-715] A live imaging system to analyze spatiotemporal dynamics of transcription activity.
*Mio K. Shibuta¹, Sachihiro Matsunaga² (1. Yamagata University, Japan, 2. University of Tokyo, Japan)

[PO-717] Time-series field phenotyping system PlantServation using machine learning revealed seasonal pigment fluctuation trends in diploid and polyploid Arabidopsis
*Toshiaki Tameshige¹,², Reiko Akiyama³, Takao Goto⁴, Jiro Sugisaka⁵,¹, Ken Kuroki⁶, Jianqiang Sun⁷, Junichi Akita⁸, Masaomi Hatakeyama³,⁹, Hiroshi Kudoh⁵, Tanaka Kenta¹⁰, Aya Tonouchi⁴, Yuki Shimahara⁴, Jun Sese¹¹,¹²,¹³, Natsumaro Kutsuna⁴, Rie Shimizu-Inatsugi³, Kentaro K Shimizu¹,³ (1. Yokohama City University, Japan, 2. Nara Institute of Science and Technology, Japan, 3. University of Zurich, Switzerland, 4. LPixel Inc., Japan, 5. Kyoto University, Japan, 6. The University of Tokyo, Japan, 7. NARO, Japan, 8. Kanazawa University, Japan, 9. Functional Genomics Center Zurich, Switzerland, 10. University of Tsukuba, Japan, 11. AIST, Japan, 12. Humanome Lab, Inc., Japan, 13. AIST-Tokyo Tech RWBC-OIL, Japan)
[PO-714] Whole-mount smFISH allows combining RNA and protein quantification at cellular and subcellular resolution
*Lihua Zhao\(^1\) (1. Swedish University of Agricultural Sciences)

*Rijad Saric\(^{1,2,3}\), Amila Akagic\(^4\), Edhem Custovic\(^{2,3}\), Oliver Berkowitz\(^{1,2}\), Mathew G. Lewsey\(^{1,2}\), James Whelan\(^{1,2,5}\) (1. La Trobe Institute for Sustainable Agriculture &Food (LISAF), Department of Animal, Plant and Soil Sciences, La Trobe University, VIC 3086, Australia., 2. Australian Research Council Research Hub for Medicinal Agriculture, AgriBio Building, La Trobe University, Bundoora, VIC 3086, Australia , 3. Department of Engineering, School of Computing, Engineering and Mathematical Sciences, La Trobe University, Bundoora, VIC 3086, Australia , 4. Faculty of Electrical Engineering, University of Sarajevo, 71000 Sarajevo, Bosnia and Herzegovina, 5. College of Life Sciences, Zhejiang University, Hangzhou, 310027, China)

[PO-718] An automated robotic system on the RIPPS for chemical stimulation to plants
*Miki Fujita\(^1\), Junbo Zhang\(^2\), Weiwei Wan\(^3\), Nobuyuki Tanaka\(^1\), Kensuke Harada\(^2\), Koichi Takahashi\(^1\), Kazuo Shinozaki\(^1\) (1. RIKEN, Japan, 2. Osaka University, Japan)
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