

GENERAL PRESENTATIONS

PROGRAM OF POSTER PRESENTATIONS

- Poster viewings and discussions will be held on-site. You can also view the posters online.
- During the online poster viewing period (March 10, 9:00 a.m. - March 15), you can also use the comment box on the abstract page of your poster posted on the web abstract portal (ORSAM portal) for questions and answers. Please respond to questions in the comments section in a timely manner.
- Presentations submitted for the PCP Poster Award are indicated by adding **P** to their presentation numbers in the poster presentation program. Additionally, a special mark is placed on the number cards of the posters to signify their submission for the award.
- Schedule

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|--------------------------|--|--|
| Presentation No. / place | 1P001–1P196 / Sports Room (B3F) 1P197–1P260 / Multi-purpose Sports Room (B2F) | 2P001–2P196 / Sports Room (B3F) 2P197–2P268 / Multi-purpose Sports Room (B2F) |
| Mounting | March 13 9:00–12:30 | March 14 10:30–12:00 |
| Discussion | March 13 Odd numbers 17:30–18:15 Even numbers 18:15–19:00 | March 15 Odd numbers 11:00–11:45 Even numbers 11:45–12:30 |
| Removal | March 14 9:00–10:30 | March 15 15:00–16:30 |

- The presenters should be in front of their posters during the discussion time.
- Any posters remaining after removal time will be removed by the Meeting Committee.

■ Photosynthesis

- 1P001 **P** State transitions, as acclimation to light fluctuations in the ocean
Masato Kubota^{1,2}, Asako Ishii¹, Chiyo Noda¹, Eunuchul Kim³, Makio Yokono^{1,2}, Jun Minagawa^{1,2} (¹National Institute for Basic Biology, ²The Graduate University for Advanced Studies, SOKENDAI, ³College of Humanities and Sciences, Nihon University)
- 1P002 **P** Heterogenous energy transfer in photosynthetic antenna complexes revealed by single-molecule time-resolved fluorescence spectroscopy
Shinnosuke Masuda^{1,2,3}, Mai Watanabe⁴, Toru Kondo^{1,2,3} (¹SOKENDAI, ²NIBB, ³ExCELLS, ⁴Grad. Sch. of Science, Tokyo Metropolitan Univ.)
- 1P003 **P** Characterization of early light-induced protein (ELIP) in overwintering evergreen leaves of *Taxus cuspidata* and *Euonymus fortunei*
Peiyuan Li^{1,2}, Kanoko Shimohara^{1,2}, Junko Kishimoto¹, Kiyomi Ono¹, Zihao Ye^{1,2,3}, Seiji Akimoto⁴, Atsushi Takabayashi¹, Ryouichi Tanaka¹ (¹Inst Low Temp Sci, Hokkaido Univ, ²Grad Sch Env Sci, Hokkaido Univ, ³Huazhong Agricultural Univ, ⁴Grad Sch Sci, Kobe Univ)
- 1P004 Comparison of winter photochemical responses in nine evergreen species growing in the Hokkaido University Botanical Garden
Azusa Ito^{1,2}, Konoha Ueda^{1,2}, Enis Koçmer^{1,2}, Peiyuan Li^{1,2}, Zihao Ye^{1,2,3}, Mitsutoshi Kitao⁴, Takayuki Azuma⁵, Junko Kishimoto¹, Kiyomi Ono¹, Ryouichi Tanaka¹ (¹Inst. Low Temp. Sci., Hokkaido Univ., ²Grad. Sch. Env. Sci., Hokkaido Univ., ³Huazhong Agricultural Univ., ⁴FFPRI, Hokkaido Res. Sta., ⁵Field Sci. Ctr. N. Biosphere, Hokkaido Univ.)
- 1P005 **P** A mutation that enhances PSII water oxidation: mechanistic insights and *in vivo* validation
Ko Imaizumi¹, Shin-ichi Arimura², Taishi Nishimura³, Ryo Nagao^{4,5}, Keisuke Saito^{6,7}, Takeshi Nakano³, Hiroshi Ishikita^{6,7}, Takumi Noguchi⁴, Kentaro Ifuku¹ (¹Grad. Sch. Agric., Kyoto Univ., ²Grad. Sch. Agric. Life Sci., Univ. Tokyo, ³Grad. Sch. Biostudies, Kyoto Univ., ⁴Grad. Sch. Sci., Nagoya Univ., ⁵Fac. Agric., Shizuoka Univ., ⁶RCAST, Univ. Tokyo, ⁷Dept. Appl. Chem., Univ. Tokyo)
- 1P006 **P** An Integrated Pipeline for Achieving High-Resolution Cryo-EM Analysis of Photosystems
Zitong Yang^{1,2}, Raymond N. Burton-Smith³, Asako Ishii⁴, Shinsa Kameo^{1,2}, Soichiro Seki⁵, Minoru Kumazawa¹, Genji Kurisu⁵, Ryouichi Tanaka^{1,2}, Makio Yokono⁴, Jun Minagawa⁴, Kazuyoshi Murata³, Akihiro Kawamoto⁵, Atsushi Takabayashi^{1,2} (¹ILTS, Hokkaido Univ., ²Grad. Env. Sci., Hokkaido Univ., ³ExCELLS, NINS, ⁴NIBB, NINS, ⁵IPR, Univ. Osaka)
- 1P007 **P** Development of a Novel Method for Evaluating Cyclic Electron Transport Using Isolated Thylakoids Based on pH Changes
Keiichiro Tanigawa¹, Kazuhiko Sugimoto², Masaru Kono³, Wataru Yamori¹, Ichiro Terashima² (¹Grad. Sch. Agri., the Univ. Tokyo, ²Natl. Chung Hsing Univ., ³Astrobiology Center, Natl. Inst. Nat. Sci.)
- 1P008 Enhanced Photosynthetic Efficiency of Freshwater Cyanobacteria in Seawater Cultivation
Kaisei Kurosaki¹, Masahiro Karikomi², Takashi Osanai¹ (¹Fac. Agr., Meiji Univ., ²Grad. Sch. Agr., Meiji Univ.)
- 1P009 **P** Responses of a cyanobacterium *Halomicronema hongdechloris* to different light qualities: white-light-adapted cells vs far-red-light-adapted cells
Zhe Wang¹, Yipeng Wang¹, Toshiyuki Shinoda², Tatsuya Tomo², Seiji Akimoto¹ (¹Grad. Sch. Sci., Kobe Univ., ²Grad. Sch. Sci., Tokyo Univ. Sci.)
- 1P010 **P** Light-responsive proton translocation across the cytoplasmic membranes regulates intracellular pH and metabolism in cyanobacteria
Akito Machida¹, Akane Echigo², Kumiko Kondo³, Toru Hisabori^{3,4,5}, Shinji Masuda¹ (¹Dept. Life Sci. & Tech., Science Tokyo, ²Dept. Life Sci. & Tech., Tokyo Inst. Tech., ³Lab. Chem. & Life Sci., IIR, Tokyo Inst. Tech., ⁴Res. Inst. Integr. Sci., Kanagawa Univ., ⁵SOKENDAI)
- 1P011 **P** Responses of nitrogenase to oxygen in the nitrogen-fixing cyanobacterium *Leptolyngbya boryana*: Induction and short oxygen exposure
Sara Bakri, Hiroya Kotani, Mari Banba, Haruki Yamamoto, Kazuma Uesaka, Yuichi Fujita (Grad. School. Bioagricultural Sci., Nagoya Uni)
- 1P012 Structure of the PSII assembly intermediate accumulated in the *ctpA*-deficient *Synechocystis* sp. PCC6803 mutant
Keiko Yokoi, Masato Akutsu, Noritoshi Inagaki (NARO RCAA)
- 1P013 Isolation and characterization of oxygen-evolving photosystem II complexes from a glaucophyte *Cyanophora paradoxa*
Yoshifumi Ueno, Tatsuya Tomo (Inst. Arts Sci., Tokyo Univ. Sci.)
- 1P014 Effects of canthaxanthin substitution for β -carotene on photosystem II in *Synechocystis* sp. PCC6803
Takanori Fukasawa, Ryo Nagao (Grad. Sch. Integrated Sci. & Tech., Shizuoka Univ.)
- 1P015 Effects of exogenous reductants on the donor side of PSII in cyanobacteria
Kokoa Mukouyama¹, Mayuko Oshiumi², Hisako Kawai-Kubota³, Rimi Koyama¹, Naoki Mizusawa^{1,4} (¹Fac. Biosci. Appl. Chem., Hosei Univ., ²Grad. Sch. Sci. Eng., Hosei Univ., ³Fac. Sci., Yamagata Univ., ⁴Res. Micro-Nano Tech, Hosei Univ.)

- IP016 Isolation and characterization of an active dimeric photosystem II complex that retains three extrinsic proteins from *Synechocystis* sp. PCC 6803
Mayuko Oshiumi¹, Kazuna Tanemura¹, Hisako Kawai-Kubota², Rimi Koyama³, Naoki Mizusawa^{1,3,4} (¹Grad. Sch. Sci. Eng, Hosei Univ., ²Fac. Sci., Yamagata Univ., ³Fac. Biosci. Appl. Chem., Hosei Univ., ⁴Res. Micro-Nano Tech, Hosei Univ.)
- IP017 Changes in Time-Resolved Fluorescence Spectra of Land Plants, Induced by an Excitation Laser with Different Intensities
Sakura Iga¹, Seiji Akimoto^{1,2} (¹Fac. Sci. Kobe Univ., ²Grad. Sch. Sci. Kobe Univ.)
- IP018 Cryo-EM structure of the PSI-LHCI supercomplex from a freshwater green alga *Raphidocelis subcapitata*
Yaoting Guo, Pi-Cheng Tsai, Haowei Jiang, Fusamichi Akita, Jian-Ren Shen (Advanced Research Field, Research Institute for Interdisciplinary Science, and Graduate School of Environmental, Life, Natural Science and Technology, Okayama University, Okayama, Japan.)
- IP019 Marimo (*Aegagropilum brownii*) Spherical Aggregates Are Nearly Anoxic Under Calm Conditions: Field Dissolved Oxygen Measurements and Reoxygenation Responses
Masaru Kono^{1,2}, Keisuke Yoshida², Yoichi Oyama³ (¹ABC, ²Dept. Life Sci & Tech., Science Tokyo, ³Kushiro City Board of Education)
- IP020 Distribution of Iron among Protein Complexes in Thylakoid Membrane of the Barley Cultivar 'Sarab-1' and Redistribution of Iron under Iron-Deficient Conditions
Kai Nakano, Akihiro Saito, Yusuke Shikanai, Kyoko Higuchi (Grad. Sch. Appl. Biosci., Tokyo Univ. Agri.)
- IP021 Charge separation reaction proceeding in the core complex of photosynthetic reaction center from the green sulfur bacterium *Chlorobaculum tepidum*
Tomomi Inagaki¹, Takeru Kawakami², Kazuki Terauchi¹, Chihiro Azai² (¹Graduate School of Life Sciences, Ritsumeikan University, ²Graduate of Science and Engineering, Chuo University)
- IP022 Structural changes caused by replacing Ca with Yb in the manganese cluster of photosystem II
Takeru Kanda¹, Yoshiki Nakajima², Jian-Ren Shen² (¹Graduate School of Environmental, Life, Natural Science and Technology, Okayama University, ²Research Institute for Interdisciplinary Science, Okayama University)
- IP023 Structural basis of formate-induced inhibition on the acceptor side of photosystem II
Ayana Nishitani¹, Jian-Ren Shen², Ryo Nagao³, Yoshiki Nakajima² (¹Department of Biology Faculty of Science, Okayama University, ²Research Institute for Interdisciplinary Science, Okayama University, ³Faculty of Agriculture, Shizuoka University)
- IP024 Evaluation of interspecific genetic potential of different cultivars of canola (*Brassica napus* L.) using RNA-Seq analysis and measurement of chlorophyll fluorescence under the influence of NaCl salinity stress
Mobina Ulfat¹, Habib-ur-Rehman Athar², Sarah Ambreen², Hazem M. Kalaji³ (¹Lahore College for Women University, Lahore, Pakistan, ²Bahauddin Zakria University, Multan, Pakistan, ³Warsaw University of Life Sciences SGGW, Warsaw, PL)
- IP025 Contribution of the mitochondrial respiratory chain to sustaining the CO₂ assimilation rate
Tatsuhisa Konishi, Yusuke Mizokami, Ko Noguchi (Grad. Sch. Life Sci., Univ. Pharm. and Life Sci.)
- IP026 The Plastid Terminal Oxidase (PTOX) participates in stomatal dynamics regulation in *Arabidopsis thaliana*
Pablo Ignacio Calzadilla^{1,2}, Clara Sotos¹, Giles N. Johnson², Anja Krieger-Liszky¹ (¹Institute for Integrative Biology of the Cell (I2BC), Université Paris-Saclay, CEA, CNRS, Gif-sur-Yvette cedex 91198, France., ²Department of Earth and Environmental Sciences, Faculty of Science and Engineering, University of Manchester, Manchester M13 9PT, United Kingdom.)
- IP027 Development of a Measurement and Data Analysis System for Photosynthetic Electron Transport
Kazuhiko Sugimoto, Ichiro Terashima (Inst. Mol. Biol., National Chung Hsing University)
- IP028 Investigation of PIF1's role in redox regulation of chloroplast NDH activity
Kenta Miura¹, Minami Murai¹, Ko Imaizumi¹, Keisuke Yoshida², Toru Hisabori^{3,4}, Kaori Kohzuma¹, Kentaro Ifuku¹ (¹Grad. Sch. Agric., Kyoto Univ., ²CLS, Science Tokyo, ³SOKENDAI, ⁴Kanagawa Univ.)
- IP029 Redox-Based Deactivation of Photosynthetic Enzymes: Emerging Mechanisms and Implications
Keisuke Yoshida¹, Yuka Fukushi¹, Jun Inaba¹, Masaru Kono^{1,2}, Toru Hisabori^{3,4} (¹CLS, Sci. Tokyo, ²ABC, ³SOKENDAI, ⁴Kanagawa Univ.)
- IP030 The Involvement of Light-Harvesting Complex I in Photosystem I Photoprotection in *Arabidopsis thaliana*
Daisuke Takagi, Aya Kishie (Fac. Agric.)

■ Primary metabolism

- 1P031 **P** Exploring the Role of Tomato SWEET Sugar Transporters in Seed Development and Oil Accumulation
Han-Yu Ko^{1,2}, Yuki Nakamura¹, Woei-Jiun Guo² (¹RIKEN Center for Sustainable Resource Science (CSRS), Yokohama, Japan, ²Department of Biotechnology and Bioindustry Sciences, National Cheng Kung University, Tainan City 7013, Taiwan)
- 1P032 **P** Analysis of Influence on Nitrogen Use Efficiency at Vegetative Growth of Chromosomal Regions Related to the Steeper Leaf Nitrogen Gradient of a Super-High-Yielding Rice Cultivar “Takanari”
Wataru Kikuchi, Yusuke Murata, Leo Takabatake, Hiroyuki Ishida (Grad. Sch. Agri. Sci., Tohoku Univ.)
- 1P033 Integrated analysis of sink-to-source transition in soybean leaves using ¹⁴C tracing and RNA-seq
Ai Soma¹, Ryohei Sugita², Yuko Kurita¹, Natsuko I. Kobayashi¹, Tomoko. M Nakanishi¹, Keitaro Tanoi^{1,3} (¹Graduate School of Agricultural and Life Sciences, The University of Tokyo, ²Radioisotope Research Center, Nagoya University, ³Fukushima Institute for Research, Education and Innovation)
- 1P034 AckA-dependent carbon allocation supports photomixotrophic growth in *Synechocystis* sp. PCC 6803
Sara Horibe (Sch. Agric., Meiji Univ.)
- 1P035 High-level production of aromatic compounds in *Synechococcus* sp. PCC 7002 using environment-responsive expression control
Kenya Tanaka^{1,2,3}, Akihiko Kondo², Tomohisa Hasunuma^{1,3,4,5} (¹EGBRC, Kobe Univ., ²Grad. Sch. Eng. Sci. RCSEC, ³Grad. Sch. Sci. Technol. Innov., Kobe Univ., ⁴CSRS, Riken, ⁵Grad. Sch., Eng., Kobe Univ.)
- 1P036 Comparative analysis of hydrogen productivity in cyanobacterial mutants with alternative nitrogenase expression
Takeshi Sato^{1,2}, Souhei Taniguchi³, Kazuhito Inoue^{1,2} (¹Res. Inst. Integr. Sci., Kanagawa Univ., ²Dept. Biochem. Biotech., Kanagawa Univ., ³Dept. Biol. Sci., Kanagawa Univ.)

■ Specialized (secondary) metabolism

- 1P037 **P** Discovery of *O*-Methyltransferase Genes Involved in Asarone Biosynthesis in *Acorus calamus* L.
Oyundari Ganbat¹, Bolortuya Ulziibat², Takumi Ogawa¹, Takao Koeduka³, Atsushi Okazawa¹ (¹Graduate School of Agriculture, Osaka Metropolitan University, ²Department of Research and R&D Policy, Mongolian Academy of Sciences, ³Graduate School of Science and Technology for Innovation, Yamaguchi University)
- 1P038 **P** Characterization of tomato high sugar mutant *hs1*
Misaki Kobayashi¹, Shaoze Yuan¹, Islam M. Y. Abdellatif^{1,2}, Siyan Xu¹, Tohru Ariizumi^{1,3}, Hiroshi Ezura^{1,3}, Kenji Miura^{1,3} (¹Grad. Sci. Life & Earth Sci., Univ. Tsukuba, ²Univ. Minia, ³Tsukuba-Plant Innovation Research Center)
- 1P039 **P** Dynamic Cluster Evolution and Conserved Regulatory Control of Diterpene Biosynthesis Across the *Oryzoideae*
Yuming Liu¹, Shiho Tomiyama¹, Ikuya Motegi¹, Naoki Yamamoto², Koji Miyamoto³, Yoshimasu Tsujii⁴, Hiroyasu Furuumi⁵, Yutaka Sato⁵, Masaki Mori⁶, Hideaki Nojiri¹, Kazunori Okada¹ (¹Graduate School of Agricultural and Life Sciences, the University of Tokyo, Tokyo, Japan, ²College of Life Science, China West Normal University, Nanchong, China, ³Graduate School of Science and Engineering, Teikyo University, Utsunomiya, Japan, ⁴Faculty of Applied Bioscience, Tokyo University of Agriculture, Tokyo, Japan, ⁵National Institute of Genetics, Mishima, Japan, ⁶Institute of Agrobiological Sciences, NARO, Tsukuba, Japan)
- 1P040 Analysis of the Process of Cellular “Metabolic” Differentiation in *Catharanthus roseus*
Mai Uzaki¹, Ayako Kawamura¹, Hatsune Morinaka¹, Matt Stata², Kotaro Yamamoto³, Rhee Seung², Keiko Sugimoto¹, Masami Y. Hirai^{1,4} (¹RIKEN CSRS, ²Plant Resilience Institute, Michigan State University, ³Sch. Sci., Yokohama City Univ., ⁴Grad. Sch. Agricul. Sci., Nagoya Univ.)
- 1P041 Metabolic Engineering of *Synechococcus elongatus* PCC 7942 for Biosynthesis of the Plant Monoterpenoid Geraniol
Kaushalya Dayarathne, Toshiki Ishikawa, Maki Kawai-Yamada (Grad. Sch. Sci. & Eng., Univ. Saitama)
- 1P042 Elucidation of the Regulatory Mechanism of Phytoalexin Production in Rice Under Light and Dark Conditions
Yumi Oshima¹, Emi Yumoto², Koji Miyamoto^{1,2} (¹Grad. Sch. Sci. Eng. Teikyo Univ., ²Adv. Instrum. Anal. Cent., Teikyo Univ.)
- 1P043 Exploring the potential of rice allelopathy on sustainable agriculture
Meng-Chun Lin¹, Feng-Yin Su¹, Yu-Ting Su¹, Yi-Jhen Hong¹, You-Ming Liu², Kazunori Okada² (¹Department of Agronomy, National Chiayi University, ²Agro-Biotechnology Research Center, the University of Tokyo)
- 1P044 Production of β -Amyrin Using a Transient Expression System in *N. benthamiana*
Mei Takasugi¹, Yuriko Nagai², Much Z. Fanani³, Hikaru Seki^{3,4}, Kenji Miura^{1,2} (¹Bio. Sci., Univ. Tsukuba, ²T-PIRC, Univ. Tsukuba, ³Grad. Sch. Eng., Univ. Osaka, ⁴OTRI, Univ. Osaka)

- IP045 [Cancelled]
- IP046 Establishment of a distribution atlas of triterpenoid saponins in *Luffa aegyptiaca*
Sakura Masuda¹, Takumi Ogawa^{1,2}, Naoya Ogawa³, Kentaro Takahama³, Atsushi Okazawa^{1,2} (¹Sch. Agric., Osaka Met. Univ., ²Grad. Sch. Agric., Osaka Met. Univ., ³Tech. Center, Nagoya Univ.)
- IP047 Phytochemical characterization of *Ludisia discolor* roots and stems and evaluation of their antioxidant and anti-inflammatory properties
Cheng-Sin Lin¹, Tsong-Long Hwang², Sio-Hong Lam³, Wen-Chieh Tsai¹ (¹Inst. Trop. Plant Sci. & Microbiol., Natl. Cheng Kung Univ., Tainan, Taiwan, ²Grad. Inst. Health Ind. Tech., Coll. Human Ecol., Chang Gung Univ. Sci. & Tech., Taoyuan, Taiwan, ³Dept. Pharm., Coll. Med., Natl. Cheng Kung Univ., Tainan, Taiwan)
- IP048 Investigation of the biosynthetic pathway of saclipins, UV-absorbing compounds in *Aphanothece sacrum*
Yoshie Uchida, Hakuto Kageyama (Grad. Sch. Environ. Hum. Sci., Meijo Univ.)
- IP049 The environmental stress response of a novel mycosporine-like amino acid in the cyanobacterium *Gloeocapsa* sp. BRSZ strain
Taiki Aono¹, Sasiprapa Samsri², Rungaroon Waditee-Sirisattah², Hakuto Kageyama¹ (¹Grad. Sch. Env. Hum. Sci., Meijo Univ., ²Chulalongkorn Univ.)
- IP050 Functional Characterization of GlcHMS326, a Novel Mycosporine-Like Amino Acid from a Cyanobacterium *Gloeocapsa* sp. BRSZ
Erika Katayama¹, Taiki Aono¹, Tomoki Tsuboi¹, Samsri Sasiprapa², Waditee-Sirisattha Rungaroon², Hakuto Kageyama¹ (¹Grad. Sch. Env. Hum. Sci., Meijo Univ., ²Chulalongkorn Univ.)

■ Biomembrane/Ion and solute transport

- IP051 Functional characterization of a flavin transporter in plants
 Rui Shibata, Takanori Maruta, Takahiro Ishikawa, Takahisa Ogawa (Grad. Sch. Nat. Sci. Technol., Shimane Univ.)
- IP052 Phenotypic characterization of Arabidopsis mutants lacking four paralogs of the heme-specific ABC transporter functioning in plastids
Mayo Ota¹, Yuma Yoshioka², Kohji Nishimura³, Mihoko Takenoya⁴, Hiromitsu Tabeta⁵, Mikiko Kojima⁵, Muneo Sato⁵, Shinji Masuda⁶, Masami Y. Hirai⁵, Hitoshi Sakakibara^{5,7}, Takaaki Miyaji^{2,8}, Tatsuru Masuda⁴, Takayuki Shimizu¹ (¹Faculty of Science, Nara Women's University, ²Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama University, ³Faculty of Life and Environmental Sciences, Shimane University, ⁴Graduate School of Arts and Sciences, The University of Tokyo, ⁵RIKEN Center for Sustainable Resource Science, ⁶Department of Life Science and Technology, Institute of Science Tokyo, ⁷Graduate School of Bioagricultural Sciences, Nagoya University, ⁸Advanced Science Research Center, Okayama University)
- IP053 Application of NanoSIMS to investigate the mechanism of iron transport and homeostasis through high-resolution localization of nicotianamine
Tomoko Nozoye^{1,2}, Miyuki Takeuchi³, Fabian Hollmann⁴, Stephan Clemens⁴ (¹Meiji Gakuin University, Center for Liberal Arts, ²The University of Tokyo, Department of Global Agricultural Sciences, Laboratory of Plant Biotechnology, ³The University of Tokyo, Graduate School of Agricultural and Life Sciences, Department of Biomaterial Sciences, ⁴University of Bayreuth, Department of Plant Physiology, Bayreuth, Germany)
- IP054 Spatiotemporal analysis of calcium transport into tomato fruits using real-time ⁴⁵Ca monitoring
Takuma Hirashima¹, Yusuke Shikanai¹, Yong-Gen Yin², Nobuo Suzui², Mitsutaka Yamaguchi², Yuto Nagao², Akihiro Saito¹, Naoki Kawachi^{2,3}, Kyoko Higuchi¹ (¹Tokyo University of Agriculture, ²The Takasaki Institute for Advanced Quantum Science, National Institutes for Quantum Science and Technology (QST), ³Fukushima Institute for Research, Education and Innovation)
- IP055 **P** Phosphate starvation-induced CORNICHON HOMOLOG 5 as endoplasmic reticulum cargo receptor for PHT1 transporters in *Arabidopsis*
Chang-Yi Chiu¹, Cheng-Da Tsai¹, Jih-Yi Wang¹, Alastair J. McGinness², Satomi Kanno³, Verena Kriechbaumer², Tzu-Yin Liu^{1,4} (¹Institute of Bioinformatics and Structural Biology, College of Life Sciences and Medicine, NTHU, ²Endomembrane Structure and Function Research Group, School of Biological and Medical Sciences, Oxford Brookes University, Headington, Oxford OX3 0BP, UK, ³Institute for Advanced Research, NAIAS, Nagoya University, Fro-cho, Chikusa-ku, Nagoya, Japan, ⁴Department of Life Science, College of Life Sciences and Medicine, National Tsing Hua University, Hsinchu 30013, Taiwan)
- IP056 **P** A genome-wide association study identifies a novel nitrate transporter that regulates leaf nitrate distribution
Meng-Jia Wang^{1,2}, Yi-Fang Tsay² (¹Molecular and Cell Biology, Taiwan International Graduate Program, Academia Sinica, National Defense Medical University, Taipei 114201, Taiwan, ²Institute of Molecular Biology, Academia Sinica, Taipei 11529, Taiwan)

■ Organelles/Cytoskeleton/Endomembrane system

- IP057 **P** Functional characterization of a root cap-specific myosin XI in *Arabidopsis thaliana*
Kohei Tachibana^{1,2}, Keigo Ito², Yusaku Inaba², Syun Ohata², Akiho Kibukawa², Yukinori Nishigami³, Tatsuaki Goh⁴, Keiji Nakajima⁴, Motoki Tominaga^{1,2} (¹Fac. Educ. Integrated Arts. Sci., Bio., Waseda Univ., ²Grad. Sch., Adv. Sci. Eng., Waseda Univ., ³Res. Inst. Elec. Sci., Hokkaido Univ., ⁴Grad. Sch. Sci. Tech., NAIST)
- IP058 **P** Functional analysis of Syntaxin 6-like protein in vascular plants (SYLK) localized to the Golgi apparatus
Sara Tode¹, Emi Ito^{2,3}, Yoko Ito⁴, Yutaro Shimizu⁵, Wataru Yamori⁶, Naoya Katsuhama⁶, Kei Hiruma⁷, Akihiko Nakano^{8,9}, Tomohiro Uemura^{1,10} (¹Grad. Sch. Humanities and Sciences, Ochanomizu Univ., ²Division of Cellular Dynamics, National Institute for Basic Biology, ³The Department of Basic Biology, SOKENDAI, ⁴IHLS., Ochanomizu Univ., ⁵LBM, UMR5200 CNRS/Bordeaux Univ., ⁶ISAS, Univ. Tokyo, ⁷Grad. Sch. Arts and Sciences, Univ. Tokyo, ⁸Science Tokyo, Institute of Integrated Research, ⁹Faculty of Core Research, Natural Science Div., Ochanomizu Univ., ¹⁰Faculty of Core Research, Natural Science Div., Ochanomizu Univ.)
- IP059 **P** Involvement of PHOSPHATE TRANSPORTER TRAFFIC FACILITATOR1 in COPII assembly by interacting with SAR1 GTPase
Hui-Fang Anne Lung (Institute of Bioinformatics and Structural Biology, National Tsing Hua University (NTHU), Taiwan)
- IP060 **P** Roles of the Sec1/Munc18 protein VPS45 and the Qa-SNARE protein SYP4 in auxin-related development in *Arabidopsis thaliana*
Kosuke Ogita¹, Narumi Fukasawa¹, Ruian Wang¹, Tomohiro Uemura², Hirokazu Tanaka¹ (¹Life Sci, Grad. Agriculture, Meiji Univ., ²Natural Sci Div, Core Research, Ochanomizu Univ.)
- IP061 **P** Integrated Pipeline for Pyrenoid Biogenesis: Combining Live Imaging, Computational Modeling, and AI-Driven Screening
Koujiro Matsuo¹, Takashi Yamano^{1,2} (¹Graduate School of Biostudies, Kyoto University, ²Center for Living Systems Information Science (CeLISIS), Kyoto University)
- IP062 **P** Analysis of the regulatory mechanism of chloroplast development by a brassinosteroid signaling factor BPG4 via its disulfide bond
Chihiro Ujihara¹, Shunshu Ri¹, Takao Ohashi¹, Ryo Tachibana², Ayumi Yamagami¹, Takuya Miyakawa¹, Takeshi Nakano¹ (¹Grad. Sch. Biostudies, Kyoto Univ., ²University of Cambridge)
- IP063 Fruits quality and photosynthesis related genes analysis of *BPG4-KO* tomato; BPG4 is a chloroplast regulating factor in Brassinosteroid signaling
Shunshu Ri¹, Chihiro Ujihara¹, Ryo Tachibana², Ayumi Yamagami¹, Magdalena Rossi³, Koichi Sugimoto⁴, Hiroshi Ezura⁴, Takeshi Nakano¹ (¹Grad. sch. Biostudies., Kyoto univ., ²Univ. Cambridge, ³Univ. San Paulo, ⁴Grad. sch. Bioindustrial Sci., Tsukuba univ.)
- IP064 Introduction of regioselective bacterial heme oxygenases into *Arabidopsis hyl-1* supports the retrograde heme signaling hypothesis
Mihoko Takenoya¹, Takayuki Shimizu², Keita Miyake¹, Tatsuru Masuda¹ (¹Grad. Sch. Arts Sci., Univ. Tokyo, ²Fac. Div. Nat. Sci., Nara Women's Univ.)
- IP065 Functional analysis of a heme specific transporter localized at chloroplast envelope membrane in *Marchantia polymorpha*
Mihoko Takenoya¹, Noriyuki Suetsugu¹, Takayuki Shimizu², Yingxi Chen¹, Yuuma Yosioka⁷, Takaaki Miyaji^{3,7}, Koji Nishimura⁴, Hitoshi Sakakibara^{5,6}, Mikiko Kojima⁵, Yumiko Takebayashi⁵, Masami Y. Hirai⁵, Hiromitsu Tabeta⁵, Muneo Sato⁵, Keita Miyake¹, Tatsuru Masuda¹ (¹Grad. Sch. Arts Sci., Univ. Tokyo, ²Fac. Div. Nat. Sci., Nara Women's Univ., ³Grad. Sch. Med. Dent Pharm Sci., Okayama Univ., ⁴Fac. Life. Env. Sci., Shimane Univ., ⁵Cen. Sus. Sci., RIKEN, ⁶Grad. Sch. Bioagri Sci., Nagoya Univ., ⁷Adv Sci Res Ctr, Okayama Univ.)
- IP066 Functional dissection of *MYB*-related transcription factors in chloroplast biogenesis during de-etiolation
Ryo Tachibana, Kumari Billakurthi, Julian M. Hibberd (Dep. Plant Sciences, Univ. Cambridge)
- IP067 *Marchantia* DPD1-MutS protein degrades organelle DNA in *Arabidopsis* pollen
Tsuneaki Takami, Wataru Sakamoto (IPSR, Okayama Univ.)
- IP068 The SGR1 G139S mutation suppresses multiple phenotypes of the *egy1* mutant
Yuki Karasaki, Kenta Maezaka, Yang Fee Kim, Yusuke Kato (Fac. Agric., Setsunan Univ.)
- IP069 Intracellular distribution and differentiation status of plastids in rice gametes and developing zygotes
Riho Tomishima¹, Yumi Goto², Aya Satoh¹, Mayuko Sato², Moe Honda³, Hiroyuki Tsuji^{3,4}, Kiminori Toyooka², Takashi Okamoto¹ (¹Grad. Sch. Sci., Tokyo Metropolitan Univ., ²RIKEN CSRS, ³KIBR., Yokohama City Univ., ⁴Biosci. Biotech Ctr., Nagoya Univ.)
- IP070 The role of osmoregulation of amyloplasts in gravity sensing in *Arabidopsis thaliana*
Atsushi Togaki¹, Chikako Tanaka¹, Kanako Yamasaki¹, Yuki Sakamoto², Yoko Ishizaki¹, Takashi Shina¹ (¹Fac. Agric., Setsunan Univ., ²Fac. Sci., Shinshu Univ)

■ Cell wall

- 1P071 **P** Survey of Novel Transcription Factors Regulating Tension Wood Formation in Hybrid Aspen
Mizuho Kanie¹, Katsuhiko Tokita², Ryosuke Sano², Taku Demura², Naoki Takata³, Misato Ohtani^{1,2} (¹Grad. Sch. Sci., Univ. Tokyo, ²Grad. Bio., NAIIST, ³Forest Bio Res. Cent., FFPRI)
- 1P072 Subfunctionalization of secondary cell wall master regulators, NST/SND transcription factors, in hybrid aspen
Naoki Takata (Forest Bio Res. Cent., For. Forest Prod. Res. Inst.)
- 1P073 Transcriptome analysis of secondary cell wall formation in a *Cryptomeria japonica* ectopic xylem cell induction system
Ryosuke Sato¹, Soichiro Nagano², Yoshihiko Nanasato¹, Ken-ichi Konagaya¹, Toru Taniguchi¹, Naoki Takata¹ (¹Forest Bio Res. Cent., For. Forest Prod. Res. Inst., ²Forest Tree Breeding Cent., For. Forest Prod. Res. Inst.)
- 1P074 Single-cell and spatial omics reveal progressive loss of xylem developmental complexity across seed plants
Peng Shuai^{1,2}, Jo-Wei Allison Hsieh^{3,4}, Chung-Ting Kao⁵, Chen-Wei Hu³, Ray Wang³, Shang-Che Kuo⁶, Ming-Ren Yen³, Pin-Chien Liou⁷, Yi-Chi Ho⁷, Chia-Chen Chu⁵, Shuotian Huang^{1,2}, Jiao Liu^{1,2}, Lixia Zhang^{1,2}, Chia-Chen Wu⁸, Yi-Jyun Luo⁹, Quanzi Li¹⁰, Chuan-Chih Hsu¹¹, Chao-Li Huang¹², Jung-Chen Su¹³, Mei-Chun Tseng⁷, Ying-Lan Chen^{14,15}, Te-Lun Mai³, Ying-Chung Jimmy Lin^{3,5,6} (¹College of Forestry, Fujian Agriculture and Forestry University, ²Chinese Fir Engineering Technology Research Center of the State Forestry and Grassland Administration, ³Department of Life Science, College of Life Science, National Taiwan University, ⁴The Genome Center, University of California, ⁵Institute of Plant Biology, College of Life Science, National Taiwan University, ⁶Genome and Systems Biology Degree Program, National Taiwan University and Academia Sinica, ⁷Institute of Chemistry, Academia Sinica, ⁸School of Forestry and Resource Conservation, National Taiwan University, ⁹Biodiversity Research Center, Academia Sinica, ¹⁰National Key Laboratory for Development and Utilization of Forest Food Resources, Zhejiang A&F University, ¹¹Institute of Plant and Microbial Biology, Academia Sinica, ¹²Institute of Tropical Plant Sciences and Microbiology, National Cheng Kung University, ¹³Department of Pharmacy, National Yang Ming Chiao Tung University, ¹⁴Department of Biotechnology and Bioindustry Sciences, National Cheng Kung University, ¹⁵Graduate Program in Translational Agricultural Sciences, National Cheng Kung University)
- 1P075 Functional analysis of Trihelix transcription factors involved in xylem vessel formation in Arabidopsis
Hinata Masukagami¹, Ya Ma¹, Akira Mine³, Misato Ohtani^{1,2} (¹Grad. Sch. Front. Sci., Univ. Tokyo, ²Grad. Sch. Sci., Univ. Tokyo, ³Grad. Sch. Agri., Univ. Kyoto)
- 1P076 Functional analysis of reactive oxygen species in the early stages of ectopic vascular formation
Yusuke Ohba^{1,2}, Li Jiuyi², Keita Matsuoka¹, Yuki Kondo³, Kazuyuki Kuchitsu⁴, Shinobu Satoh⁵, Hiroaki Iwai^{5,6}, Masashi Asahina^{1,7} (¹Dept. Biosci, Teikyo Univ., ²Gard. Sch. Sci. and Tech., Univ. Tsukuba, ³Grad. Sch. Sci. Dept. Bio. Sci., Osaka Univ., ⁴Dept. appl. Bio. Sci., Tokyo Univ. Sci., ⁵Fac. Life and Env. Sci., Univ. Tsukuba, ⁶Bio. Tokai Univ., ⁷Adv. Inst. anal. Ctr., Teikyo Univ.)
- 1P077 Development of an *In Vitro* Grafting Method for Interfamily and Vegetable Grafts
Yaichi Kawakatsu¹, Hafiz Muhammad Nasir¹, Abdul Rasool Ataei¹, Michitaka Notaguchi^{1,2,3,4}, Munenori Kitagawa¹ (¹Huazhong Agricultural University, College of Horticulture and Forestry Sciences, ²Bioscience and Biotechnology Center, Nagoya University, ³Graduate School of Bioagricultural Sciences, Nagoya University, ⁴Department of Botany, Graduate School of Science, Kyoto University)
- 1P078 Comprehensive analysis of genes involved in grafting success between plants of the same family
Ken-ichi Kurotani¹, Masashi Asahina^{2,3}, Michitaka Notaguchi¹ (¹Grad. School. Sci., Kyoto Univ., ²Env. & Biotech., Dept. Integ. Sci. & Eng., Teikyo Univ., ³Adv. Inst. Anal. Ctr., Teikyo Univ.)

■ Development/Morphogenesis

- 1P079 **P** Stomatal Lineage Cells Regulate Substomatal Cavity Formation Through Inter-Tissue Signaling during Leaf Development
Chynthia Devi Hartono^{1,2}, Kuan-Chuan Tseng¹, Wei-Han Fang¹, Tzu-Chuan Huang¹, Chia-Ming Lee³, Bi-Chang Chen³, Wei-Chen Chu⁴, Shen-Long Tsai², Chin-Min Kimmy Ho¹ (¹Institute of Plant and Microbial Biology, Academia Sinica, Nangang, Taipei, Taiwan, ²Department of Chemical Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan, ³Research Center for Applied Sciences, Academia Sinica, Nangang, Taipei, Taiwan, ⁴Institute of Cellular and Organismic Biology, Academia Sinica, Nangang, Taipei, Taiwan)
- 1P080 HDL mediates chromatin condensation to establish stable centromere architecture
Tsai-Chen Chen, Chin-Min Ho (Institute of Plant and Microbial Biology, Academia Sinica)

- IP081 **P** A novel CLE peptide cooperates with TDIF signalling to regulate cambium stem cell fate in *Arabidopsis*
Hui Cao^{1,2}, Dongbo Shi¹ (¹RIKEN Yokohama Campus, ²University of Potsdam)
- IP082 Regulation of secondary vascular formation during taproot thickening in sugar beet
Toshiaki Kozuka¹, Srisuthep Namthip¹, Yuma Shimizu¹, Masashi Asahina^{2,3}, Yosuke Kuroda⁴, Masaki Ito¹ (¹Inst. Sci. & Eng., Kanazawa Univ., ²Env. & Biotech., Dept. Integ. Sci. & Eng., Teikyo Univ., ³Adv. Inst. Anal. Ctr., Teikyo Univ., ⁴HARC/NARO)
- IP083 **P** SUPERMAN-mediated Flower Development in *Arabidopsis thaliana*
Febri Yuda Kurniawan, Nobutoshi Yamaguchi, Toshiro Ito (Laboratory of Plant Stem Cell Regulation and Floral Patterning, Grad. Sch. of Biol. Sci., Nara Inst. of Sci. and Tech.)
- IP084 Flowering Regulation mediated by the RABH1 group in *Involving Arabidopsis thaliana*
Asaki Sato¹, Emi Ito^{2,3,4}, Yoko Ito², Tomohiro Uemura^{1,2,5} (¹Grad. Humanities and Sciences, Univ. Ochanomizu, ²IHLS., Ochanomizu Univ., ³Division of Cellular Dynamics, NIBB, ⁴Basic Biology Program, Graduate Institute for Advanced Studies, ⁵Faculty of Core Research, Natural Science Div., Ochanomizu Univ., Department of Life Science, Ochanomizu University)
- IP085 The role of auxin in developmental changes caused by mechanical forces exerted on the floral primordium of *Arabidopsis thaliana*
Amika Kanda¹, Akitoshi Iwamoto^{1,2} (¹Dept. Biol. Sci., Grad. Sch., Sci., Kanagawa Univ., ²Dept. Biol. Sci., Fac. Sci., Kanagawa Univ.)
- IP086 Development of an Experimental System for Single-Nucleus RNA-Seq and Single-Cell Resolution Three-Dimensional Imaging Analysis of Barley Shoot Apex
Ryota Takeda¹, Jun Ito¹, Yuko Nomura¹, Nao Sato¹, Atsuko Hirota², Makoto Hayashi², Tohaku Seki², Yosuke Sasai², Ping Kao², Keiko Sugimoto², Daisuke Saisho³, Hiroshi Hisano³, Tomoki Uchino⁴, Shuhei Nasuda⁴, Kaoru Tonosaki¹, Tetsu Kinoshita¹, Kana Amagai⁵, Makoto Kashima⁵, Hiroyuki Tsuji^{1,6} (¹Kihara Inst. Biol. Res., Yokohama City Univ., ²CSRS, RIKEN., ³IPSR, Okayama Univ., ⁴Grad. Sch. Agric., Kyoto Univ., ⁵Fac. Sci., Toho Univ., ⁶Biosci. Biotechnol. Center, Nagoya Univ.)
- IP087 Single-cell resolution imaging of barley inflorescences where three meristems develop simultaneously without bracts
Ryouta Mitsuishi¹, Jun Ito¹, Yuko Nomura¹, Ryota Takeda¹, Hiroyuki Tsuji^{1,2} (¹Kihara Inst. Biol. Res., Yokohama City Univ., ²Biosci. Biotechnol. Center, Nagoya Univ.)
- IP088 *De novo* Induction of Meristem-like Structures by Gall-Inducing Midge in *Aster scaber*
Asumi Fujimoto¹, Akiteru Maeno², Tomoaki Sakamoto^{3,4}, Seisuke Kimura^{3,4}, Seiji Takeda^{1,5}, Norihiro Ohtsubo¹ (¹Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ., ²Cell Architecture Laboratory, NIG., ³Faculty of Life Sciences, Kyoto Sangyo Univ., ⁴Center for Plant Sciences, Kyoto Sangyo Univ., ⁵Faculty of Science and Engineering, Yasuda Women's Univ.)
- IP089 **P** The mechanism of tomato fruit set regulated by jasmonate localization in ovule
Yukako Nomura¹, Yoshihito Shinozaki², Taiji Kawakatsu³, Mikiko Kojima⁴, Yumiko Takebayashi⁴, Hitoshi Sakakibara⁵, Hiroshi Ezura^{2,6}, Tohru Ariizumi^{2,6} (¹Graduate School of Life and Environmental Sciences, University of Tsukuba, Japan, ²Faculty of Life and Environmental Sciences, University of Tsukuba, Japan, ³Institute of Agrobiological Sciences, National Agriculture and Food Research Organization, Japan, ⁴RIKEN Center for Sustainable Resource Science, Japan, ⁵Graduate School of Bioagricultural Sciences, Nagoya University, Japan, ⁶Tsukuba Plant Innovation Research Center, University of Tsukuba, Japan)
- IP090 **P** Indispensable Roles of RBOH-mediated ROS Production Orchestrating Development and Morphogenesis in *Marchantia polymorpha*
Yuto Yamashita¹, Yuki Hagiwara¹, Kenji Hashimoto¹, Mizuki Ogawa¹, Seigo Hoshino¹, Hidemasa Suzuki², Megumi Iwano³, Toshiki Ishikawa⁴, Ryuichi Nishihama¹, Kazuyuki Kuchitsu¹ (¹Department of Applied Biological Science, Tokyo University of Science, Noda, Japan, ²Graduate School of Life Sciences, Tohoku University, Sendai, Japan, ³Graduate School of Biostudies, Kyoto University, Kyoto, Japan, ⁴Graduate School of Science and Engineering, Saitama University, Saitama, Japan)
- IP091 Hierarchical Regulation of Rhizoid Tip Growth by Ca²⁺/CPK-RBOH/ROS Module in *Marchantia polymorpha*
Mika Kimura, Yuto Yamashita, Seigo Hoshino, Kenji Hashimoto, Takafumi Hashimoto, Kazuyuki Kuchitsu (Tokyo University of Science)
- IP092 **P** Evolutionarily conserved RLF, a cytochrome *b₅*-like heme-binding protein, regulates organ development across land plants
Kentaro P. Iwata¹, Takayuki Shimizu², Hiromitsu Tabeta³, Yuuki Sakai¹, Tomoyuki Furuya⁴, Hinatamaru Fukumura¹, Yuki Kondo⁴, Masami Y. Hirai³, Tatsuru Masuda⁵, Kimitsune Ishizaki¹, Hidehiro Fukaki¹ (¹Grad. Sch. of Sci., Kobe Univ., ²Fac. Sci., Nara Women's Univ., ³RIKEN CSRS, ⁴Grad. Sch. of Sci., Univ. of Osaka, ⁵Grad. Sch. of Arts and Sci., Univ. of Tokyo)
- IP093 Molecular functional differentiation of three subgroups of BZR/BES transcription factors in *Marchantia polymorpha*
Tomoyuki Furuya¹, Shohei Nosaki^{2,3}, Yuki Takabatake¹, Masahiro Kasahara⁴, Yuki Kondo¹ (¹Grad. Sch. Sci., Univ. of Osaka, ²Inst. of Life and Env. Sci., Univ. of Tsukuba, ³T-PIRC, Univ. of Tsukuba, ⁴College Sch. Sci., Ritsumeikan Univ.)

- 1P094 The developmental roles of TALE homeobox transcription factors KNOX2 and BELL in hornworts
Kazune Ezaki¹, Tomoaki Nishiyama², Keiko Sakakibara¹ (¹College of Sci., Rikkyo Univ., ²Sch. of Sci., Univ. of Toyama)
- 1P095 Regulation of sex-determination gene expression associated with the transition of sexual reproductive systems in liverworts
Yukiko Yasui¹, Yuka Umeya¹, Yuki Akimoto¹, Eita Shimokawa¹, Masaki Shimamura², Takayuki Kohchi¹ (¹Grad. Sch. Biostudies, Kyoto Univ., ²Grad. Sch. Integ. Sci. Life, Hiroshima Univ.)
- 1P096 Investigating how neofunctionalized *LEAFY* is involved in the evolution of dioecy in *Nepenthes*
Yuhan Guo^{1,2}, Kenji Fukushima^{1,2} (¹SOKENDAI, ²National Institute of Genetics)
- 1P097 Characterizing plant cell totipotency regulators during zygotic embryogenesis in *Arabidopsis thaliana*
Ping Kao, Keiko Sugimoto (CSRS, RIKEN)
- 1P098 **P** Analysis of mechanisms regulating the transcriptional repression of Mp*LAXR*, a stem cell factor that positively regulates regeneration in *Marchantia polymorpha*
Hina Motoshige¹, Haruka Mine¹, Aya Iwaki^{1,2}, Emi Hainiwa², Shohei Yamaoka², Yutaka Kodama³, Shota Yamauchi¹, Takayuki Kohchi², Ryuuichi Nishihama¹ (¹Dept. Appl. Biol. Sci., Fac. Sci. Tech., Tokyo Univ. Sci., ²Grad. Sch. Biostudies., Kyoto Univ., ³Cent. Bio., Utsunomiya Univ.)
- 1P099 Plantlet regeneration from female gametophytes and immature embryos of *Podocarpus macrophyllus*
Yasunori Ohmiya¹, Yoshihisa Hosoi² (¹Forest Tree Breeding Center, FFPRI, ²Forestry and Forest Products Research Institute)
- 1P100 Optimization of callus induction conditions for transformation of the fern *Equisetum arvense*
Chihiro Uchida, Yoh Sakuma, Hirotaka Kato (Grad. Sch. Sci. Eng., Ehime Univ.)
- 1P101 **P** Cell fate transition during wound-induced adventitious shoot formation in *Drosera rotundifolia*
Yosuke Sasaki^{1,2}, Shoji Segami^{3,4}, Dongbo Shi², Noriko Takeda-Kamiya², Hatsune Morinaka², Ayako Kawamura², Arika Takebayashi², Akira Iwase², Kiminori Toyooka², Mitsuyasu Hasebe^{3,4}, Keiko Sugimoto^{1,2} (¹Univ. Tokyo, Dep. Biol. Sci., ²CSRS, RIKEN, ³NIBB, ⁴SOKENDAI)
- 1P102 **P** Dissecting Cell Wall-Mediated Regenerative Pathways in the *Arabidopsis* Root Meristem
Hazel Marie Kugan, Ye Zhang, Masaaki Umeda (Laboratory of Plant Growth Regulation, Graduate School of Science and Technology, Nara Institute of Science and Technology (NAIST))
- 1P103 Exploring interacting factors and functional analysis of the histone demethylase LDL3 during shoot regeneration in *Arabidopsis thaliana*
Tasuku Nakahashi¹, Hikaru Sato¹, Nodoka Handa¹, Yuki Sakamoto², Takuya Sakamoto³, Sachihiko Matsunaga¹ (¹Dept. Integr. Biosci., Grad. Sch. Front. Sci., Univ. Tokyo, ²Fac. Sci., Univ. Shinshu, ³Fac. Sci., Univ. Kanagawa)
- 1P104 Studies on the *VAH* Gene Negatively Influencing Stemness in *Arabidopsis*
Ryuji Tsugeki¹, Yoko Ikeda², Hitoshi Mori^{3,4}, Yuta Aoyagi⁵, Hideki Hirakawa⁶ (¹Grad. Sch. Sci., Kyoto Univ., ²IPSR, Okayama Univ., ³Grad. Sch. Bioagric. Sci., Nagoya Univ., ⁴Grad. Sch. Food Agric. Sci., ⁵Kazusa DNA Res. Inst., ⁶Grad. Sch. Agri., Kyushu Univ.)
- 1P105 Embryogenesis of the family Lentibulariaceae with novel body plans
Ao Masuda¹, Mitsuyasu Hasebe², Natsu Katayama¹ (¹Grad. Sch. Sci., Univ Tokyo, ²NIBB)
- 1P106 **P** Morphological characterization of glandular trichomes and neck strip
Shaouxuan Jiang, Toru Fujiwara, Takehiro Kamiya (Graduate School of Agricultural and Life Sciences, The University of Tokyo)
- 1P107 **P** The roles of organelle-localized RNA-binding proteins in mobile mRNA transport
Jen Wei Chiu (Institute of Plant and Microbial Biology, Academia Sinica)
- 1P108 Signatures of positive selection in pulvinus-expressed genes facilitate the evolution of rapid movement in *Mimosa*
Yan-Han Fang¹, Hiroaki Mano², Tomoaki Nishiyama³, Shuji Shigenobu⁴, Mitsuyasu Hasebe^{2,5}, Chao-Li Huang^{1,6} (¹Graduate Program in Translational Agricultural Sciences, National Cheng Kung University and Academia Sinica, Tainan, Taiwan, ²Division of Evolutionary Biology, National Institute for Basic Biology, Aichi, Japan, ³School of Science, Academic Assembly, University of Toyama, Toyama, Japan, ⁴Laboratory of Evolutionary Genomics, National Institute for Basic Biology, Aichi, Japan, ⁵Basic Biology Program, SOKENDAI (The Graduate University for Advanced Studies), Kanagawa, Japan, ⁶Institute of Tropical Plant Sciences and Microbiology, College of Biosciences and Biotechnology, National Cheng Kung University, Tainan, Taiwan)
- 1P109 The breakdown of distyly in *Primula sieboldii*
Lele Shang, Michael Lenhard (University of Potsdam)

- IP110 **P** ZYP1 Mediates Synaptonemal Complex Assembly and Ensures Crossover Assurance in Maize
Tzu-Han Huang^{1,2}, Chung-Ju Rachel Wang¹ (¹Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan, ²Institute of Plant Biology, National Taiwan University, Taipei, Taiwan)

■ Reproduction

- IP111 **P** Molecular Study of Substrate Specificities and Inhibitor Recognition of *Petunia* S-RNases
Yu Wang¹, Yoshinobu Kato¹, Shuhei Kusano², Shinya Hagihara², Seiji Takayama¹, Sota Fujii¹ (¹University of Tokyo, ²RIKEN)
- IP112 **P** Comparative transcriptomic analysis reveals why endosperm does not develop in *Phalaenopsis* orchids
 Hai Nguyen Nguyen Thanh¹, Ming-Bang Huang¹, Ming-Tsair Chan^{1,2}, Masaru Ohme-Takagi¹ (¹CBB, NCKU., ²ABRC, Academia Sinica)
- IP113 **P** Genetic Variation and Crossover Suppression in CML228 Compared with Other Maize NAM Inbreds and its Hybrid Behavior
Sami Adnan, Chung-Ju Rachel Wang (Institute of Plant and Microbial Biology (IPMB), Academia Sinica)
- IP114 Comparing floral induction by salicylic and benzoic acid in duckweed plants, *Wolffiella hyalina*
Minako Isoda¹, Sayaka Maki², Tokitaka Oyama³, Masahiro Kanaoka² (¹Fac. Sci. Eng., Yasuda Women's Univ., ²Fac. Life Environ. Sci., Prefectural Univ. Hiroshima, ³Grad. Sch. Sci., Kyoto Univ.)
- IP115 Auxin triggered orchid ovary post-pollination morphology
Ming-Bang Huang¹, Nguyen Thanh Hai Nguyen¹, Masaru Ohme Takagi¹, Ming-Tsair Chan² (¹College of Bioscience and Biotechnology, National Cheng Kung University, ²ABRC, Academia Sinica)
- IP116 Pollen-Coat Defects and Impaired Hydration in the GRP-Cluster Knockout Mutant
Mari Takusagawa, Haruki Oguni, Surachat Tangpranomkorn, Seiji Takayama, Sota Fujii (Grad. Sch. Agr., UTokyo)
- IP117 Search of new mechanisms regulating self-incompatibility on the stigma side in Brassicaceae
Hitomi Ogama¹, Hatsune Tasaka¹, Yuka Kimura¹, Seiji Takayama¹, Sota Fujii^{1,2} (¹Grad. Sch. Agric. Lif. Sci, Univ. Tokyo, ²Suntory Rising Stars Encouragement Program in Life Science)

■ Plant hormones/Signaling molecules

- IP118 **P** Identifying further components of the *KLUH*-dependent signaling pathway by exploiting cryptic genetic variation
Mingyang Wang (University of Potsdam Institute for Biochemistry and Biology Genetics Research Group)
- IP119 **P** Effects of root-derived genetic factors on shoot growth in *Arabidopsis thaliana* accessions
Kota Monden¹, Takatoshi Kiba², Ryo Tabata³, Takushi Hachiya⁴ (¹Grad. Sch. Nat. Sci. & Tech., Shimane Univ., ²IPSR, Okayama Univ., ³Sch. Agri., Meiji Univ., ⁴ICSR, Shimane Univ.)
- IP120 **P** Jasmonates induce seed germination of root parasitic plants
Taiki Suzuki¹, Kotaro Nishiyama², Michio Kuruma¹, Tomoya Ishikawa¹, Marco Burger³, Koji Miyamoto⁴, Wendi Jiang¹, Hanae Kaku², Hiromu Tsuzuki⁵, Naoki Kitaoka⁵, Hideyuki Matsuura⁵, Yoshiya Seto² (¹Grad. Sch. Agriculture, Meiji Univ., ²Sch. Agriculture, Meiji Univ., ³Salk Institute for Biological Studies, ⁴Fac. Science and Engineering, Teikyo Univ., ⁵Sch. Agriculture, Hokkaido Univ.)
- IP121 **P** SAHY2 suppresses VSP acid phosphatase activity to regulate abscisic acid and jasmonic acid biosynthesis under salt stress in *Arabidopsis*
Bo-Yu Yang^{1,2}, Hieng-Ming Ting², Wan-Hsing Cheng¹ (¹Institute of Plant and Microbial Biology, Academia Sinica, ²Institute of Plant Biology, National Taiwan University)
- IP122 **P** GA-related compounds regulate plant growth by modulating cytokinin levels in *Marchantia polymorpha*
Takuya Segawa¹, Shogo Kawamura¹, Eita Shimokawa¹, Rui Sun^{1,2}, Shohei Yamaoka¹, Mikiko Kojima³, Masanori Okamoto³, Yoshihiro Yoshitake¹, Takayuki Kohchi¹ (¹Grad. Sch. Biostudies, Kyoto Univ., ²Institute for Chemical Research, Kyoto Univ., ³RIKEN Center for Sustainable Resource Science)
- IP123 **P** Progesterone Binding Activity of the Plant Progesterone Receptor Candidate AmPR and Identification of AmPR Signaling Factors
Sena Ishigami, Yuka Kinugasa, Ayumi Yamagami, Takuya Miyakawa, Takeshi Nakano (Grad. Sch. Bio., Univ. Kyoto)
- IP124 **P** Mode of action and the effects of a compound that increase both jasmonic acid and salicylic acid in *Arabidopsis*
Mizuki Ogawa¹, Sota Ogawa¹, Seigo Hoshino¹, Kentaro Namiki¹, Kaisei Chujo¹, Manami Awano¹, Nobutaka Kitahata^{1,2}, Yuhō Saito¹, Hiroshi Abe³, Tadao Asami^{2,4}, Seisuke Kimura⁵, Kenji Matsui⁶, Kouji Kuramochi¹, Kazuyuki Kuchitsu¹ (¹Dept. Appl. Biol.

Sci., Tokyo Univ. of Science, ²Grad. Sch. Agric. Life Sci., The Univ. of Tokyo, ³RIKEN BRC, ⁴KIBR, Yokohama City Univ., ⁵Fac. Life Sciences, Kyoto Sangyo Univ., ⁶Fac. Agriculture, Yamaguchi Univ.)

- IP125 Screening of Novel Phloem-mobile Polypeptides
Nanami Yamaguchi, Mari Ogawa-Ohnishi, Yoshikatsu Matsubayashi (Grad. Sch. Sci., Univ. Nagoya)

■ Photoreceptors/Photoresponses

- IP126 **P** Arabidopsis *BEL1-LIKE HOMEODOMAIN 1* acts as a suppressor of FIN219/JAR1 in regulating hypocotyl elongation through direct interaction under far-red light
Sushanthi Poovendhan, Huai-Ju Chen, Hsu-Liang Hsieh (Institute of Plant Biology, College of Life Science, National Taiwan University, Taipei, Taiwan)
- IP127 Effects of Light on Lateral Root Nutritropism of Nipponbare
Hasan Mehraj, Kiyoshi Yamazaki, Toru Fujiwara (Lab of Plant Nutrition and Fertilizer, School of Agriculture and Life Sciences, The University of Tokyo)
- IP128 Identification and functional studies of ubiquitin E3 ligases responsible for FIN219-regulated degradation of GUS-CCT1 proteins in response to blue light
Wei Lee, Hsu-Liang Hsieh (National Taiwan University Institute of Plant Biology)
- IP129 Functional Study of FIN219 and NPH3 Interaction in Arabidopsis Phototropism
Chia-Cheng Yen, Hsu-Liang Hsieh (National Taiwan University Institute of Plant Biology)
- IP130 Phosphoproteomic identification of novel phototropin phosphorylation substrates
Natsune Yukawa¹, Rio Goto², Saashia Fuji¹, Hinano Takase³, Hassan Nadeem⁴, Diwakar Shukla⁴, Taishi Umezawa³, Atsushi Takemiya¹ (¹Grad. Sch. Sci. Tech. Yamaguchi Univ., ²Fac. Sci. Yamaguchi Univ., ³Grad. Sch. BASE, Tokyo Univ. Agri. Tech., ⁴Dept. Bioeng., UIUC)
- IP131 Phosphorylation of a sucrose phosphate synthase by the group B4 Raf-like kinase MpPRAF in *Marchantia polymorpha*
Hayato Watanabe¹, Shota Yamauchi¹, Akida Jahan¹, Hinano Takase², Kota Yamashita², Taishi Umezawa², Ryuichi Nishihama¹ (¹Dept. Appl. Biol. Sci., Fac. Sci. Tech., Tokyo Univ. Sci., ²Grad. Sch. BASE, Tokyo Univ. Agri. and Tech.)
- IP132 Analysis of phosphorylation of translation initiation factor-binding proteins by the group B4 Raf-like kinase MpPRAF in *Marchantia polymorpha*
Tomohiro Kanazawa¹, Shota Yamauchi¹, Akida Jahan¹, Eri Koide², Takayuki Kohchi², Ryuichi Nishihama¹ (¹Dept. Appl. Biol. Sci., Fac. Sci. Tech., Tokyo Univ. Sci., ²Grad. Sch. Biostudies., Kyoto Univ.)
- IP133 An Inexpensive Benchtop Solar Simulator for the Study of Phototropism in Plants and Algae
Andy Crofts^{1,2}, Chizuru Honda¹ (¹Akita International University, Department of International Liberal Arts, ²Akita Prefectural University, Department of Biological Production)

■ Environmental response A/Physiological responses

- IP134 The effects of environmental pH on nutritropism
Haruki Murata (Graduate School of Agricultural and Life Sciences, The University of Tokyo)
- IP135 Molecular mechanisms in the root gravitropism regulation of the Brassinosteroids signaling factor BIL8
Kaname Narumi¹, Ayumi Yamagami¹, Shinn Suzuki¹, Tadao Asami², Takeshi Nakano¹ (¹Grad. Sch. Biostudies, Kyoto Univ., ²KIBR, Yokohama City Univ)
- IP136 **P** Mutation of a Ribosomal Protein (UL13X) Mediated Root Growth Defects under Calcium Deficiency in *Arabidopsis thaliana*
Yicong Chen¹, Arpna Kumari¹, Hirofumi Fukuda^{1,2}, Naoyuki Sotta^{1,3}, Toru Fujiwara¹ (¹The Faculty of Agriculture, The University of Tokyo, ²National Agriculture and Food Research Organization, ³Department of Agricultural Biology, Osaka Metropolitan University)
- IP137 Genome-wide association study of the leaf area-to-shoot biomass ratio in Arabidopsis in response to foliar-applied urea
Kosuke Matsuo^{1,2}, Raj Kishan Agrahari², Toru Fujiwara², Takehiro Kamiya² (¹Tokyo College of Biotechnology, ²Department of Applied Biological Chemistry, The University of Tokyo, Japan)
- IP138 **P** Effect of High pH on Iron Acquisition in Rice
Tomoki Okamura¹, Keita Takahashi¹, Akiko Watanabe², Sayaka Kudo², Yuta Hasegawa², Seiji Nagasaka^{1,2} (¹Grad. Sch. Life Sci., Toyo Univ., ²Dept. Life Sci., Toyo Univ.)

- IP139 **P** Analysis of light- and photosynthesis-dependent phosphorylation of plasma membrane H⁺-ATPase in plant
Xin Yu¹, Toshinori Kinoshita^{1,2} (¹Graduate School of Science, Nagoya University, ²Institute of Transformative Bio-Molecules, Nagoya University)
- IP140 Light-off signals flower-opening in the night-blooming Ipomoea nil QX909
Sumiko Kaihara¹, Soya Nakaga², Eiji Nitasaka³ (¹blank, ²Fac. Agr., Niigata-U, ³Fac. Sci., Kyushu-U)
- IP141 Enhancement of lettuce growth by lighting control synchronized with lunar rhythm
Kyosuke Kawai (TOYOTA BOSHOKU CORPORATION)
- IP142 Functional characterization of plasma membrane H⁺-ATPase in guard cells using GFP-tagged AHA1
Takeharu Koyasu¹, Koji Takahashi¹, Kohei Fukatsu¹, Yutaka Kodama², Toshinori Kinoshita^{1,3} (¹Grad. Sch. Sci., Nagoya Univ., ²C-Bio, Utsunomiya Univ., ³ITbM, Nagoya Univ.)
- IP143 S-Glutathionylation of Histone H2B At Cys⁴⁰ Regulates SPL-Dependent Flowering via BZR1–PIF4 Signaling in *Oncidium* Under High Ambient Temperature
Senthil Kumar Rajendran^{1,2}, Kai-Wun Yeh², Ching-Hui Yeh¹ (¹Department of Life Science, National Central University, Zhongli, Taoyuan, Taiwan R.O.C, ²Institute of Plant Biology, National Taiwan University, Taipei, Taiwan R.O.C)
- IP144 **P** Analysis on the circadian oscillatory mechanism independent of the KaiC phosphorylation rhythm
Maho Arakawa¹, Yoriko Murayama¹, Daichi Itaki¹, Kumiko Miwa², Moe Mimura¹, Remi Kameshima¹, Yohko Kitayama², Takao Kondo², Hideo Iwasaki¹ (¹Grad. Sch., Adv. Sci., Waseda Univ., ²Grad. Sch. Sci., Univ. Nagoya)
- IP145 Regulation of Autophagic Activity in Response to Nitrate Signaling in *Arabidopsis*
Daiki Shinozaki, Shuichi Yanagisawa (Agro-Biotechnology Res., Grad. Sch. Agri. Life Sci., Univ. Tokyo)

■ Environmental response B/Environmental stresses

- IP146 *Marchantia polymorpha* partially relies on MpRAD51B to maintain resistance to DNA-damaging treatments
Mika Teranishi¹, Ayako Sakamoto² (¹Graduate School of Life Sciences, Tohoku University, ²Department of Quantum-Applied Biosciences, QST)
- IP147 Role of protein disulfide isomerase PDII;1 in actin structures in *Oryza sativa* root cells
Yayoi Onda¹, Suzuka Otagawa², Tomoya Okino², Daiki Nagata² (¹Grad. Sch. Agr., Ehime Univ., ²Fac. Agr., Ehime Univ.)
- IP148 Prediction of the higher-order structure of Strontium transport proteins in *Arabidopsis thaliana*
Takeshi Nagata, Icchi Nakagawa, Mio Onoe, Takanobu Sakamoto (Setsunan University)
- IP149 Analysis of Fe Accumulation and Localization By Ti in *Arabidopsis thaliana* For Lunar Agriculture
Kazuki Indo¹, Tokuma Oiwa², Takeshi Nagata² (¹setsunan univercity graduate school of science and engineering life science, ²setsunan univercity paculty of science and engineering)
- IP150 Increase Phosphorus Utilization Efficiency in *Synechocystis* sp. PCC 6803
Rinsei Negishi, Naohiro Hososaka, Tatsunori Hiyoshi, Norihiro Sato (Tokyo University of Pharmacy and Life Sciences)
- IP151 Strategy for Exploring *cis*-elements involved in water-responsive expression of *CYP707A3* in *Arabidopsis*
Chihiro Maruyama^{1,2}, Sotaro Katagiri¹, Chisato Oshima^{1,3}, Yuri Kanno¹, Yumiko Takebayashi¹, Keisuke Fujiyama¹, Yuanjie Weng¹, Tetsuo Kushiro³, Masanori Okamoto^{1,2} (¹RIKEN • CSRS, ²Yokohama City Univ., ³Meij Univ.)
- IP152 Role of Mycosporine-like Amino Acids in Salt Stress Tolerance Mechanisms of Cyanobacteria
Tomoki Tsuboi, Hakuto Kageyama (Grad. Sch. Env. Hum. Sci. Meijo Univ.)
- IP153 **P** The temperature-dependent diversity of photosynthetic activity in bryophytes
Shoma Yoshimoto¹, Fumino Maruo², Makiko Kosugi³, Satoshi Imura^{4,5}, Chihiro Azai¹ (¹Faculty of Science and Engineering, Chuo Univ., ²New Field Pioneering Div. Toyota Boshoku Corp., ³National Institute for Basic Biology, ⁴National Institute of Polar Research, ⁵The Graduate University for Advanced Studies (SOKENDAI))
- IP154 Cysteine-rich peptide that regulates salt-induced xylem gap formation
Yu Okumura¹, Naoyuki Uchida² (¹Grad. Sch. Sci., Nagoya Univ., ²Ctr. Gene Res., Nagoya Univ.)
- IP155 Analysis of stress granule formation in *Arabidopsis* heat shock factor mutants
Yuzuki Nishi¹, Shiyu Shimoyama¹, Mei Ichikawa², Yukiko Yamamoto², Takahito Takei^{2,3}, Nobutoshi Yamaguchi⁴, Takahiro Hamada^{1,2} (¹Grad. Sch. Sci. and Eng., Okayama Univ. of Sci., ²Fac. of Sci., Okayama Univ. of Sci., ³BPRC, AIST, ⁴Grad. Sch. Sci. and Tec., NAIST)

- IP156 Galactolipid synthesis suppress cell death under zinc starvation
Kanato Ohe¹, Yoichiro Fukao¹, Yushi Yoshitake² (¹Grad. Sch. Life Sci., Ritsumeikan Univ, ²Sch. Life Sci., Ritsumeikan Univ)
- IP157 **P** BGLU18, a β -glucosidase for rapid ABA production, triggers early stress responses in *Arabidopsis*
Yutong Song, Yuma Mitsuzono, Hiroshi Shimada, Atsushi Sakamoto (Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)
- IP158 Isolation and Functional Analysis of Novel Regulators of Abscisic Acid (ABA) Biosynthesis by Novel Screening which isolates transcriptional complexes on a specific promoter *in planta*
Tomoki Kuribayashi¹, Hikaru Sato^{1,2}, Satoru Fujimoto³, Kazuo Shinozaki², Sachihito Matsunaga¹ (¹Grad. Sch. Frontier Sci., Univ. Tokyo, ²RIKEN, CSRS, ³Tokyo Univ. of Sci., Dept. of Appl. Biol. Sci.)
- IP159 Cross-species analysis of ABA-induced phosphosignaling landscapes in rice, soybean, and *Arabidopsis*
Hinano Takase¹, Sotaro Katagiri², Takuma Ide¹, Aina Nagano¹, Haruki Sakurai³, Hana Kokubo⁴, Taiki Yanagisawa⁴, Masanori Okamoto², Taishi Umezawa^{1,3,4} (¹Graduate School of Bio-Applications and Systems Engineering, Tokyo University of Agriculture and Technology, ²RIKEN Center for Sustainable Resource Science (CSRS), ³Graduate School of Advanced Interdisciplinary Science, Tokyo University of Agriculture and Technology, ⁴Faculty of Agriculture, Tokyo University of Agriculture and Technology)
- IP160 Evaluation of soybean drought response using the Crop-Type automated phenotyping system CRIPPS
Miki Fujita¹, Yukari Nagatoshi², Yasunari Fujita^{2,3}, Kazuo Shinozaki¹ (¹RIKEN CSRS, ²JIRCAS, ³Tsukuba U.)
- IP161 **P** Low Concentration Ethanol Enhances Growth and Yield in Soybean: Evidence of Genotype Dependent Chemical Priming
Selwan Abdelhakam¹, Islam Abdellatif², Saki Igarashi¹, Daisuke Todaka³, Motoaki Seki^{3,4}, Kenji Miura^{1,2} (¹Degree Program in Life and Earth Sciences, University of Tsukuba, ²University of Tsukuba, ³Tsukuba-Plant Innovation Research Center, University of Tsukuba, ⁴Plant Genomics Network Research Team, RIKEN Center for Sustainable Resource Science, ⁴Kihara Institute for Biological Research, Yokohama City University)
- IP162 **P** Mutation on *Co-chaperonin10* (*Os07g0641700*) enhance susceptibility to root heat stress in rice Koshihikari (*Oryza sativa L.*)
Mel Anthony Talavera^{1,2}, Sachiko Funayama-Noguchi², Yoshihiro Ohmori³, Takehiro Kamiya², Toru Fujiwara² (¹Grad. Sch. Univ. Tokyo, ²Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo, ³Agricultural Bioinformatics Research Unit, Graduate School of Agricultural and Life Sciences, The University of Tokyo)
- IP163 **P** Small Disordered Proteins Enable Rapid Cellular Protection Against Cold Stress
Arriel Fadhilah¹, Yutaro Okumura¹, Shin-ichiro Kidou^{1,2} (¹Graduate School of Science, Nagoya City University, ²Research Center for Biological Diversity, Nagoya City University)
- IP164 Physiological Effects of Long-term High Temperatures and High Humidity Conditions on *Solanum lycopersicum* cv. Micro-Tom
Takumi Morokuma¹, Lia Ooi^{1,2} (¹Research, Technology & Value Creation Division, Nagase Viita Co., Ltd., ²Faculty of Environmental, Life, Natural Science and Technology, Okayama Uni., Japan)
- IP165 The GREK receptor-like kinase family defines the leaf senescence window in *Arabidopsis*
Asuka Higo¹, Tamami Kamiya², Naoyuki Uchida¹ (¹Center for Gene Research, Nagoya Univ., ²Grad. Sch. Sci., Nagoya Univ.)
- IP166 Analyses of cell wall-related and disease-responsive gene mutants in low-calcium-induced cell death in *Arabidopsis*
Koharu Yamada, Akihiro Saito, Kyoko Higuchi, Yusuke Shikanai (Facl. Appl. Biosci., Tokyo Univ. Agri.)
- IP167 Rice Responses to Acidic Stress Revealed by Transcriptome–Metabolome Integration and Functional Validation of Key Stress-Induced Metabolites
Ching-Yao Liu, Hao-Jen Huang (Department of Life Sciences, National Cheng Kung University)
- IP168 Functional Analysis of the Glutamate Receptor-Like (GLR) Ion Channel in *Marchantia polymorpha* and its Role in Ca²⁺ Signaling
Kyoka Hashinishi¹, Yuki Kamiya¹, Yushin Tsuruda¹, Yu Iwamoto¹, Kenshiro Watanabe¹, Kenji Hashimoto¹, Daisuke Yamada², Akiyoshi Saitoh², Kazuyuki Kuchitsu¹ (¹Department of Biological Sciences, Tokyo University of Science, ²Faculty of Pharmaceutical Sciences, Tokyo University of Science)
- IP169 Large-scale salt tolerance evaluation and population genetic analysis using *Arabidopsis thaliana* accessions
Yuki Harada¹, Kousuke Hanada², Izumi Yotsui¹, Yoichi Sakata¹, Teruaki Tajiri¹ (¹Dept. of Biosci., Tokyo Univ. of Agri, ²Dept. Biosci. Bioinfo., Kyutech)
- IP170 **P** A novel quinone inhibitor suppresses haustorium induction in Orobanchaceae parasitic plants
Saori Suga¹, Ryoga Inoue¹, Shogo Wada¹, Yumiko Shirano², Natsumi Aoki¹, Anuphon Laohavisit², Takamasa Suzuki³, Ayato Sato^{2,4}, Satoko Yoshida¹ (¹Bioscience., NAIST, ²ITbM., Univ. Nagoya, ³Grad. Biological Chemistry., Univ. Chubu, ⁴COMIT., Univ. Nagoya)

- IP171 Relationship between high-pH responsive *NRT2* expression in root tips and root elongation maintenance in barley under high-pH conditions
Taiga Hosono, Yusuke Shikanai, Akihiro Saito, Kyoko Higuchi (Tokyo Univ. Agri.)
- IP172 Functional analysis of *Arabidopsis* GRF6 that represses drought stress responses
Akari Umezawa¹, Junki Maeya¹, Ami Omata¹, Fuminori Takahashi^{1,2} (¹Grad. Sch. Fac. Adv. Eng., TUS, ²Fac. Adv. Eng., TUS)
- IP173 Functional analysis of *Arabidopsis* *NADK2* gene in response to water stress
Akiyoshi Kawaoka¹, Ryosuke Hashimoto², Satoshi Kidokoro¹, Keishi Osakabe², Yuriko Osakabe¹ (¹Sch. of Life Sci. & Tech., Inst. of Sci. Tokyo, ²Grad. Sch. of Tech., Ind. & Soc. Sci., Tokushima Univ.)
- IP174 **P** *Marchantia Polymorpha* Heat Shock Transcription Factor B Orchestrates Transcriptional Networks for Land Plant Adaptation
Huan-Chi Tien^{1,2,3,4}, Thalimaraw Lavakau¹, Kuan-Hung Lin¹, Ming-Ren Yen¹, Hsiu-Ru Yang¹, Ting-Ying Wu^{1,2,3,4} (¹Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan, ²Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, Chung-Hsing University and Academia Sinica, Taipei, Taiwan, ³Graduate Institute of Biotechnology, National Chung-Hsing University, Taichung, Taiwan, ⁴Biotechnology Center, National Chung-Hsing University, Taichung, Taiwan)
- IP175 Effects of Presence or Absence of Bicarbonate Ion on Rice Responses to Saline-Alkaline Stress and Functional Analysis of the Cation/H⁺ Exchangers OsCHX11 and OsCHX16
Mami Nampei, Daichi Toyama, Mitsuki Kondo, Akihiro Ueda (Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)
- IP176 Role of the HOMEODOMAIN GLABROUS in the DNA damage response in *Arabidopsis*
Toshiki Wada, Naoki Takahashi (Grad. Sch. Agri., Meiji Univ.)
- IP177 Role of gibberellin catabolism in stem cell regeneration in *Arabidopsis* roots
Miyu Isozaki, Toshiki Wada, Naoki Takahashi (Sch. Agri., Meiji Univ.)
- IP178 **P** Roles of acylplastoquinone species in the cyanobacterium *Synechocystis* sp. PCC 6803
Mizuki Endo, Yunosuke Suzuki, Norihiro Sato (Tokyo University of Pharmacy and Life Sciences)
- IP179 **P** Rice Reproductive RNA Mechanisms in Response to Environmental Stress
Ryusei Sone^{1,2}, Reina Komiya¹ (¹RIKEN, CSRS, ²The University of Tokyo, Graduate School of Agriculture and Life Sciences)
- IP180 **P** Ecotype-Specific Sensitivity to DNA Methylation Inhibitors in *Arabidopsis*
Xin Sun, Hidetaka Ito, Atushi Kato (Hokkaido University, Morphology and Function Laboratory III)
- IP181 **P** Salt-Driven Cell Cycle Activation in Synchronized Cells of *Mesembryanthemum crystallinum*
Phan Thuy Tien Nguyen¹, Yuri Kondo¹, Sakae Agarie² (¹Graduate School of Bioresource and Bioenvironmental Sciences, Kyushu University, 744, Motooka, Nishi-ku, Fukuoka 819-0395, Japan, ²Faculty of Agriculture, Kyushu University, W5-444, 744, Motooka, Nishi-ku, Fukuoka 819-0395, Japan)
- IP182 Screening CRISPR-Edited Plant Biosensors of Detecting Phosphate Deficiency
Ming-Liang Yeh¹, Chin-Wen Chiu², Tat-Heng Lam², Choun-Sea Lin³, Chiu Chi-Chou¹, Ming-Jung Liu^{1,2} (¹Institute of Tropical Plant Sciences and Microbial Biology, NCKU, Tainan, Taiwan, ²Biotechnology Center in Southern Taiwan, Academia Sinica, Tainan, Taiwan, ³Agricultural Biotechnology Research Center, Academia Sinica, Taipei, Taiwan)
- IP183 **P** Identification of Transcription Factors for CAM Carbon Fixation Genes
Yuri Kondo¹, Tien Nguyen Phan Thuy¹, Sakae Agarie² (¹Graduate School of Bioresource and Environmental Sciences, Kyushu University, ²Graduate School of Agriculture, Kyushu University)
- IP184 **P** SALT OVERLY SENSITIVE 1 Na⁺/H⁺ antiporter operates in mature root zone and is a major contributor to root Na⁺ exclusion
Tomoki Nagata¹, Ryohei Sugita², Takaaki Ogura¹, Natsuko I. Kobayashi¹, Yuko Kurita¹, Lana Shabala³, Sergey Shabala³, Keitaro Tanoi^{1,4} (¹Grad. Sch. Agr. & Life Sci., Univ. Tokyo, ²Radioisotope Res. Ctr., Nagoya Univ., ³Sch. Biol. Sci., Univ. Western Australia, ⁴Fukushima Inst. Res., Educ. & Innov. (F-REI))
- IP185 **P** Elucidation of mechanisms underlying plant response to heat-drought combination regulated by ELM2-Domain Protein in *Arabidopsis*
Rita Rose Chacko¹, Mai Nagaya¹, Hee Yong Lee¹, Nobuhiro Suzuki² (¹Grad. Sch. Sci. Tech. Sophia. University, ²Fac. Sci. Tech. Sophia University)
- IP186 **P** Desiccation-induced dynamics of free water in bryophytes
Miyu Tanabe¹, Fumino Maruo², Makiko Kosugi³, Satoshi Imura^{4,5}, Chihiro Azai¹ (¹Faculty of Science and Engineering, Chuo Univ., ²New Field Pioneering Div. Toyota Boshoku Corp., ³National Institute for Basic Biology, ⁴National Institute of Polar Research, ⁵The Graduate University for Advanced Studies (SOKENDAI))

- 1P187 **P** Mechanistic Analysis of *ONSEN* Activation under Heat Stress and Identification of Novel Transcriptional Regulators
Zhiyu Ge¹, Hidetaka Ito² (¹Grad. Sch. Life Sci., Hokkaido Univ., ²Grad. Sch. Sci., Hokkaido Univ.)
- 1P188 **P** *Serendipita indica* volatiles mitigate cadmium uptake and toxicity in Plants
Naresh Singh Yengkhom^{1,2} (¹Academia Sinica, Biotechnology Center in Southern Taiwan, ²National Cheng Kung University, NCKU-AS Graduate School of Bioscience and Biotechnology)
- 1P189 **P** Enhancing tomato quality, high sugar content and GABA accumulation, with mutations in *ESKs* and *GAD3* genes
Seungje Choi¹, Takeru Iwama¹, Misaki Kobayashi¹, Abdellatif Islam^{1,2}, Hiroshi Ezura^{1,2}, Kenji Miura^{1,2} (¹Grad. Sci. Life & Earth Sci., Univ. Tsukuba, ²Tsukuba-Plant Innovation Research Center)
- 1P190 **P** **Isolation and Identification** of halotolerant-PGPR enhancing salt tolerance of *Arabidopsis*
Hibiki Watanabe¹, Kousuke Yamamoto², Izumi Yotsui¹, Yoichi Sakata¹, Teruaki Taji¹ (¹Dept. of Biosci., Tokyo Univ. of Agri, ²Dept. of Microbio., Tokyo Univ. of Agri)
- 1P191 **P** Cyanobacterium *Synechococcus elongatus* PCC 7942 forms cellulosic biofilm by induction of a diguanylate cyclase from *E. coli*
Chihiro Yamaguchi, Jiro Mori, Robert Kanaly, Shinsuke Kutsuna (Grad. Sch. Nanobiosci., Yokohama City Univ.)
- 1P192 **P** DE-ETIOLATED1 Mediates Non-Photochemical Quenching and Transposon Activation in *Chlamydomonas reinhardtii*
Koseki Yamada^{1,2}, Konomi Fujimura-Kamada¹, Katsushi Yamaguchi³, Shuji Shigenobu³, Jun Minagawa^{1,2} (¹Department of Environmental Photobiology, National Institute for Basic Biology, ²Basic Biology Course, The Graduate University for Advanced Studies, SOKENDAI, ³Trans-Omics Faculty, National Institute for Basic biology)
- 1P193 ROS regulatory systems are involved in regulating memory of 5-min heat stress in *Arabidopsis thaliana*
Nobuhiro Suzuki¹, Chinatsu Sumi², Rio Shimizu², Makoto Fujiwara¹ (¹Fac. Sci. Tech., Sophia University, ²Grad. Sch. Sci. Tech., Sophia University)

■ Plant-organism interaction

- 1P194 **P** Identification of host factors targeted by Type III effector hopR1 from *Pseudomonas syringae* pv. *tabaci* 6605
Kana Kuroe¹, Nanami Sakata¹, Yoshiteru Noutoshi¹, Kazuhiro Toyoda¹, Hirofumi Nakagami², Yuki Ichinose¹, Hidenori Matsui¹ (¹Grad. Environ. & Life Sci., Okayama Univ., ²MPIPZ)
- 1P195 **P** A Protease-like Effector Mediates Maize Susceptibility to Smut Fungi
Minh-Quang Chau^{1,2,3}, Lay-Sun Ma^{1,2,4} (¹Institute of Plant and Microbial Biology, Academia Sinica, Taipei 11529, Taiwan, ²Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, National Chung Hsing University and Academia Sinica, Taipei 11529, Taiwan, ³Graduate Institute of Biotechnology, National Chung-Hsing University, Taichung 402, Taiwan, ⁴Biotechnology Center, National Chung Hsing University, Taichung 402, Taiwan)
- 1P196 **P** Convergent evolution of phytoalexin-responsive mechanisms in independently evolved broad host-range fungal pathogens
Akira Ashida, Minami Kawashima, Teruhiko Kuroyanagi, Makoto Ojika, Ikuo Sato, Sotaro Chiba, Daigo Takemoto (Grad. Sch. Bioagr. Sci., Nagoya Univ.)
- 1P197 **P** Tryptophan metabolism mediates local and systemic suppression of the potential virulence of *Arabidopsis* root endophyte *Colletotrichum tofieldiae*
Ren Ujimatsu¹, Paweł Bednarek², Kei Hiruma¹ (¹Grad. Sch. Art. and Sci., UTokyo, ²IBCH, PAS)
- 1P198 **P** Collaborative Regulation of PR1 Processing by Apoplastic Proteases Balances Growth and Immunity in Maize
Yu Han Lin^{1,2}, Lay-Sun Ma¹ (¹Institute of Plant and Microbial Biology, Academia Sinica, ²Institute of Plant Biology, National Taiwan University)
- 1P199 **P** Disarming Plant Ros-Mediated Defenses: The Filament Associated Effector Face1 in *Ustilago Maydis* Virulence
Neelima Chandrasekharan^{1,2,3}, Lay-Sun Ma^{1,2,4} (¹Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan, ²Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, Chung-Hsing University and Academia Sinica, Taipei, Taiwan, ³Graduate Institute of Biotechnology, National Chung-Hsing University, Taichung, Taiwan, ⁴Biotechnology Center, National Chung-Hsing University, Taichung, Taiwan)
- 1P200 **P** Hunting for oxidatively modified proteins involving in plant immune responses by redox proteomics
Yuta Hino¹, Miki Yoshioka¹, Akira Ashida¹, Maurizio Camagna¹, Daigo Takemoto¹, Kenya Tanaka², Hirofumi Yoshioka¹ (¹Grad. Sch. Bioagr. Sci., Nagoya Univ., ²EGBRC, Kobe Univ.)
- 1P201 **P** Investigating Potential Roles Of VIP3, TSN1/2 For Viral Defense And RNA Silencing In *Arabidopsis Thaliana*
Liang-He Chen, Jia-Zhen Yu, Shih-Shun Lin (Institute of Biotechnology, National Taiwan University)

- 1P202 **P** Atypical E2F Transcription Factor Regulates Jasmonic Acid Signaling
Pertunia Nomezbe Nxumalo¹, Yi-Ting Chen¹, Nguyen Thanh Hai Nguyen¹, Ming-Tsair Chan², Masaru Ohme-Takagi¹ (¹National Cheng Kung University, ²ABRC, Academia Sinica)
- 1P203 **P** Possible involvement of retrograde signaling in SALICYLIC ACID INDUCTION DEFICIENT2-mediated plant immunity
Tsuyoshi Kitada¹, Wakana Harada², Ai Obayashi², Shunsuke Masuo³, Shigeyuki Betsuyaku² (¹Grad. Sch. Agr., Ryukoku Univ., ²Fac. Agr., Ryukoku Univ., ³Fac. of Life & Env. Sci./MiCS, Univ. of Tsukuba)
- 1P204 **P** Effects of growth-phase-dependent metabolisms in *Pseudomonas* sp. Y132 on duckweed growth
Tomoya Nozaki¹, Masahiro Okanami², Makoto Kashima³, Shogo Ito¹, Tokitaka Oyama¹ (¹Grad. Sch. Sci., Univ. Kyoto, ²Grad. Sch. BOST, Univ. Kindai, ³Fac. Sci., Univ. Toho)
- 1P205 Identification of marker genes for root nodule senescence in *Lotus japonicus*
Seitaro Okuhira, Toshiki Uchiumi, Mitsutaka Fukudome (Grad. Sch. Sci and Eng., Univ. Kagoshima)
- 1P206 **P** Potential Cross-species Signaling via Small RNA Between the Hemiparasite *Phtheirospermum japonicum* and Its Host *Arabidopsis thaliana*
Xin Li¹, Allison Vanek^{2,3}, Michael Axtell^{2,3}, Satoko Yoshida¹ (¹Grad. Sch. Sci., Nara Institute of Science and Technology, Nara, Japan, ²Huck Institutes of the Life Sciences, The Pennsylvania State University, University Park, Pennsylvania, United States of America, ³Department of Biology, The Pennsylvania State University, University Park, Pennsylvania, United States of America)
- 1P207 Functional contribution of bacterial *NIF* gene clusters in plant-growth-promoting *Sphingomonas*–rice interactions
Fumiaki Inoue, John Jewish A. Dominguez, Kanako Inoue, Yusuke Saijo (Grad. Sch. Sci and Tech., NAIST)
- 1P208 **P** Root exudate-mediated promotion of root colonization by a rice plant growth-promoting bacterium
Masahiro Nagayasu, Kanako Inoue, John Jewish A. Dominguez, Mutsumi Watanabe, Takayuki Tohge, Yusuke Saijo (Division of Biological Science, Nara Institute of Science and Technology (NAIST))
- 1P209 **P** Profiling changes in soil nitrogen-cycling microbiomes following application of peptide-based biostimulants across different nitrogen input levels
Chu-Chun Lin¹, Nai-Hua Ye³, Ming-Yuan Lee³, Chao-Li Huang^{1,2} (¹NCKU-AS Graduate-Program in Translational Agriculture Sciences, NCKU, Taiwan, ²Institute of Tropical Plant Sciences and Microbiology, NCKU, Taiwan, ³Ch Biotech R&D Co., Ltd)
- 1P210 N-Glycosylation Fine-Tunes Smut Fungal Effector-PMEI Interactions in a Coevolutionary Arms Race
Chibbhi Kumarasamybaskar^{1,2,3}, Ee Yang Teoh¹, Minh-Quang Chau^{1,2,3}, Wei-Lun Tsai¹, Ooi-Kock Teh¹, Lay-Sun Ma^{1,2,4} (¹Institute of Plant and Microbial Biology, Academia Sinica, Taipei 11529, Taiwan, ²Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, National Chung Hsing University and Academia Sinica, Taipei 11529, Taiwan, ³Graduate Institute of Biotechnology, National Chung-Hsing University, Taichung 402, Taiwan, ⁴Biotechnology Center, National Chung Hsing University, Taichung 402, Taiwan)
- 1P211 Postfire resilience of soil bacterial communities in two *Pinus* species with contrasting fire adaptations
Yen-Ju Chen¹, Ching-An Chiu², Chao-Li Huang^{1,3} (¹Institute of Tropical Plant Sciences and Microbiology, National Cheng Kung University, Tainan, Taiwan, ²Department of Forestry, National Chung Hsing University, Taichung, Taiwan, ³Graduate Program in Translational Agricultural Sciences, National Cheng Kung University and Academia Sinica, Taiwan)
- 1P212 Soil Microbiome and Physiological Responses of Flint Corn to Swine Wastewater Irrigation
Zongyi Lin¹, Hao-Jen Huang², Chao-Li Huang^{1,3} (¹Institute of Tropical Plant Sciences and Microbiology, National Cheng Kung University, Tainan, Taiwan, ²Department of Life Sciences, National Cheng Kung University, Tainan, Taiwan, ³Graduate Program in Translational Agricultural Sciences, National Cheng Kung University and Academia Sinica, Taiwan)
- 1P213 System for direct evaluation of combined metal stress and herbivory responses in isolated rice leaves
Kidest Ameha Abebe, Yuko Hojo, Tomonori Shinya, Ivan Galis (Institute of Plant and Resource Sciences, Okayama University)
- 1P214 Investigate the role of Actin in Plant Immunity
Hsuan-Yu Pan, Yi-Ju Lu (National Taiwan University)
- 1P215 Insect gut bacteria-produced β -1,4-galactooligosaccharides elicit defense responses in rice
Tomonori Shinya¹, Toshihisa Kotake², Yuka Fujiwara¹, Yuko Hojo¹, Kiwamu Hyodo¹, Akio Tani¹, Yoshihisa Yoshimi^{2,3}, Tatsuya Fujiki⁴, Raja Hasnain Ahmad⁴, Toshiki Nokami⁴, Hanae Kaku⁵, Naoto Shibuya⁵, Ivan Galis¹ (¹IPSR, Okayama Univ., ²Grad. Sch. Sci. Eng., Saitama Univ., ³Fac. Biology-Oriented Sci. Technol., Kindai Univ., ⁴Fac. Eng., Tottori Univ., ⁵Sch. Agri., Meiji Univ.)
- 1P216 Inactivated *Bacillus thuringiensis* BtHS1 Remnants Enhance Ferredoxin-Mediated Resistance to *Colletotrichum* spp. in Tomato
Jia Ying Lin (Dept. Life Sci., Natl. Taitung Univ.)

- 1P217 Systematic analysis of c-di-GMP catalytic proteins reveals differential regulation in virulence and interbacterial competition in phytopathogen *Agrobacterium*
Xuan Lai^{1,2}, Chiu-Ping Cheng², Erh-Min Lai¹ (¹Institute of Plant and Microbial Biology, Academia Sinica, ²Institute of Plant Biology, National Taiwan University)
- 1P218 Analysis of transcriptomic response of Arabidopsis roots to interaction with endophytes
Tomasz Oleszkiewicz¹, Subhankar Bera¹, Atsushi J. Nagano^{2,3}, Rafał Ważny¹, Piotr Rozpądek¹, Kenji Yamada¹ (¹MCB, Jagiellonian Univ., ²BBC, Nagoya Univ., ³IAB, Keio Univ.)
- 1P219 Impact of *Rhodopseudomonas palustris* PS3 on tomato growth, soil health and soil microbiota composition
Sook-Kuan Lee¹, Ming-Shu Chiang², Zeng-Yei Hseu³, Chih-Horng Kuo⁴, Chi-Te Liu^{3,5,6} (¹Department of Horticulture, National Chung Hsing University, Taichung, Taiwan, ²Department of Agronomy, National Taiwan University, Taipei, Taiwan, ³Department of Agricultural Chemistry, National Taiwan University, Taipei, Taiwan, ⁴Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan, ⁵Institute of Biotechnology, National Taiwan University, Taipei, Taiwan, ⁶Agricultural Biotechnology Research Center, Academia Sinica, Taipei, Taiwan)
- 1P220 Structural Alterations in PR1 Result in Functional Diversify
Chao Hsuan Yeh, YuHan Lin, Lay-Sun Ma (Institute of Plant and Microbial Biology)

■ Genome function/gene regulation

- 1P221 **P** Initial Characterization of Genes Potentially Responsible For Surface-Adhesion In Liquid Media And Gliding Motility In The Filamentous Cyanobacterium, *Leptolyngbya boryana*
Shu Ushio¹, Aimi Watanabe¹, Kotomi Takahashi¹, Keitaro Yashiro¹, Dai Okuyama¹, Kazama Toida¹, Takashi Shimokawa², Hideo Iwasaki^{1,3} (¹Grad. ASE., Univ. Waseda, ²Inst. Quantum Science and Technology, QST, ³metaPhorest)
- 1P222 Profiling of the HDL–HDA6–KYP module reveals its central role in heterochromatin organization during Arabidopsis silique development
Chia-Yang Chen, Chin-Min Ho (Institute of Plant and Microbial Biology, Academia Sinica)
- 1P223 Uncovering Agronomically Favorable Genotypes in Temperate *Japonica* Rice through Haplotype Analysis of a Japan-MAGIC population
Hirofumi Fukuda^{1,2}, Akari Fukuda², Toshihiro Sakamoto³, Yoshihiro Kawahara⁴, Ken Naito⁵, Taiji Kawakatsu^{6,7}, Jun-ichi Yonemaru^{1,2}, Daisuke Ogawa² (¹Res. Cen. Agri. Info. Tech., NARO, ²Inst. Crop. Sci., NARO, ³Inst. Agro-Env. Sci., NARO, ⁴Res. Cen. Adv. Anal., NARO, ⁵Res. Cen. Genet. Resour., NARO, ⁶Inst. Agrobio. Sci., NARO, ⁷RIKEN BRC)
- 1P224 Genome sequencing of Arabis stelleri, a sand beach-inhabiting species close to Arabidopsis
Tatsuaki Hirano¹, Kazuki Sugekawa¹, Kousuke Hanada², Yoshiharu Y. Yamamoto^{1,3,4} (¹Grad. Sch. Nat. Sci. Tech, Gifu Univ., ²Grad. Sch. Eng., Kyutech, ³Fac. Appl. Biol. Sci, Gifu Univ., ⁴RIKEN CSRS)
- 1P225 Genetic engineering of the enzymes involved in carotenoid biosynthesis in *Euglena*
Vicki Nishinarizki^{1,2}, Iman Permana Maksum^{2,3}, Shun Tamaki⁴, Anzu Minami^{1,5}, Keiichi Mochida^{1,5,6,7}, Toto Subroto^{2,3} (¹RIKEN, CSRS, ²Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran, ³Research Center for Molecular Biotechnology and Bioinformatics, Universitas Padjadjaran, ⁴Department of Biological Science, Faculty of Sciences and Engineering, Yasuda Women's, ⁵Kihara Institute for Biological Research, Yokohama City University, ⁶RIKEN BZP, ⁷School of Information and Data Sciences, Nagasaki University)
- 1P226 Functional Analysis of B1-RAF kinase in the moss *Physcomitrium patens*
Ibuki Shima, Izumi Yotsui, Teruaki Taji, Yoichi Sakata (Dept. Bioscience, Tokyo Univ. of Agriculture)
- 1P227 Live-cell imaging analysis of histone modification dynamics in *Arabidopsis thaliana*
Sora Oshima¹, Hikaru Sato¹, Megumi Matsuoka¹, Mio K. Shibuta², Takuya Sakamoto³, Nanami Ito¹, Tatsuaki Goh⁴, Yuko Sato⁵, Hiroshi Kimura⁶, Sachihiko Matsunaga¹ (¹Dept. Integrated Biosci., Grad. Sch. Frontier Sci., Univ. Tokyo, ²Fac. Sci., Yamagata Univ., ³Dept. Sci., Fac. Sci., Kanagawa Univ., ⁴Div. Biol. Sci., Grad. Sch. Sci. Tech., NAIST, ⁵MIB, Kyushu Univ., ⁶IIR, Science Tokyo)
- 1P228 Imaging analysis of histone acetylation in different cell types of *Arabidopsis thaliana*
Misaki Toriawa¹, Takuya Sakamoto¹, Shigeru Hanamata^{1,2}, Mio K. Shibuta³, Yuko Sato⁴, Hiroshi Kimura⁵, Sachihiko Matsunaga⁶ (¹Fac. Sci., Kanagawa Univ., ²Fac. Pharm. Sci., Tokyo Univ. Sci., ³Fac. Sci., Yamagata Univ., ⁴Med. Inst. Bioreg., Kyushu Univ., ⁵Cell Biol. Center, Instit. Innov. Res., Science Tokyo, ⁶Grad. Sch. Sci., Univ. Tokyo)

- 1P229 Effect of boron conditions on chromatin structures and gene expression profiles in *Arabidopsis* cultured cells
Ayane Komatsu¹, Shigeru Hanamata^{1,2}, Shimpei Uraguchi^{3,4}, Yudeki Nakamura³, Masako Kiyono³, Takuya Sakamoto¹ (¹Fac. Sci., Kanagawa Univ., ²Fac. Pharm. Sci., Tokyo Univ. Sci., ³Dep. Public Health., Sch. Pharm., Kitasato Univ., ⁴Grad Sch Hort, Chiba Univ.)
- 1P230 Functional Antagonism between JM27 and HDA6 in Regulating Flowering Time
Jyun-An Chang, Keqiang Wu (National Taiwan University Institute of Plant Biology)
- 1P231 **P** Regulation of flowering time by HAKAI, a component of the m⁶A writer complex
Takumi Noyori¹, Shusei Mori^{1,2}, Hiroshi Watanabe¹, Soichi Inagaki¹ (¹Dept. Biol. Sci., Grad. Sch. Sci., Univ. Tokyo, ²Dept. Plant Sci., Univ. Cambridge)
- 1P232 Elucidation of the Epigenetic Growth Control Mechanism of *met1* mutants
Hisashi Iitsuka, Yuho Itabashi, Naoya Sugi, Miyako Kusano, Hiroshi Shiba (Grad. Lif. Env. Sci., Univ. Tshukuba)
- 1P233 Functional analysis of endosperm-specific DNA methyltransferases in *Arabidopsis*
Hiroki Tsutsui, Hidetoshi Saze (Okinawa Institute of Science and Technology)
- 1P234 The Relationship Between DNA Methylation and Salt Stress Tolerance In *Arabidopsis*
Risa Kawashima, Sayaka Tominaga, Taiko To (Sch. Life Science and Technology., Science Tokyo)
- 1P235 **P** Functional Interaction of JM28 and GCN5 in Regulating ABA and Drought Responses
Wen-Chi Liao¹, Chin-Min Ho², Keqiang Wu¹ (¹Institute of Plant Biology, National Taiwan University, ²Institute of Plant and Microbial Biology, Academia Sinica)
- 1P236 **P** Transcriptome analysis reveals acid stress response and mitigation mechanisms in acid-tolerant and acid-sensitive tomatoes
Pei-Yu Su¹, Ching-Han Chang², Hao-Jen Huang^{1,2} (¹Dept. Life Sci., Natl. Cheng Kung Univ., ²Grad. Prog. Transl. Agric. Sci., Natl. Cheng Kung Univ. & Acad. Sinica)
- 1P237 Is JAH3 a novel corepressor? :Analysis of the negative regulation of JA–Ethylene responses
KwiMi Chung, Kouki Matsuo (AIST BPRC)
- 1P238 Genome-wide identification of NAC transcription factors associated with heat stress and fruit development in *Lycium barbarum*
Tai-Sheng Yen, Pin-Ci Yen, Wen-Lii Huang, You-Yi Chen (Department of Agronomy, National Chiayi University, Chiayi, Taiwan)
- 1P239 **P** BASIC PENTACYSSTEINES Modulate The Circadian Clock By Repressing The Evening Complex In *Arabidopsis*
Yi-Chen Lee, Shao-Chi Tsai, Yen-Jui Chang, Xun-Xian Huang, Huang-Lung Tsai (National Taiwan University)
- 1P240 Analysis of the *NRT1.3* promoter that confers epidermis-specific expression suppression in *Arabidopsis*
Shuta Yamamoto, Taku Takahashi (Grad. Sch. Env. Lif. Nat. Sci., Okayama Univ.)
- 1P241 Roles of alternative transcription start sites for regulation of xylem vessel cell differentiation
Yusei Yanagiya¹, Toshihiro Arae², Misato Ohtani^{1,2} (¹Grad. Sch. Front. Sci., Univ. Tokyo, ²Grad. Sch. Sci., Univ. Tokyo)
- 1P242 Development of efficient regeneration system for resource crops by transcriptional activation using CRISPR-dCas9
Jo Nishimura¹, Jun Sakaguchi¹, Miki Takehara¹, Satoshi Kidokoro¹, Keishi Osakabe², Yuriko Osakabe¹ (¹Sch. of Life Sci. & Tech., Science Tokyo., ²Grad. Sch. of Tech., Ind. & Soc. Sci., Tokushima Univ.)
- 1P243 **P** Pre-mRNA splicing regulates cellular dedifferentiation via lipid metabolism in a cytokinin-dependent manner in *Arabidopsis*
Ami Takeuchi¹, Toshiaki Ishikawa², Toshihiro Arae¹, Munetaka Sugiyama³, Misato Ohtani^{1,3,4,5} (¹Grad. Sch. Front. Sci., Univ. Tokyo, ²Grad. Sch. Sci. Eng., Saitama Univ., ³Grad. Sch. Sci., Univ. Tokyo, ⁴Div. Bio. Sci., NAIST, ⁵CSRS, RIKEN)
- 1P244 Transcriptomic Rewiring Uncovers ATG8a-Dependent Viral Suppression of Light and miRNA Pathways by P1/HC-Pro^{Tu}
Phuong Anh Tran (National Taiwan University)
- 1P245 **P** AtMSRB5 stabilizes AHA through 14-3-3 ω to promote root growth
Freta Kirana Balladona^{1,2} (¹Graduate Program of Translational Agricultural Sciences, National Cheng Kung University, Taiwan, ²Academia Sinica-Biotechnology Center of Southern Campus, Agricultural Biotechnology Research Center, Taiwan)

■ Systems biology

- 1P246 **P** Construction of Sorghum Coexpression Data and Prospects for Integrating Epigenomics Variation
Daffa Akbar Aprilio¹, Akane Kitamura², Atsushi Okazawa³, Yutaka Tamaru^{4,5}, Takeshi Obayashi^{1,2} (¹Graduate School of Information Sciences, Tohoku University, ²Advanced Institute of Marine Ecosystem Change (WPI-AIMEC), Tohoku University, ³Department of Agricultural Biology, Graduate School of Agriculture, Osaka Metropolitan University, ⁴Green X-tech Research Center, Green Goals Initiative, Tohoku University, ⁵Department of Molecular Bioengineering, Graduate School of Engineering, Tohoku University)

- 1P247 **P** AI-based large-scale structural modeling integrated with multi-omics reveals candidate plant receptor–peptide interactions from *Pseudomonadales* microbiota
Miguelito Isip^{1,2}, Lai Loi Trinh¹, Ka-Wai Ma^{1,2} (¹Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan, ²Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, National Chung-Hsing University and Academia Sinica, Taipei, Taiwan)

■ New Technology

- 1P248 Cavity Imaging Tool (CavIT): a method for high-resolution analysis of substomatal airspaces in leaves
Wei-Han Fang¹, Tzu-Chuan Huang¹, Chun-Ping Yu², Chynthia Devi Hartono^{1,3}, Chin-Min Kimmy Ho¹ (¹Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan, ²Research Center for Information Technology, Academia Sinica, Taipei, Taiwan, ³Department of Chemical Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan)
- 1P249 Development of a Noninvasive and Rapid Imaging Method for Long-distance Protein Movement using Florigen as a case study
Kotaro Nishiyama¹, Haruka Kimura¹, Ayato Sato^{2,3}, Makoto Shirakawa⁴, Yoshiya Seto¹ (¹Sch. Agri., Meiji Univ., ²WPI-ITbM, Nagoya Univ., ³COMIT, Nagoya Univ., ⁴IPMB, Academia Sinica)
- 1P250 **P** To infinity and beyond: A novel agrobacterial strain allows transient expression and functional genomics research across plant lineages
Juan Carlos Lopez-Agudelo^{1,2,3}, Yueh-Ning Sweet¹, Wei-Jia Liu¹, May Htet Aung¹, Chih-Hang Wu^{1,2,4} (¹Institute of Plant and Microbial Biology, Academia Sinica, Taipei 115201, Taiwan, ²Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, National Chung Hsing University and Academia Sinica, Taipei 115201, Taiwan, ³Graduate Institute of Biotechnology, National Chung Hsing University, Taichung 402202, Taiwan, ⁴Biotechnology Center, National Chung Hsing University, Taichung 402202, Taiwan)
- 1P251 **P** Investigation of the causal genes in frequent T-DNA truncation in “Princettia” (*Euphorbia pulcherrima* x *Euphorbia coranstra*)
Koya Ito¹, Reiko Kogishi¹, Sayaka Shindo¹, Rina Shimo¹, Yukiko Shimbo¹, Maki Ohtsubo¹, Keisuke Matsui², Kenichi Suzuki², Koichi Tomomatsu², Norihiro Ohtsubo¹ (¹Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ., ²Suntory Flowers, Ltd.)
- 1P252 Development and use of cloning system for problematic genes
Yuta Iwamoto¹, Wang Junhao², Hideaki Nojiri², Takushi Hachiya¹, Yutaka Sato³, Kazunori Okada², Tsuyoshi Nakagawa¹ (¹Cent. Integ. Res. Sci., Shimane Univ., ²Agro-Biotech. Res. Cent. Grad. Sch. Agr. Life Sci., Univ. Tokyo, ³Plant Genet., Nat. Inst. Genet.)
- 1P253 Development of binary vectors enabling naked-eye visualization of T-DNA insertion in rice callus
Kiyoshi Yamazaki, Raj Kishan Agrahari, Toru Fujiwara (Grad. Sch. Agr. Life Sci., Tokyo Univ.)
- 1P254 A transcriptome-based pipeline for automated discovery of known and novel microRNAs in *Marchantia polymorpha*
Jia-Zhen Yu¹, Yu-Ling Hung¹, Chi-Ling Huang¹, Jia-Ling Guo¹, Sae Anada², Keisuke Inoue^{2,3}, Takashi Araki², Shih-Shun Lin¹ (¹Institute of Biotechnology, National Taiwan University, ²Graduate School of Biostudies, Kyoto University, ³CeLiSIS, Kyoto University)
- 1P255 Boosting CRISPR Power in Moss: Dual-gRNA and Polycistronic Designs Enable Large, Multiplex Gene Deletions
Elena Kozgunova^{1,2} (¹Graduate School of Science, Nagoya University, ²Institute for Advanced Research, Nagoya University)
- 1P256 High-Throughput Gene Knockout in *Nicotiana benthamiana* via TRV-Delivered CRISPR and Agrobacterium Infiltration
Ivan Wong (University of Illinois at Urbana Champaign)
- 1P257 Creation of double-petal *Cyclamen* by multiplex genome editing using CRISPR/Cas9
Satoru Komagata¹, Chisato Watarai¹, Kimiyo Sage-Ono¹, Masaki Endo², Seiichi Toki^{2,3}, Tsubasa Yano⁴, Teruhiko Terakawa⁴, Michiyuki Ono¹ (¹T-PIRC, Univ. Tsukuba, ²NIAS, NARO, ³Ryukoku Univ., ⁴Inplanta Innovations Inc.)

■ Bioresources

- 1P258 RIKEN BRC’s 2025 Progress in Collection, Distribution, and Quality Control of Plant Cell Resources
Toshihiro Kobayashi, Mayumi Sugawara, Yuri Shitomi, Mamiko Kouzai, Taiji Kawakatsu (RIKEN BRC)
- 1P259 Adding Bioresource Information to the RIKEN BRC Exp-Plant Catalog
Satoshi Iuchi, Taiji Kawakatsu (RIKEN BRC Experimental Plant Division)
- 1P260 The Influence of Environmental Education on Preferences for Plant Health Conditions
Ying-Chu Chen¹, Po-Ching Wang² (¹National Taiwan University, Department of Forestry and Resource Management, ²National Chiayi University, Department of Landscape Architecture)

■ Photosynthesis

- 2P001 Adaptation of energy transfer in red alga *Porphyridium Purpureum* to different green light intensities
Hidetaka Kurachi¹, Shimpei Aikawa², Seiji Akimoto¹ (¹Grad. Sch. Sci., Kobe Univ., ²JIRCAS)
- 2P002 Identification of key chlorophyll *a* molecules responsible for the 695 nm fluorescence emission in CP47 of *Thermosynechococcus vulcanus*
Songbo Fan, Hiroshi Kuroda, Haowei Jiang, Yoshiki Nakajima, Jian-Ren Shen (Research Institute for interdisciplinary Science, Okayama University)
- 2P003 Investigation of Interspecies Differences in Light Environment Responses in Diatoms
Shiori Kitamura¹, Jian Xing², Minoru Kumazawa³, Atsushi Takabayashi³, Kentaro Ifuku^{1,2} (¹Fac. Agri., Kyoto Univ., ²Grad. Sch. Agri., Kyoto Univ., ³Inst. Low Temp. Sci., Hokkaido Univ.)
- 2P004 Efficient Quenching by Phosphorylated Lhcb1-Enriched PSI-PSII Megacomplexes Formed in Thylakoid Membranes of Iron-Deficient Barley
Akihiro Saito¹, Suzuha Hirayama¹, Miku Arakaki¹, Kai Nakano¹, Makio Yokono², Yusuke Shikanai¹, Kyoko Higuchi¹ (¹Dept. Agric. Chem., Fac. Appl. Biosci., Tokyo Univ. Agric., ²Div. Environ. Photobiol., NIBB)
- 2P005 Co-expression and chloroplast localization of a nitrogenase-like enzyme in plant cells using ribosome skipping
Yui Shimizu, Haruki Yamamoto, Takafumi Yamashino, Yuichi Fujita (Grad. Sch. Bioagri. Sci., Nagoya Univ.)
- 2P006 Deciphering the evolution of pigment biosynthetic pathways and Bacteria
Yusuke Tsukatani¹, Arisa Nishihara², Chihiro Azai³, Masaru K. Nobu¹ (¹JAMSTEC, ²AIST, ³Fac. of Sci. and Eng., Chuo Univ.)
- 2P007 Distribution regulation of tetrapyrrole biosynthesis by two chelatases in cyanobacteria
Shun Hatano, Tatsuru Masuda, Keita Miyake (Grad. Sch, Arts Sci., Univ. Tokyo.)
- 2P008 Excitation-energy-dissipating photosystem complex accumulated during desiccation in desert green alga *Chlorella ohadii*
Soma Kawamura, Makio Yokono, Chiyo Noda, Jun Minagawa (National Institute for Basic Biology)
- 2P009 Energy distribution mechanisms to PSI and PSII in the far-red-light-utilizing Antarctic alga *Prasiola crispa*
Hibika Umehara^{1,2}, Makiko Kosugi^{1,2}, Jun Minagawa^{1,2} (¹Natl. Inst. Basic Biol., ²SOKENDAI)
- 2P010 Far-red light absorption and excitation energy transfer mechanism in the far-red light-harvesting antenna protein complex in a green alga, *Prasiola crispa*
Makiko Kosugi^{1,2}, Keisuke Saito^{3,4}, Yusuke Yoneda^{2,5}, Hikaru Kuramochi^{2,5,6}, Hiroshi Ishikita^{3,4}, Jun Minagawa^{1,2} (¹Nat. Inst. Basic Biol., ²Grad. Inst. Adv. Stu., SOKENDAI, ³Dep. App. Chem., Univ. Tokyo, ⁴Res. Cent. Adv. Sci. Tech., Univ. Tokyo, ⁵Res. Cent. Integ. Molecul. Sys., Inst. Molecul. Sci., ⁶Grad. Sch. Engin. Sci., Univ. Osaka)
- 2P011 Redox Regulation of PPK-Regulatory Proteins from *Arabidopsis thaliana*
Subaru Nishide^{1,2}, Keisuke Yoshida^{1,2} (¹Laboratory for Chemistry and Life Science, Institute of Integrated Research, Institute of Science Tokyo, Yokohama Japan, ²School of Life Science and Technology, Institute of Science Tokyo, Yokohama, Japan)
- 2P012 Complementation of the PyShell gene to the PyShell-less mutants of the marine diatom, *Thalassiosira pseudonana*
Rika Ikeda, Yusuke Matsuda (Grad. Bio. Sci., Kwansai Gakuin Univ)
- 2P013 Correlation between the intercellular CO₂ concentration and the heat dissipation during phase transition in CAM plants
Shunki Kawata¹, Naoki Ohishi², Shin Kore-eda¹ (¹Grad. Sch. Sci. and Eng., Saitama Univ., ²Dept. Biochem. Mol. Biol., Saitama Univ.)
- 2P014 Effect of genome editing knock out of the CO₂/light sensing transcription factor, PtbZIP11
Haruta Koyama, Yusuke Matsuda (Kwansei Gakuin University)
- 2P015 Flow Cytometry as a Tool for Analyzing Photoacclimation of Cyanobacteria in Co-culture
Ting-Hsuan Chan¹, Ming-Yang Ho^{1,2} (¹Department of Life Science, National Taiwan University, ²Institute of Plant Biology, National Taiwan University)
- 2P016 Isolation and Characterization of High-Temperature-Tolerant Cyanobacteria from Taiwan for Flue-Gas Carbon Capture Applications
Tzu-Ling Chen^{1,3}, Pa-Yu Chen², Hsiu-An Chu³, Ming-Yang Ho^{1,2} (¹Institute of Plant Biology, National Taiwan University, ²Department of Life Science, National Taiwan University, ³Institute of Plant and Microbial Biology, Academia Sinica)
- 2P017 Effectiveness of Protamine in the Cell Harvesting Process of *Synechocystis* sp. PCC 6803
Kokone Sato¹, Michiyo Honda², Takashi Osanai¹ (¹Sch. Agr., Univ. Meiji, ²Sch. Sic., Univ. Meiji)
- 2P018 Significance of Acetate Metabolism in Cyanobacteria
Yuka Soga¹, Masahiro Karikomi², Takashi Osanai¹ (¹Agri., Univ. Meiji, ²Grad. Sch. Agri., Univ. Meiji)

- 2P019 Analysis of the effect of polysulfide on chloroplast biogenesis in *Arabidopsis thaliana*
Otoa Matsui¹, Shingo Kasamatsu², Yousuke Seto³, Satoru Watanabe⁴, Tomohiko Tsuge⁵, Hideshi Ihara², Tatsuru Masuda⁶, Takayuki Shimizu¹ (¹Graduate School of Humanities and Sciences, Nara Women's University, ²Graduate School of Science, Osaka Metropolitan University, ³Cancer Chemotherapy Center, JFCR, ⁴Faculty of Life Sciences, Tokyo University of Agriculture, ⁵Institute for Chemical Research, Kyoto University, ⁶Graduate School of Arts and Sciences, The University of Tokyo)
- 2P020 Functional analysis of chloroplast formation factors in early branching cyanobacteria
Shota Suzuki¹, Wataru Sakamoto², Toshihiko Eki^{1,3}, Shigeru Kawai¹, Yuu Hirose^{1,3} (¹Toyohashi Tech. Grad. Sch. Eng., Dept. of Appl. Chem. & Life Sci., ²Okayama Univ. Inst. of Plant Sci. & Resources, ³Toyohashi Tech. Dept. of Appl. Chem. and Life Sci.)
- 2P021 Discovery of a novel protein that is involved in the thylakoid membrane formation in cyanobacteria
Yoshiki Shirotori^{1,5}, Kimie Atsuzawa², Egi tritya Apdila³, Yasuko Kaneko², Koichiro Awai³, Masaru K. Nobu⁴, Yusuke Tsukatani⁵, Shigeaki Ehira¹ (¹Grad. Sch. Sci, Tokyo Metropolitan Univ, ²Grad. Sch. Sci Eng., Saitama Univ., ³Grad. Sch. Sci. Tec., Shizuoka Univ., ⁴XSTAR., JAMSTEC, ⁵BGC., JAMSEC)
- 2P022 Intracellular thiol modifications of transcription factors responsive to polysulfide and reactive oxygen species in photosynthetic bacteria
Otoha Takeda¹, Masaru Hashimoto², Shingo Kasamatsu³, Tatsuru Masuda⁴, Takayuki Shimizu¹ (¹Faculty of Science, Nara Women's University, ²Graduate School of Agricultural and Life Sciences, The University of Tokyo, ³Graduate School of Science, Osaka Metropolitan University, ⁴Graduate School of Arts and Sciences, The University of Tokyo)
- 2P023 Functional Analysis of Polysulfide- and ROS-Sensing Transcriptional Regulators in Purple Photosynthetic Bacteria
Shuxian Wang¹, Yosuke Seto², Yutaro Kumagai³, Masaru Hashimoto⁴, Shintaro Maeno⁵, Yasuhiro Gotoh⁶, Tetsuya Hayashi⁷, Tatsuru Masuda⁸, Takayuki Shimizu¹ (¹Graduate School of Humanities and Sciences, Nara Women's University, ²Cancer Chemotherapy Center, JFCR, ³Department of Life Science and Biotechnology, AIST, ⁴Graduate School of Agriculture and Life Science, The University of Tokyo, ⁵Organization for Research Initiatives, Yamaguchi University, ⁶Advanced Genomics Center, NIG, ⁷Graduate School of Medical Sciences, Kyushu University, ⁸Graduate School of Arts and Sciences, The University of Tokyo)
- 2P024 Analysis of metabolism and extracellular efflux mechanism of sulfur globule generated by sulfide-dependent photosynthesis
Miyu Ikushima¹, Nanako Kanno², Shigeru Kawai³, Shinsuke Shiget², Tatsuru Masuda⁴, Christiane Dahl⁵, Takayuki Shimizu¹ (¹Faculty of Science, Nara Women's University, ²Department of Chemistry, School of Science, Kwansei Gakuin University, ³Department of Applied Chemistry and Life Science, Toyohashi University of Technology, ⁴Graduate School of Arts and Sciences, The University of Tokyo, ⁵Institut für Mikrobiologie & Biotechnologie, Rheinische Friedrich-Wilhelms-Universität Bonn)
- 2P025 Photosynthetic analyses of the double mutants of TRXf and chloroplast-localized eukaryotic TXRs in *Marchantia polymorpha*
Taichi Sugiyama¹, Yuuki Sakai², Masaru Kono^{1,3}, Kimitsune Ishizaki², Keisuke Yoshida¹ (¹CLS, Sci. Tokyo, ²Grad. Sch. Sci. Kobe Univ., ³ABC)
- 2P026 Light-wavelength-dependent pigment biosynthesis in thermophilic photosynthetic bacterium *Chloroflexus aurantiacus*
Yuuri Asou, Yuu Hirose, Shigeru Kawai (Department of Applied Chemistry and Life Science, Toyohashi University of Technology)
- 2P027 Considerations on the evolutionary relationship between C8-vinyl reductase (DVR) present only in the bacteriochlorophyll *a* synthesis and anther types of DVR
Jiro Harada¹, Ken Yamamoto¹, Hitoshi Tamiaki² (¹Dept. Med. Biochem., Kurume Univ. Sch. Med., ²Grad. Sch. Life Sci., Ritsumeikan Univ.)
- 2P028 Synergistic Co-utilization of Malate and Succinate Enhances Photofermentative H₂ Production in *Cereibacter sphaeroides*: Implications for Redox Balancing
Sakiko Nagashima, Ayumu Kurihara, Kenji Nagashima, Kazuhito Inoue (Kanagawa University)
- 2P029 Photoreduction of ferric iron catalysed by a flavoenzyme from a non-phototrophic bacterium
Daisuke Seo¹, Kazuhito Inoue², Hirofumi Komori³ (¹Inst. Mat. Sci., Kanazawa Univ., ²Dep. Biochem. Biotech., Kanagawa Univ., ³Fac. Edu., Kagawa Univ.)

■ Primary metabolism

- 2P030 Evolution and physiological significance of non-peroxisomal allantoin synthesis in plant purine catabolism
Yuta Takeuchi, Hiroshi Shimada, Atsushi Sakamoto (Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)
- 2P031 Different responses of grain-free amino acid accumulation in rice cultivars to the change in nitrogen application rates
Aya Kishie¹, Daisuke Takagi² (¹Grad. Sch. Agric., Setsunan Univ., ²Fac. Agric., Setsunan Univ.)

- 2P032 Physiological and Transcriptomic Characterization of a Nitrogen-Insensitive Variety from the World Rice Core Collection
Honoka Kurikawa¹, Keisuke Kutsuwada¹, Tomoko Nishizawa², Mikiko Koizumi², Makoto Kobayashi², Takanari Tanabata³, Atsushi Fukushima^{4,5}, Miyako Kusano^{2,6,7} (¹Grad. Sch. Life and Envi Sci., Univ. Tsukuba, ²CSRS., RIKEN, ³Sci. & Tech., Univ. Chitose Inst. Sci. and Tech., ⁴Life and Envi Sci., Univ. Kyoto Pref, ⁵R-IH., RIKEN, ⁶Life and Envi Sci., Univ. Tsukuba, ⁷T-PIRC)
- 2P033 Dynamics of Triacylglycerol Accumulation during Seed Development in Soybean and *Arabidopsis thaliana*
Yuta Ihara¹, Yuki Nakamura^{1,2} (¹CSRS, RIKEN, ²Grad. Sch. Sci., Univ. Tokyo)
- 2P034 Functional analysis of phosphocholine in *Arabidopsis* roots
Moe Ito^{1,2}, Van C. Nguyen², Artik Elisa Angkawijaya², Misako Kato¹, Yuki Nakamura^{2,3} (¹Graduate School of Science, Ochanomizu University, ²RIKEN CSRS, ³Department of Biological Sciences, Graduate School of Science, The University of Tokyo)
- 2P035 Physiological role of root-type ferredoxin:NADP(H) oxidoreductase in *Arabidopsis thaliana*
 Kota Monden¹, Daisuke Otomaru¹, Takamasa Suzuki², Tsuyoshi Nakagawa³, Takushi Hachiya³ (¹Graduate School of Natural Science and Technology, Shimane University, ²College of Bioscience and Biotechnology, Chubu University, ³Department of Molecular and Functional Genomics, Interdisciplinary Center for Science Research, Shimane University)

■ Specialized (secondary) metabolism

- 2P036 Enzymatic activity of DET2 in plant progesterone metabolism
Rikuto Hamada¹, Kenichi Uchida², Takao Yokota², Takahito Nomura¹ (¹Ctr. for Biosci. Res. and Edu., Utsunomiya Univ., ²Fac. of Sci. and Eng., Teikyo Univ.)
- 2P037 Characterization of sterol metabolic enzymes in *Physcomitrium patens*
Rin Nakamura¹, Masaharu Mizutani², Takahito Nomura¹ (¹Ctr. for Biosci. Res. and Edu., Utsunomiya Univ., ²Grad. Sch. of Agri., Kobe Univ.)
- 2P038 Analysis of the regulatory mechanisms of salicylic acid synthesis via CNL, a key enzyme of salicylic acid synthesis in tobacco, and salicylic acid synthetase HSR203J
Momoho Osada, Shinpei Katou (Grad. Sch. Sci., Univ. Shinshu)
- 2P039 Functional analysis of *calmodulin-like* genes in salicylic acid synthesis in tobacco
Kota Arai, Riho Kuribara, Shinpei Katou (Grad. Sch. Sci. & Tech., Univ. Shinshu)
- 2P040 Involvement in SA biosynthesis of two paralogous cinnamoyl-CoA hydratase/dehydrogenases with distinct expression pattern and subcellular localization
Shinnosuke Itou, Kazumi Murata, Shinpei Katou (Grad. Sch. Sci and Tec., Univ. Shinshu)
- 2P041 The additive effects of jasmonic acid overproduction between *dgd1* mutants and under phosphate starvation in *Arabidopsis*
Huan-Chi Chou, Chun-Wei Yu (Institute of Molecular and Cellular Biology, National Taiwan University)
- 2P042 Effects of elicitors on the levels of cysteine sulfoxide derivatives in *Allium* species
Shimpei Kawaguchi¹, Kanako Murata¹, Ayuna Kisanuki¹, Takashi Asano², Mami Yamazaki^{1,3}, Naoko Yoshimoto^{1,3} (¹Grad. Sch. Pharm. Sci., Chiba Univ., ²Sch. Pharm., Iwate Med. Univ., ³Plant Mol. Sci. Cent, Chiba Univ.)
- 2P043 Identification and functional analysis of beta-substituted alanine synthases in garlic
Mio Takeda¹, Mami Yamazaki^{1,2}, Naoko Yoshimoto^{1,2} (¹Grad. Sch. Pharm. Sci., Chiba Univ., ²Plant Mol. Sci. Cent., Chiba Univ.)
- 2P044 Aluminum resistance in *Eucalyptus camaldulensis* with knockdown of hydrolysable tannin biosynthesis
Ko Tahara¹, Mitsuru Nishiguchi¹, Hideyuki Ito^{2,3}, Haruna Uemori^{3,4}, Yuji Iwaoka³, Hiromi Yamashita³, Toshiyuki Murakami⁴, Chihiro Oda-Yamamizo¹ (¹FFPRI, ²National Institutes of Biomedical Innovation, Health and Nutrition, ³Grad. Sch. Okayama Prefectural Univ., ⁴Maruzen Pharmaceuticals, Co., Ltd.)
- 2P045 Search for biosynthetic genes of hydrolysable tannins in *Eucalyptus camaldulensis* using herbaceous model plants
Chihiro Oda-Yamamizo, Tokuko Ujino-Ihara, Ko Tahara (FFPRI)
- 2P046 Analysis of betalain biosynthesis-related genes in *Phytolacca japonica*
Yukiko Fukayama¹, Takumi Ogawa¹, Kenji Miura², Manabu Horikawa³, Atsushi Okazawa¹ (¹Grad. Sch. Agric., Osaka Met. Univ., ²Fac. Sch. Life Environ. Sci., Univ. Tsukuba, ³Bioorg. Res. Inst., Suntory Found. Life Sci.)
- 2P047 Elucidating the Genetic Diversity of Natural Rubber Based on Multi-omics Analysis of *Hevea* Species Genomes and Latex
Emiko Okubo-Kurihara^{1,6}, Nyok Sean Lau², Yuko Makita³, Fetrina Oktavia⁴, Tomoko Kuriyama⁶, Minami Matsui^{5,6} (¹Keio University, Division of Biology, ²Universiti Sains Malaysia, ³Mebashi Institute of Technology, ⁴Indonesian Rubber Research Institute, ⁵Yokohama City University, ⁶RIKEN Center for Sustainable Resource Science)

- 2P048 Identification and Functional Analysis of 2-Oxoglutarate-Dependent Dioxygenases Involved in Calystegine Biosynthesis in *Atropa belladonna*
Kohei Nakanishi^{1,2}, Ryota Akiyama¹, Arisa Nakae¹, Tsukasa Mikawa¹, Bubwoong Kang¹, Masaharu Mizutani¹, Tsubasa Shoji²
 (1Grad. Sch. Agric. Sci., Kobe Univ., 2INM, Toyama Univ.)
- 2P049 Unraveling Phloem-Mediated Regulation in the Ripening of Non-Climacteric Fruits in *Capsicum annuum*
Chia-Chi Yeh, Wei-Jie Ciou, Ping-Yi Lin, Zhi-Yu Fu, I-Chun Pan (Department of Horticulture, National Chung Hsing University)

■ Biomembrane/Ion and solute transport

- 2P050 Zinc transport function of OsMRS2-8, a member of magnesium transporter family
Natsuko I. Kobayashi¹, Ayako Nishizawa-Yokoi², Yusaku Noda³, Naoto Yamada³, Naoki Kawachi^{3,4}, Koichi Ito⁵, Keitaro Tano^{1,4}
 (1Grad. Sch. Agri. Life Sci., Univ. Tokyo, 2NARO, 3QST, 4F-REI, 5Grad. Sch. Front. Sci., Univ. Tokyo)
- 2P051 Nitrate transporter NRT1.11/1.12 affect leaf angle in *Arabidopsis*
Yiyi Juan^{1,2}, Po-Kai Hsu¹, Yi-Fang Tsay¹ (1Institute of molecular biology, Academia Sinica, 2Department of Agronomy, National Taiwan University)
- 2P052 CO₂ permeability of rice PIP2 aquaporins
Mahbuba Siddika, Izumi C. Mori (IPSR, Okayama Univ.)
- 2P053 Improvement of tolerance to high concentrations of magnesium in plants through disruption of an upstream ORF using genome editing
Naoko Onishi¹, Noriya Hayashi¹, Hirota Inuma¹, Toshiki Mori², Atsushi Kaido¹, Toshihiro Watanabe¹, Zhihang Feng³, Takehiro Kamiya³, Toru Fujiwara³, Yuta Hiragori¹, Satoshi Naito¹, Hitoshi Onouchi¹ (1Grad. Sch. Agr., Hokkaido Univ., 2Sch. Agr., Hokkaido Univ., 3Grad. Sch. Agr. Sci., Univ. Tokyo)
- 2P054 Search for the regulatory proteins of Arabidopsis magnesium transporter CST2/MGR1 using the proximal-dependent labeling enzyme AirID
 Kurumi Nakata¹, Taiga Hagimoto¹, Akira Nozawa², Tatsuya Sawasaki², Jian Feng Ma³, Toshinori Kinoshita⁴, Shin-ichiro Inoue¹
 (1Grad. Sch. Sci. Eng., Saitama Univ., 2PROS, Ehime Univ., 3IPSR, Okayama Univ., 4ITbM, Nagoya Univ.)

■ Organelles/Cytoskeleton/Endomembrane system

- 2P055 Genetical analysis of Tadukan-type cytoplasmic male sterile rice crossed with various fertility restorer lines
Ayumu Takatsuka^{1,2}, Tomohiko Kazama¹, Keisuke Igarashi², Kinya Toriyama² (1Grad. Sch. Biores. Bioenviron. Sci., Kyushu Univ., 2Grad. Sch. Agri. Sci., Tohoku Univ.)
- 2P056 On Gene Expression in Plant Mitochondria: Transcription and RNA editing
 Jingchan Xie¹, Jingxiu Ji¹, Akihito Mamiya¹, Chang Zhou², Tenghua Wang¹, Sachi Takenaka¹, Issei Nakazato², Shin-ichi Arimura², Mizuki Takenaka¹ (1Grad. Sch. Sci., Kyoto Univ., 2Grad. Sch. Agric., Univ. Tokyo)
- 2P057 Functional analysis of plant AOX in mitochondrial thermogenesis
Shungo Higashi¹, Takashi Fukada¹, Yasuko Ito-Inaba², Noriko Inada¹ (1Osaka Metropolitan Univ., Schl. Of Agri, 2Fac. Agri., Univ. Miyazaki)
- 2P058 Live Cell Monitoring of Chloroplast Nucleoids during Chloroplast Autophagy in Arabidopsis Leaves
Sakuya Nakamura, Shinya Hagihara, Masanori Izumi (RIKEN CSRS)
- 2P059 Functional redundancy of Clade I ATG8 isoforms in nitrogen remobilization during rice vegetative growth
Kyohei Komatsu¹, Ryotaro Kitayama¹, Ryota Suzuki¹, Sota Izumi¹, Mayu Ito¹, Arisa Masuko¹, Takahiro Ni¹, Eri Kondo¹, Masafumi Hidaka¹, Mao Suganami², Masanori Izumi³, Shinya Wada¹, Hiroyuki Ishida¹ (1Grad. Sch. Agri. Sci., Tohoku Univ., 2IFeS, Fac. Food Agri. Sci., Fukushima Univ., 3CSRS, Riken)
- 2P060 Structural analysis of the peroxisomal ATP-dependent protease LON2, a regulator of autophagy
 Wataru Tsuchiya¹, Keiko Yokoi¹, Masato Akutsu¹, Satomi Inaba-Inoue², Toshio Moriya², Toshiya Senda², Shino Goto-Yamada³, Akira Kato⁴, Noritoshi Inagaki¹ (1NARO/RCAA, 2KEK/SBRC, 3NIBB/Lab. Organelle Reg., 4Niigata Univ./Faculty of Sci.)
- 2P061 Spatiotemporal regulation of F-actin accumulation in response to mechanical stress
Yun-Ching Yen, Han Tang (Graduate Institute of Biochemistry, National Chung Hsing University, Taichung, ROC, Taiwan)

- 2P062 Chloroplast Movement Involving Myosin XI Adaptors
Haruto Takiura¹, Jun Obara², Motoki Tominaga³ (¹Sch. Edu, Sci., Bio., Waseda Univ., ²Grad. Sch., Adv. Sci. Eng., Waseda Univ., ³Educ. Integrated Arts. Sci., Bio., Waseda Univ.)
- 2P063 The Microtubule-Associated Protein AIR9 regulate the Cortical Microtubule Orientation and Stability in the Moss *Physcomitrium patens*
Keita Nakamura¹, Satoshi Naramoto², Yoshikatsu Sato³, Yuji Hiwatashi⁴ (¹Grad. Sch. Food, Agricul. Environ. Sci., Miyagi Univ., ²Grad. Sch. Life Sci., Hokkaido Univ., ³ITbM, Nagoya Univ., ⁴Sch. Food, Agricul. Environ. Sci., Miyagi Univ.)
- 2P064 Elucidating the role of MPB2C in cortical microtubule nucleation
Yuto Yamazumi¹, Noriyoshi Yagi², Masayoshi Nakamura² (¹Grad. Sch. Sci., Univ. Nagoya, ²Grad. Sch. Sci., Univ. Saitama)
- 2P065 Function of kinesin family in the development of Marchantia polymorpha
Hiroyasu Motose, Runon Ibara (Okayama Univ.)
- 2P066 Functional analysis of factors involved in glutelin transport and accumulation in rice using newly identified *glup* mutants
Mako Fukuda, Toshihiro Kumamaru (Kyushu Univ., Agri.)
- 2P067 Tissue-Specific Cargo Selection by PATROL1: AHA1 in Guard Cells but Not AHA1/AHA2 in Roots
Mimi Hashimoto-Sugimoto, Wakana Oya, Hitoshi Sakakibara (Grad. Sch. Bioagri. Sci, Nagoya Univ.)
- 2P068 Molecular genetic analysis of the mechanisms underlying the formation and function of the shoot epidermis
Yusuke Sagawa¹, Satomi Tai², Sawa Mizuguchi¹, Kazuo Ebine³, Takashi Ueda³, Hirokazu Tanaka¹ (¹Dept. Life Sci. Agriculture, Meiji Univ., ²Grad. Sch. Sci., Osaka Univ., ³Division of Cellular Dynamics, NIBB)
- 2P069 Protein-retention expansion microscopy of Arabidopsis roots
Yutaro Shimizu, Dumazel Amandine, Louise Fougere, Emmanuelle Bayer, Mónica Fernandez-Monreal, Yohann Boutte, Magali Grison (Bordeaux University)
- 2P070 Roles of the TGN-localized membrane trafficking components in regulating the root meristem in Arabidopsis
Ruihan Wang, Kosuke Ogita, Hirokazu Tanaka (Meiji Univ. Grad. School of Agri.)
- 2P071 Observation of Plasmodesmata Formation During Grafting
Nao Nakamigawa¹, Chika Otake¹, Yoko Ito², Tomohiro Uemura^{1,2} (¹Grad. Sch. Humanities and Sciences, Ochanomizu Univ., ²IHLS., Ochanomizu Univ.)
- 2P072 Localization Analysis of PDLP1 and PDLP5 Using Super-Resolution Live Imaging
Chika Otake¹, Nao Nakamigawa¹, Yoko Ito², Masayoshi Nakamura³, Shiori Nagahara⁴, Michitaka Notaguchi⁴, Tomohiro Uemura^{1,5} (¹Grad. Sch. Life Sci., Ochanomizu Univ., ²Human Life, Ochanomizu Univ., ³Grad. Sch. Sci. & Engr., Saitama Univ., ⁴Grad. Sch. Sci., Kyoto Univ., ⁵Fac. of Core Recr., Ochanomizu Univ.)

■ Cell wall

- 2P073 Cell wall integrity in mechanosensing shapes wound-induced regeneration patterns
Shunenn Kou, Kann Tou (Graduate Institute Of Biochemistry, National Chung Hsing University)
- 2P074 Divergent evolution and lineage-specific expansion of hybrid proline-rich proteins (HyPRPs) in vascular plants
Sou-Yu Cheng, Ming-Der Huang (Department of Biological Sciences, National Sun Yat-sen University, Taiwan)
- 2P075 Analysis of Composition and Localization of Cell Wall Polysaccharides in *Sphagnum palustre*
Tadashi Kunieda^{1,2}, Suguru Aiba¹, Natsune Nakamura¹, Taku Demura^{1,2} (¹Div. of Biol. Sci., NAIST, ²CDG, NAIST)
- 2P076 Analysis of the effects of varieties of white light source on sturdy stem formation in *Arabidopsis thaliana*
Koshiro Hatanaka¹, Momoka Ohashi², Daisuke Takahashi², Toshiya Yokoyama³, Kazuhiko Nishitani³, Takuya Sakamoto³, Mariko Asaoka³ (¹Grad. Fac. Sci., Kanagawa Univ., ²Grad. Sch. Sci. Eng., Saitama Univ., ³Fac. Sci., Sci., Kanagawa Univ.)
- 2P077 Identification and molecular characterisation of pollen-derived cutin-degrading enzymes
Mengyi Xu¹, Yoshinobu Kato¹, Seiji Takayama¹, Sota Fujii^{1,2} (¹Grad. Sch. Agri. Life Sci., Univ. Tokyo, ²Suntory SunRISE)
- 2P078 Effects of glucosylation of haustorium inducing factors on haustorium induction in parasitic plants
Moe Takahashi¹, Lei Xiang¹, Shoko Inaba², Bing Xie¹, Takayuki Tohge³, Yuki Tobimatsu⁴, Satoko Yoshida¹ (¹NAIST, Plant Symbiosis, ²Kansai Gakuin Uni., ³NAIST, Plant Secondary Metabolism, ⁴Kyoto Uni.)
- 2P079 β -Galactoglucosylmannan is involved in cell adhesion in tomato fruit
Yoshihisa Yoshimi^{1,2}, Li Yu², Konan Ishida², Rosalie Cresswell^{2,3}, Raymond Wightman⁴, Georgina Lindop⁵, Karin Müller⁵, William Willats⁶, Paul Dupree^{2,3}, Paul Dupree² (¹Fac. Bio.-Ori. Sci. Tech, Kindai Univ., ²Dept. Biochem., Univ. Cambridge, ³Dept. Phys., Warwick Univ., ⁴Sainsbury Lab., Univ. Cambridge, ⁵Cam. Adv. Imag. Cent., Univ. Cambridge, ⁶Sch. Nat. Env. Sci., Newcastle Univ.)

■ Development/Morphogenesis

- 2P080 The Role Of The Phloem Specific NAC Transcription Factor In The Phloem Development
Shinnosuke Kajiwara¹, Tatsuo Kakimoto¹, Yuki Kondo¹, Pingping Qian^{1,2} (¹Graduate School of Science, The University of Osaka, ²Graduate School of Life Science, Lanzhou University)
- 2P081 Regulation of *LONESOME HIGHWAY* by uORF in *Arabidopsis thaliana*
Naota Fujishima, Kuninori Iwamoto, Kyoko Ohashi-Ito (Grad. Sci., Univ. Tokyo)
- 2P082 LONESOME HIGHWAY-LIKE3 regulates vascular cell proliferation in the root apical meristem
Kyoko Ohashi-Ito¹, Marino Mori¹, Kuninori Iwamoto¹, Hiroo Fukuda² (¹Grad. Sch. Sci., The Univ. of Tokyo, ²Akita Prefectural Univ.)
- 2P083 *LSH4/LSH10* mediated root growth regulation downstream of VLCFA signaling under high ambient temperature
Nanami Yasui¹, Yuta Uemura¹, Rena Kasahara¹, Rika Sasaki¹, Takamasa Suzuki², Hironaka Tsukagoshi¹ (¹Grad. Sch. Agr. Meijo Univ., ²Coll. Biosci. & Biotech. Chubu Univ.)
- 2P084 Elucidation of a novel molecular mechanism of plant growth induced by root zone cooling
Yuri Hachisuka¹, Yuta Uemura¹, Rena Kasahara¹, Takamasa Suzuki², Hironaka Tsukagoshi¹ (¹Grad. Sch. Agr. Meijo Univ., ²Coll. Biosci. & Biotech. Chubu. Univ)
- 2P085 Elucidation of Root Development Mechanisms Involving the Blocking of Iron Absorption Genes Expression
Kanau Sato, Kazuto Sakai, Hironaka Tsukagoshi (Grad. Sch. Agr. Meijo Univ.)
- 2P086 Nitrogen-inducible peptide LOHN1 negatively regulates lateral root initiation via modulating auxin transport in *Arabidopsis*
Tomoya Sonoda¹, Kazuhiro Ito¹, Takamasa Suzuki², Takumi Higaki³, Hidehiro Fukaki⁴, Kousuke Hanada⁵, Koh Iba¹, Kensuke Kusumi¹ (¹Grad. Sch. Sci., Kyushu Univ., ²Col. Biosci. Biotech., Chubu Univ., ³Kumamoto Univ., FAST, ⁴Grad. Sch. Sci., Kobe Univ., ⁵Dep. Biosci. Bioinform., Kyutech.)
- 2P087 A Novel Circadian Clock Transcriptional Complex Regulating Lateral Root Development
Ayano Kato¹, Sota Nomoto¹, Syunsaku Yamamoto¹, Takumi Ohnakado¹, Kosuke Mase¹, Satomi Sakaoka¹, Takamasa Suzuki², Soichi Inagaki³, Yasuomi Tada⁴, Yoshikatsu Matsubayashi⁵, Norihito Nakamichi⁶, Hironaka Tsukagoshi¹ (¹Agr., Meijo Univ., ²Col. Biosci. Biothech., Chubu Univ., ³Grad. Sch. of Sci., Tokyo Univ., ⁴Cent. Gene Res., Nagoya Univ., ⁵Grad. Sch. Sci., Nagoya Univ., ⁶Grad Sch Bioagric Sci., Nagoya Univ)
- 2P088 A novel wound defense strategy, “Cells lock”, as an initial response to endogenous and exogenous damage in root
Kosuke Mase¹, Honomi Mizuno¹, Keigo Nakamura¹, Koki Tomida¹, Nanari Furukawa¹, Shiho Ueno¹, Sesshu Takagi¹, Kanau Sato¹, Satomi Sakaoka¹, Takamasa Suzuki², Soichi Inagaki³, Atsushi Morikami¹, Hironaka Tsukagoshi¹ (¹Faculty of Agr., Univ. Meijo, ²Biosci. Biotech., Univ. Chubu, ³Grad. Sch. Sci., Univ. Tokyo)
- 2P089 CLE46 Peptide Signal in Wound-induced Root Regeneration in *Arabidopsis*
Tatsuya Ito¹, Hiroo Fukuda^{2,3}, Satoshi Endo² (¹Grad. Sch. Bioenviron. Sci., Kyoto Univ. Adv. Sci., ²Fac. Bioenviron. Sci., Kyoto Univ. Adv. Sci., ³Akita Pref. Univ.)
- 2P090 The role of gibberellin metabolism in root tip regeneration in *Arabidopsis*
Aoi Ishikawa, Zen Machida, Naoki Takahashi (Sch. Agri., Meiji Univ.)
- 2P091 Role of *bHLH* transcription factor in root tip regeneration in *Arabidopsis*
Haruki Kano, Aoi Ishikawa, Naoki Takahashi (Sch. Agri., Meiji. Uni.)
- 2P092 Phenotypic Analysis and Gene Expression Profiling of Roots in Tomato bZIP11 Genome-Edited Plants
Yuri Morita^{1,2}, Yoshimi Nakano², Takahito Takei², Saku Kijima², Sumire Fujiwara², Shigeo S. Sugano^{1,2} (¹TUS, Sci. Tech., ²AIST BPRC)
- 2P093 Investigating Genetic Factors Affecting Differential Stomatal Patterns of *Callitriche palustris* and *Callitriche deflexa*
Jiyang Kim¹, Yuki Doll², Tomoki Kamimura¹, Hiroyuki Koga¹, Hirokazu Tsukaya¹ (¹Grad. Sch. Sci., Univ. Tokyo, ²Div. Bio. Sci., Grad. Sch. Sci. Tech., NAIST)
- 2P094 Mechanisms of cotyledon size control through primary and secondary metabolism
Hiromitsu Tabeta^{1,2}, June-Sik Kim^{1,3}, Hiroyuki Koga⁴, Teruki Kameyama², Atsuko Hirota¹, Yushiro Fuji¹, Muneo Sato¹, Makoto Hayashi¹, Keiichi Mochida¹, Hirokazu Tsukaya⁴, Ali Ferjani², Masami Y. Hirai^{1,5} (¹RIKEN CSRS, ²Department of Biology, Tokyo Gakugei University, ³IPSR, Okayama University, ⁴Department of Biological Sciences, Graduate School of Science, The University of Tokyo, ⁵Department of Applied Biosciences, Graduate School of Bioagricultural Sciences, Nagoya University)

- 2P095 Analysis of the localization of 45S rDNA in mutants of AS2 and RH10, involved in leaf development in *Arabidopsis thaliana*
Rina Kawamoto¹, Sayuri Ando¹, Yasuhiro Kamei², Misako Saita², Yasunori Machida³, Chiyoko Machida¹, Shoko Kojima¹ (¹Grad. Sch. Biosci. and Biotech., Chubu Univ, ²NIBB, ³Grad. Sch. Sci., Nagoya Univ)
- 2P096 Initiation of asexual reproduction by the AP2/ERF gene *GEMMIFER* in *Marchantia polymorpha*
Go Takahashi¹, Saori Yamaya², Tomohiro Kiyosue², Yuki Hirakawa¹ (¹Grad. Sch. Integr. Sci. Life, Univ. Hiroshima, ²Grad. Sch. Sci., Univ. Gakushuin)
- 2P097 A divergent *PaWUS-PaCLV3* module regulates shoot regeneration in *Phalaenopsis aphrodite*
Chih-Chi Lee^{1,2}, Pou-Yi Chang^{1,2}, Hsiang-Yin Lin^{1,2}, Jhun-Chen Chen^{1,2}, Yan-Lin Lai^{1,2}, Ya-Ting Chao¹, Su-Chiung Fang^{1,2}
 (¹Agricultural Biotechnology Research Center, Academia Sinica, ²Biotechnology Center in Southern Taiwan, Academia Sinica)
- 2P098 Microplastic Pollution as a Stress Factor Affecting Plant Callus Induction and Regeneration
Yu-Ning Chen, Tzu-Hsun Yu, Fu-Yu Hung (NCHU, GIB)
- 2P099 Functional analysis of chromatin regulatory factors involved in the acquisition of pluripotency in callus cells
Yasuhiro Kozaki, Ayaka Shimoki, Momoko Ikeuchi (NAIST, bio)
- 2P100 Mechanism of adventitious bud formation on leaf in *Heloniopsis orientalis*
Tomooki Sakamoto^{1,2}, Anna Hata¹, Yui Kuroda¹, Seisuke Kimura^{1,2} (¹Life Sci., Kyoto Sangyo Univ., ²Center for Plant Sci., Kyoto Sangyo Univ.)
- 2P101 Rapid Ca²⁺ flux as a wounding response is required for regeneration in *P. patens*
Kouann Ou, Kann Tou (Graduate Institute of Biochemistry, National Chung Hsing University, Taiwan)
- 2P102 Elucidating the Molecular Basis of Medial-Lateral Stamen Elongation in *Arabidopsis thaliana*
Koki Nakamura, Nobutoshi Yamaguchi, Toshiro Ito (Div. Biol. Sci., NAIST.)
- 2P103 Plasticity of Morphogenesis During Early Wheat Embryo Development in vitro
Saya Okamoto, Takashi Okamoto, Atsuko Kinoshita (Tokyo Metropolitan University)
- 2P104 Validation of a plastid-mediated regulatory model of SCL28 activity in cell size control
Yuji Nomoto¹, Hiroto Takatsuka², Keisuke Yamada¹, Masaki Ito¹ (¹Sch. Biol. Sci. Tech., Kanazawa Univ., ²Faculty Div. Nat. Sci., Nara Women's Univ.)
- 2P105 Exploring the evolutionary background of the cell size regulator SCL28 in moss
Rihoko Senga¹, Toshinari Takahashi¹, Yuji Nomoto², Masaki Katagiri¹, Hidekazu Iwakawa², Takumi Nishiuchi³, Masaki Ishikawa^{4,5}, Mitsuyasu Hasebe^{4,5}, Rumiko Kofuji², Masaki Ito² (¹Grad. Sch. Nat. Sci. & Tech., Kanazawa Univ., ²Sch. Biol. Sci. & Tech., Kanazawa Univ., ³ReCEMHD., Kanazawa Univ., ⁴Div. Evol. Biol., Natl. Inst. Basic Biol., Japan, ⁵Basic Biol., SOKENDAI, Japan)
- 2P106 Analysis of Complex Formation and DNA-Binding Properties of the Cell Size Regulator SCL28 Using a Cell-Free Translation System
Masaki Katagiri¹, Poyu Chen², Hidekazu Iwakawa², Takumi Nishiuchi³, Akira Nozawa⁴, Masaki Ito² (¹Grad. Sch. Nat. Sci. & Tech., Kanazawa Univ., ²Sch. Biol. Sci. & Tech., Kanazawa Univ., ³ReCEMHD, Kanazawa Univ., ⁴PROS, Ehime Univ.)
- 2P107 N-terminally Truncated Arabidopsis NSE5/SNI1 Retains SMC5/6 Function via Downstream Translation Initiation
 Mika Yoshimura, Takashi Ishida (FAST, Kumamoto Univ.)
- 2P108 The relationships between the developmental constraint of and the maximization of the light capture efficiency of the divergence angle in spiral phyllotaxis
Takaaki Yonekura, Munetaka Sugiyama (Grad. Sch. Sci., Univ. Tokyo)
- 2P109 *Marchantia* Early Embryo Shares a Cell Division Rule with *Arabidopsis* inferred from 3D Shape-Based Modeling
Akira Osada¹, Sohta Nakamura², Naoya Kamamoto¹, Katsuyoshi Matsushita¹, Yue Wang², Minako Ueda², Yusuke Kimata², Koichi Fujimoto¹ (¹Graduate School of Integrated Sciences for Life, Hiroshima University, ²Graduate School of Life Sciences, Tohoku University)
- 2P110 The potential role of Arabidopsis H3K4 demethylases LDL1 and LDL2 in plant regeneration by the lncRNA-mediated epigenetic regulation
Yi-Ting Chang (National Chung Hsing University, Graduated Institute of Biotechnology (GIB), Taiwan)
- 2P111 Can plasma-irradiated non-edible biomass serve as a plant growth enhancer?
Sesshu Takagi¹, Ryohei Oguchi², Takamasa Suzuki³, Yuki Yoshida¹, Motoyuki Shimizu¹, Masafumi Ito⁴, Hironaka Tsukagoshi¹
 (¹Grad. Sch. Agr. Meijo Univ., ²Sch. Agr. Meijo Univ., ³Coll. Biosci. & Biotech. Chubu Univ., ⁴Fac. Sci. & Tec. Meijo Univ.)
- 2P112 Most Commercial Lettuce, *Lactuca sativa*, Seeds Are Not Strictly Photoblastic
Hidenobu Tsujimura (Student Science Research Institute)

■ Reproduction

- 2P113 Functional analysis of brassinosteroids and flavonols in conferring temperature stress tolerance in pollen tubes
Kumi Matsuura-Tokita^{1,2}, Ayaka Sakai², Takamasa Suzuki³, Akihiko Nakano⁴, Tetsuya Higashiyama^{1,2} (¹Grad. Sch. Sci., The Univ. Tokyo, ²Sch. Sci., Nagoya Univ., ³Dept. Bio. Chem., Chubu Univ., ⁴RAP, RIKEN)
- 2P114 Understanding and Overcoming Interspecific Barriers in Pollen Tube Attraction
Takuya T. Nagae¹, Hidenori Takeuchi², Keisuke Matsuda³, Shiori Nagahara⁴, Yoko Mizuta^{5,6}, Tetsuya Higashiyama⁷ (¹RIKEN, CSRS, ²Grad. Sch. Arts & Sci., Univ. Tokyo, ³Grad. Sch. Med. Sci., Kyushu Univ., ⁴Grad. Sch. Sci., Kyoto Univ., ⁵Inst. Adv. Res., Nagoya Univ., ⁶ITbM (WPI), Nagoya Univ., ⁷Grad. Sch. Sci., Univ. Tokyo)
- 2P115 Exploring downstream target genes of PpRKD transcription factor responsible for archegonium development in *Physcomitrium patens*
Emiko Yoro^{1,2}, Ryohei Sato¹, Nobuhiro Akiyoshi¹, Yuki Kondo², Tomoyuki Furuya², Keiko Sakakibara¹ (¹Dept. Life Sci., Rikkyo Univ., ²Grad. Sch. Sci., Univ. of Osaka)
- 2P116 Identification of a novel RLCK subfamily involved in the reproductive process
Riko Inoue¹, Ryo Noguchi², Sho Tanaka², Shigeo S. Sugano³, Takahito Takei^{2,3}, Daisuke Maruyama⁴, Takahiro Hamada^{1,2} (¹Fac. of Life Sci., Okayama Univ. of Sci., ²Fac. of Sci., Okayama Univ. of Sci., ³BPRC, AIST, ⁴KIBR, Yokohama City Univ.)
- 2P117 Elucidation of embryo-to-endosperm communication through analysis of embryo development-dependent *LBD35*
Yi-Ting Chen¹, Yilin Zhang², Hironori Takasaki², Nguyen Thanh Hai Nguyen¹, Tomokazu Kawashima³, Ming-Tsair Chan^{1,4}, Masaru Takagi¹ (¹Graduate Program of Translational Agricultural Sciences, National Cheng Kung University, Tainan, Taiwan, ²Graduate School of Science and Engineering, Saitama University, Saitama, Japan, ³Department of Plant and Soil Science, University of Kentucky, United States, ⁴Agricultural Biotechnology Research Center, Academia Sinica Biotechnology Center in Southern Taiwan, Taiwan)
- 2P118 Induction of endosperm development without fertilization in *Oryza sativa*
Nguyen Thanh Hai Nguyen¹, Yoshimi Oshima², Yi-Ting Chen¹, Nobutaka Mitsuda², Masaru Takagi¹ (¹National Cheng Kung University – Academia Sinica Graduate-Program in Translational Agriculture Sciences, Tainan, Taiwan, ²Bio manufacturing Process Research Center, National Institute of Advanced Industrial Science and Technology (AIST), Ibaraki, Japan)
- 2P119 *MAC1* and *AMI* play critical but independent roles to regulate the mitosis-to-meiosis transition in pollen mother cells in maize
Ching-Chih Tseng, Chung-Ju Rachel Wang (Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan)
- 2P120 Identifying interaction between PeDL and SWEETs and their regulation of Gynostemium Development
Sean Yuet To¹, Wen-Chieh Tsai¹, You-Yi Chen², Shao-Ting Lin¹ (¹Inst. of Tropical Plant Sciences and Microbiology, NCKU, Tainan City, 701, Taiwan., ²Grad Inst. of Agronomy, NCYU, Chiayi City, 600, Taiwan.)

■ Plant hormones/Signaling molecules

- 2P121 Unraveling the Genetic Architecture of Tomato Fruit Drop Through Combined Molecular Profiling and Segregation Analysis
Yu-Ting Huang¹, Yu-Heng Lin², Amit Dhingra³, I-Chun Pan¹ (¹Department of Horticulture, National Chung Hsing University, ²Taichung District Agricultural Research and Extension Station, MOA, ³Department of Horticultural Sciences, Texas A&M University)
- 2P122 Identification of the molecular target of the plant growth-promoting compound PPG and functional analysis of its natural analogues
Sakurako Katsuta¹, Shun Takeno^{2,3}, Shota Tanaka^{2,3}, Keiya Kaga^{1,7}, Kazuma Ohata¹, Ayumi Yamagami¹, Takuya Miyakawa¹, Shoji Segami⁴, Yasumitsu Kondo², Naoshi Domae², Kei Tsuzuki³, Yoshiya Seto³, Tetsuo Kushiro³, Masayoshi Maeshima⁵, Tadao Asami⁶, Takeshi Nakano¹ (¹Grad. Sch. Biostudies., Univ. Kyoto, ²RIKEN, CSRS, ³Grad. Sch. Agriculture, Univ. Meiji, ⁴NIBB, ⁵Grad. Sch. Bioagricultural Sciences, Univ. Nagoya, ⁶KIBR, Yokohama City Univ., ⁷Grad. Sch. Science & Engineering, Univ. Saitama)
- 2P123 The allelopathy induced by a single-gene mutation in the Arabidopsis thaliana *sur2* mutant is mediated by extracellular auxin
Yui Kobayashi¹, Kang Xu², Emi Yumoto⁴, Masashi Asahina^{3,4}, Ken-ichiro Hayashi⁵, Hidehiro Fukaki⁶, Masaaki Watahiki⁷ (¹Grad. Life. Sci., Hokkaido Univ., ²Sch. Agri. Biol., Shanghai Jiao Tong Univ., ³Env. & Biotech., Dept. Integ. Sci. & Eng., Teikyo Univ., ⁴Adv. Inst. Anal. Center, Teikyo Univ., ⁵Dept. Biosci., Okayama Univ. Sci., ⁶Grad. Sch. Sci., Kobe Univ., ⁷Fac. Sci., Hokkaido Univ.)
- 2P124 Biosynthetic pathway of a natural auxin, phenylacetic acid, in Arabidopsis
Haruki Iwama¹, Kaisei Maruyama², Akie Watanabe², Takemoto Agui², Shunsuke Watanabe³, Zhao Yunde⁴, Ken-ichiro Hayashi⁵, Mitsunori Seo^{6,7}, Masanori Okamoto⁷, Hiroyuki Kasahara^{2,7} (¹Fac. Agri., Tokyo Univ. Agri. Tech., ²Grad. Sch. Agri., Tokyo Univ.

- Agri. Tech., ³Fac. Sci. Eng., Yasuda Women's Univ., ⁴UCSD, ⁵Dept of Biosci., Okayama Univ. Sci., ⁶TBRC, Univ. Ryukyus., ⁷RIKEN CSRS)
- 2P125 Analysis of the Regulatory Mechanism of Early Hypocotyl Growth Mediated by the Interaction Between BIL1 and ABA-Responsive Transcription Factors
Natsuki Futagami¹, Nobutaka Mitsuda², Ayumi Yamagami¹, Takuya Miyakawa¹, Takeshi Nakano¹ (¹Grad. Sch. Bio., Univ. Kyoto, ²AIST)
- 2P126 Analysis for the BR signaling factor BIL7 function and interactome
Asuma Kubono¹, Kaisei Nishida¹, Senri Nakamura¹, Ayumi Yamagami¹, Takuya Miyakawa¹, Tadao Asami², Takeshi Nakano¹ (¹Grad. Sch. Biostudies., Kyoto Univ., ²KIBR, Yokohama)
- 2P127 The role of BIN2 phosphorylation in regulating the activity of the BR signaling factor BIL7
Senri Nakamura¹, Kaisei Nishida¹, Yusuke Nakamura¹, Ayumi Yamagami¹, Takuya Miyakawa¹, Takehiro Suzuki², Naoshi Dohmae², Akira Nozawa³, Tatsuya Sawasaki³, Tadao Asami⁴, Takeshi Nakano¹ (¹Grad. Sch. Biostudies., Kyoto University, ²CSRS, Riken, ³PROS, Ehime University, ⁴KIBR, Yokohama City Univ.)
- 2P128 Evolution and functional diversification of plant auxin metabolic genes
Takemoto Agui¹, Yuki Suganuma¹, Risayo Mizutani¹, Masaki Shimamura², Ken-ichiro Hayashi³, Hiroyuki Kasahara^{1,4} (¹Grad. Sch. Agric., TUAT, ²Grad. Sch. Integr. Sci. Life, Hiroshima Univ., ³Dept. Biosci., Okayama Univ. Sci., ⁴CSRS, RIKEN)
- 2P129 Functional Analysis of Group C Raf-like Kinases in *Marchantia*
Hana Kokubo¹, Hinano Takase², Shota Yamauchi³, Ryuichi Nishihama³, Taishi Umezawa² (¹Department of Biological Production, Tokyo University of agriculture and Technology, ²Graduate School of Bio-Applications and Systems Engineering, Tokyo University of agriculture and Technology, ³Department of Applied Biological Science, Faculty of Science and Technology, Tokyo University of Science)
- 2P130 Evolutionary and Functional Significance of ShPP2C1 in the Parasitic Life Strategy of *Striga*
Sotaro Katagiri¹, Daisuke Fukuhara², Keisuke Fujiyama¹, Hijiri Fujioka³, Yukihiko Sugimoto³, Masanori Okamoto^{1,4} (¹CSRS, RIKEN, ²C-Bio • Utsunomiya Univ., ³Kobe Univ., ⁴Yokohama City Univ.)
- 2P131 A method to quantify plant hormones from very small tissues
Yumiko Takebayashi¹, Hiromi Suzuki^{1,2}, Masami Y. Hirai¹, Mitsunori Seo^{1,3} (¹RIKEN, CSRS, ²School of Bioscience and Biotechnology, Tokyo University of Technology, ³Tropical Biosphere Research Center, University of the Ryukyus)
- 2P132 High-throughput comprehensive phytohormone analysis and quantification using LC-MS/MS
Mikiko Kojima¹, Yumiko Takebayashi¹, Masanori Okamoto¹, Masami Y. Hirai¹, Hitoshi Sakakibara^{1,2} (¹RIKEN CSRS, ²Grad. Sch. Bio. Sci., Nagoya Univ)
- 2P133 Strawberry Protoplast Isolation using its Callus Tissue
Hibiki Tanimitsu, Fumi Homma, Toshio Sano (Grad. Sch. Life Sci. Univ. Hosei)
- 2P134 An ABC transporter for strigolactones in Arabidopsis
Shuo Zhao¹, Kei Suzuki², Kiyoshi Mashiguchi¹, Shinjiro Yamaguchi¹ (¹ICR, Univ. Kyoto, ²Grad. Sch. Life. Sci, Univ. Tohoku)
- 2P135 LWD1 acts as a mobile factor coordinating circadian rhythms between neighboring and distant tissues in *Arabidopsis*
Yi-Chen Wu, Ying Wang, Shu-Hsing Wu (Institute of Plant and Microbial Biology, Academia Sinica)
- 2P136 Characterization of Transport Mechanism and Physiological Functions of Tomato KNOTTED1 mRNA
Sirui Liu, Munenori Kitagawa (Coll. Hort. & For., HZAU)
- 2P137 Genome-wide Identification of Mobile mRNAs Based on a Conserved Sequence
Shioto Ishihara¹, Ken-ichi Kurotani¹, Shiori Nagahara¹, Tomomi Suzuki¹, Kentaro Okada², Takumi Iwata¹, Nobuyoshi Mochizuki¹, Michitaka Notaguchi^{1,2} (¹Grad. Sch. Sci., Kyoto Univ, ²Biosci. and Biotech. Center, Nagoya Univ.)
- 2P138 Functional analysis of ABI5-related bZIP transcription factors in *Marchantia polymorpha*
Amane Shibuya¹, Yuta Kidokoro¹, Daisuke Takezawa², Teruaki Taji¹, Yoichi Sakata¹, Izumi Yotsui¹ (¹Dept. of Biosci., Tokyo Univ. of Agri, ²Graduate School of Science and Engineering, Saitama University)
- 2P139 Polycistronic expression of KARRIKIN-INSENSITIVE2 and a histidine kinase in the liverwort *Marchantia polymorpha*
Rui Sun, Kiyoshi Mashiguchi, Shinjiro Yamaguchi (Inst. Chem. Res., Kyoto Univ.)

■ Environmental response A/Physiological responses

- 2P140 Water as a Compass: Hydrostimulation-Triggered Aerial Root Growth in *Phalaenopsis aphrodite*
Yueh-Ju Hou¹, Su-Chiung Fang², Jhun-Chen Chen², Hua-Chen Chang¹, I-Chian Chen¹ (¹Department of Life Sciences, National University of Kaohsiung, Kaohsiung, Taiwan, ²Biotechnology Center in Southern Taiwan, Academia Sinica, Tainan, Taiwan)
- 2P141 Development of Synthetic Compounds that Disrupt Plant Root Tropism
Yuma Shisaka, Shuhei Kusano, Sakuya Nakamura, Masanori Izumi, Shinya Hagihara (RIKEN CSRS)
- 2P142 L-DOPA Activates an Alternative Root-to-Shoot Signaling Mechanism in Response to Iron Deficiency
En-Jung Hsieh (National Taiwan University)
- 2P143 N-status communication among leaves
Peirong Tsai^{1,2}, Yi-Fang Tsay² (¹Department of Life Science, National Taiwan University, ²Institute of Molecular Biology, Academia Sinica)
- 2P144 IRONMAN and BTS: A Regulatory Circuit for Enhancing Plant Iron Acquisition
Tong Yu Jhang (National Taiwan University Department of Agricultural Chemistry)
- 2P145 Functional analysis of P-type cyclin Involved in phosphate deficiency response in *Arabidopsis thaliana*
Yuki Kitagawa, Masami Sekine, Rena Kamekawa (Facal. Bioresour. Univ. Ishikawa)
- 2P146 Feeding the Grain: How Phosphate Energizes Starch Production in Rice
Chiu-Ling Yang¹, Wen-Chien Lu¹, Jo-Chi Hung², Swee-Suak Ko², Tzyy-Jen Chiou¹ (¹Agricultural Biotechnology Research Center, Academia Sinica, Taipei, Taiwan, ²Biotechnology Center in Southern Taiwan, Academia Sinica, Tainan, Taiwan)
- 2P147 The effect of *ArabidopsisNodGS* gene on nitrogen uptake
Soichiro Noda, Ken'ichi Ogawa (RIBS Okayama)
- 2P148 Analysis of Factors Determining the Guttation Rate from a Hydathode
Yuki Yaguchi, Reina Ito, Moeka Kuriki, Haruna Sumino, Kanon Takahashi, Ko Noguchi, Yusuke Mizokami (Grad. Sch. Life Sci., Tokyo Pharm Univ.)
- 2P149 Circadian regulation of stomatal ABA sensitivity in *Arabidopsis thaliana*
Chihiro Endo, Saya Mizushima, Ayaka Nogi, Ko Noguchi, Yusuke Mizokami (Fac. Life Sci., Tokyo Pharm. Univ.)
- 2P150 Functional characterization of *Arabidopsis* plantacyanin, a blue copper protein
Yuina Dohi¹, Mirai Matsuoka¹, Satoshi Sano² (¹Fac. Life Env. Sci., Kyoto Pref. Univ., ²Grad. Sch. Life Env. Sci., Kyoto Pref. Univ.)
- 2P151 Sequence Variation In The Promoter Of A LncRNA Related To Petal Movement And Its Potential Impact On Gene Expression In *Arabidopsis Thaliana*
Yufei Bai (Grad. Sch. Nanobioscience., YCU)

■ Environmental response B/Environmental stresses

- 2P152 GPL13 interacts with ERF1 and co-regulates stress-responsive genes in *Arabidopsis*
Meng-Ju Chen, Mei-Chun Cheng (Department of Biochemical Science & Technology, National Taiwan University)
- 2P153 Dissecting The Functional And Regulatory Roles Of Heat Shock Proteins in Rice Seed Germination
Chinghui Yeh, Shawjye Wu, Senthil Kumar Rajendran (Department of Life Sciences, NCU, Taiwan)
- 2P154 Functional Dissection of AIL7 Reveals Its Transcriptional and Interaction-Mediated Roles in Stress Responses
Ping-Chien Hsin, Mei-Chun Cheng (Department of Biochemical Science & Technology, National Taiwan University)
- 2P155 The *OsSPL2*-regulated NF-Y transcription factor *OsHAP2J* and *DUF1719* modulate pathogen defenses in rice
Cheng-Chung Huang, Yi-Tsang Tsai, Shang-Yuan Liu, Meng-Jou Chung, Shih-Tong Jeng (National Taiwan University Institute of Plant Biology)
- 2P156 LWD1 interacts with HY5 to mediate *DREB* gene expression in response to abiotic stresses in *Arabidopsis*
Jing-Fen Wu¹, Sim Lin Lim², Shu-Hsing Wu¹ (¹Institute of Plant and Microbial Biology, Academia Sinica, ²Biodiversity Research Center, Academia Sinica)
- 2P157 Uncovering Plant Transcription Factors Control Membrane Lipid Remodeling Under Phosphate Starvation in *Arabidopsis*
Jiratorn Meethongantamas^{1,2}, Kai-Lun Yeh², Yu-Tung Wang², Nobutaka Mitsuda³, You-Yi Chen¹, Wen-Chieh Tsai¹, Sumire Fujiwara³, Masaru Ohme-Takagi^{1,3}, Chuan-Ming Yeh^{2,3,4} (¹Institute of Tropical Plant Sciences and Microbiology, National Cheng Kung University, Tainan, Taiwan, ²Institute of Molecular Biology, National Chung Hsing University, Taichung, Taiwan,

- ³Biomufacturing and Process Research Center, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan, ⁴Advanced Plant and Food Crop Biotechnology Center, National Chung Hsing University, Taichung, Taiwan)
- 2P158 Splicing Integrity Under Cold Stress: The Central Role of OsRH42 in Rice Chilling Tolerance
Wei-Shen Zhang (Department of Life Sciences, National Central University, Taoyuan, Taiwan)
- 2P159 Molecular physiological responses of rice seedlings to saline-alkaline stress
Mitsuki Kondo¹, Mami Nampei¹, Tanee Sreewongchai², Akihiro Ueda¹ (¹Graduate School of Integrated Sciences for Life, Univ. Hiroshima, ²Faculty of Agriculture, Univ. Kasetsart)
- 2P160 Analysis of Hyperosmotic Stress Tolerance in *Marchantia polymorpha* Strains Collected in Japan and Identification of Responsible Loci
Hiroki Kato, Takehide Kato, Taku Demura (Nara Institute of Science and Technology, Grad. School of Sci. and Tech.)
- 2P161 Functional analysis of barley cold-induced small protein CISP with intrinsically disordered regions
Yutaro Okumura¹, Arriel Fadhilah¹, Shin-ichiro Kidou^{1,2} (¹Grad. Sch. Sci., Nagoya City Univ., ²Research Center for Biological Diversity)
- 2P162 Exploration of Relationship between Blossom-end rot and Fruit Ionome in Tomato
Yusuke Shikanai, Yuka Takata, Amiri Watanabe, Akihiro Saito, Kyoko Higuchi (Department of Agricultural Chemistry, Tokyo university of Agriculture)
- 2P163 Characterization of MYB-Related Transcription Factors Regulating Pi Starvation and Heat Stress Adaptation in *Arabidopsis thaliana*
Yi-Zhen Wu¹, Kuang-Yu Cheng¹, Wei-Yung Hsu¹, Ichiro Terashima¹, Sumire Fujiwara², Nobutaka Mitsuda², Masaru Ohme-Takagi^{2,3}, Chuan-Ming Yeh^{1,2,4} (¹Institute of Molecular Biology, National Chung Hsing University, Taichung, Taiwan, ²Biomufacturing and Process Research Center, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan, ³Institute of Tropical Plant Sciences and Microbiology, National Cheng Kung University, Tainan, Taiwan, ⁴Advanced Plant and Food Crop Biotechnology Center, National Chung Hsing University, Taichung, Taiwan)
- 2P164 Comprehensive transcriptome analysis of photoperiod-dependent dormancy using natural variants of *Lemna turionifera*
Shogo Ito¹, Makoto Kashima², Tokitaka Oyama¹ (¹Department of Botany, Division of Biological Sciences, Graduate School of Science, Kyoto University, ²Faculty of Science Department of Biomolecular Science, Toho University)
- 2P165 Transcriptomic Discovery of Key Transcription Factors Conferring Disease Resistance in a Novel Orchid Hybrid
Kai-Lun Yeh¹, Yu-Wen Hsu¹, Su-Hui Liu¹, Pin-Hui Sung², Ichiro Terashima¹, Chuan-Ming Yeh^{1,3,4} (¹Institute of Molecular Biology, National Chung Hsing University, Taichung, Taiwan, ²Kaohsiung District Agricultural Research and Extension Station, Ministry of Agriculture, Pingtung, Taiwan, ³Advanced Plant and Food Crop Biotechnology Center, National Chung Hsing University, Taichung, Taiwan, ⁴Biomufacturing and Process Research Center, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan)
- 2P166 Evaluation of temperature effects on stem fragments regeneration in the invasive alien plant *Alternanthera philoxeroides*
Kanata Arai, Naoki Hirotsu (Grad. Sch. Life Sci., Univ. Toyo)
- 2P167 Isolation and Characterization of Lead-Sensitive Mutants in *Arabidopsis thaliana*
Haruka Serizawa, Yuki Nisiyama, Izumi Yotsui, Teruaki Taji, Yoichi Sakata (Dept. of Bioscience., Tokyo Univ. of Agri)
- 2P168 Functional analysis of the rice transcription factor OsHsfA1a in the whole-plant level heat shock response
Yuhe Zhao, Tatsuki Tanaka, Junya Mizoi (Grad. Sch. Agr. Life Sci., Univ. Tokyo)
- 2P169 Identification of Transcription Factors Modulating High-Affinity Phosphate Transporter Expression
Jr-Han Lai¹, Yoshimi Nakano², Nobutaka Mitsuda², Masaru Ohme-Takagi^{2,3}, Ichiro Terashima¹, Chuan-Ming Yeh^{1,2,4} (¹Institute of Molecular Biology, National Chung Hsing University, Taichung, Taiwan, ²Biomufacturing and Process Research Center, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan, ³Institute of Tropical Plant Sciences and Microbiology, National Cheng Kung University, Tainan, Taiwan, ⁴Advanced Plant and Food Crop Biotechnology Center, National Chung Hsing University, Taichung, Taiwan)
- 2P170 Functional analysis of CrHRZ, a homolog of the ubiquitin ligase HRZ involved in iron nutrient responses, in a green alga *Chlamydomonas reinhardtii*
Haruka Shinkawa^{1,2}, Takanori Kobayashi¹, Kazuyuki Kuchitsu² (¹Res. Inst. Biores. Biotech., Ishikawa Pref. Univ., ²Dept. Appl. Biol. Sci., Fac. Sci. Tech., Tokyo Univ. Sci.)
- 2P171 Quantification of c-di-GMP Using a Biosensor in *Synechococcus elongatus* PCC7942
Koichiro Takatsuki, Chihiro Yamaguchi, Shinsuke Kutsuna (Grad. Sch. Bio. Nano., Univ. Yokohama City)

- 2P172 Application of salt tolerant genes identified from *Arabidopsis* to crop
Sanako Yokota¹, Hirotaka Ariga², Kanna Izawa¹, Izumi Yotsui¹, Yoichi Sakata¹, Teruaki Taji¹ (¹Dept. of Biosci., Tokyo Univ. of Agri, ²National Agriculture and Food Research Organization)
- 2P173 Responsibility of exopolyphosphatase gene for cellular response to sulfur starvation in *Synechocystis* sp. PCC 6803
Miki Kamimura, Mizuki Endo, Norihiro Sato (Tokyo University of Pharmacy and Life Sciences)
- 2P174 Changes in ascorbate levels in *Opuntia* (prickly pear cactus) in response to environmental stresses
Qiaochu Wang¹, Shuusuke Kawachi², Misaki Ito², Kazuya Yoshimura^{1,2} (¹Dept. Biol. Chem., Coll. Biosci. Biotech., Chubu Univ., ²Dept. Food Nutr. Sci., Coll. Biosci. Biotech., Chubu Univ.)
- 2P175 BZR1 Stability Is Coordinated by HSP101 and ATG8 to Regulate Thermotolerance in Rice Seeds
Yun-Sheng Hu, Senthil Kumar Rajendran, Ching-Hui Yeh (Department of Life Science, National Central University, Zhongli, Taoyuan, ROC)
- 2P176 A Novel Oxylinp KODA Improves Drought Tolerance in Lettuce (*Lactuca sativa*)
Toki Nakamura¹, Mineyuki Yokoyama², Naoto Kawakami², Hirokazu Ohno³, Hiromi Suzuki⁴, Yuichi Tada⁴ (¹Grad. Sch. Bio., Tokyo Univ. of Tech., ²Sch. Agri., Meiji Univ., ³Maruzen Pharmaceuticals Co., Ltd, ⁴Sch. Bio., Tokyo Univ. of Tech.)
- 2P177 Photoresponse Mechanisms under Monochromatic High-light Conditions in *Acaryochloris marina* MBIC 11017
Kanta Watanabe¹, Keita Miyake², Tatsuru Masuda^{1,2} (¹Grad, Sch, Sci., Univ. Tokyo, ²Grad, Sch, Arts Sci., Univ. Tokyo)
- 2P178 Plasmid Shuffling Supports Light Environment Adaptation in *Acaryochloris marina*
Keita Miyake¹, Tomonori Kashimoto³, Chikahiro Matsumoto³, Ryosuke Hasama⁶, Mayuko Sato⁴, Kiminori Toyooka⁴, Yu Kanesaki⁵, Wataru Iwasaki², Rei Narikawa⁶ (¹Grad, Sch, Arts Sci., Univ. Tokyo, ²Grad, Sch, Frontier Sci., Univ. Tokyo, ³Dep, Bio Sci, Faculty Sci., Shizuoka Univ, ⁴RIKEN., CSRS, ⁵Grad, Sch, Health Sci., Gunma Univ, ⁶Dep, Bio Sci, Grad, Sch, Sci., Tokyo Metropolitan Univ)
- 2P179 Alterations in oxidative stress responses in *Arabidopsis thaliana* high-polyploids
Suzuka Kikuchi¹, Futa Oura², Daiki Ito³, Takafumi Miyashita⁴, Hiroyuki Koga⁵, Kanae Nishii⁶, Akitoshi Iwamoto³ (¹Grad. Sch. Sci. and Technol. for Inov., Yamaguchi Univ., ²Fac. Agric., Yamaguchi Univ., ³Fac. Sci., Kanagawa Univ., ⁴Grad. Sch. Sci., Kanagawa Univ., ⁵Grad. Sch. Sci., Univ. Tokyo, ⁶Res. Inst. for Integrated Sci., Kanagawa Univ.)
- 2P180 Gibberellin biosynthesis contributes to plant tolerance to combined heat and high light stress in *Arabidopsis*
Tomoya Hotta, Mayu Nawata, Naoki Takahashi (Sch. Agri., Meiji Univ.)
- 2P181 Unraveling the transcriptional regulation of bioactive polysaccharide biosynthesis in *Dendrobium* Taiseed Tosnobile
Kai-Lun Yeh¹, Su-Hui Liu¹, Chi-Luan Wen², Ichiro Terashima¹, Chuan-Ming Yeh^{1,3,4} (¹Institute of Molecular Biology, National Chung Hsing University, Taichung, Taiwan, ²Seed and Seedling Testing Section, Taiwan Seed Improvement and Propagation Station, Ministry of Agriculture, Taichung, Taiwan, ³Advanced Plant and Food Crop Biotechnology Center, National Chung Hsing University, Taichung, Taiwan, ⁴Biomufacturing and Process Research Center, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan)
- 2P182 Vacuolar dynamics of *Arabidopsis* root tips after release of osmotic pressure revealed by electron microscopy
Mayumi Nakayama^{1,2}, Mayumi Wakazaki³, Yumi Goto³, Mayuko Sato³, Kiminori Toyooka³ (¹Organization for Research Promotion, Tohoku Univ., ²Grad. Sch. Life Sci, Tohoku Univ., ³RIKEN CSRS)
- 2P183 Investigation of candidate genes involved in the alleviation of salt stress by silicon dioxide nanoparticles in rice
Ryoichi Araki^{1,2}, Hidetoshi Miyazaki³, Ping An⁴ (¹Fac. Edu., Wakayama Univ., ²Ctr. Food Agric. Res. Edu., Wakayama Univ., ³Sci. Res. Unit, The Glob. Environ. Forum, ⁴Arid Land Res. Ctr., Tottori Univ.)
- 2P184 A Preliminary Study on Habitat Conditions and Population Structure of the Endangered *Aster altaicus* Willd. in Eastern Taiwan
Chun Han Chen (National Taitung University)
- 2P185 Functional analysis of *LOC_Os06g36590 (OsKEA3)* in ion homeostasis and its potential involvement in grain filling
Li-Yen Lin¹, Nobuhiro Tanaka², Kiyoshi Yamazaki¹, José M. Pardo³, Francisco Javier Quintero³, Imelda Mendoza³, Hideki Takanashi¹, Yoshihiro Ohmori¹, Takehiro Kamiya¹, Toru Fujiwara¹ (¹Grad. Sch. Agr. Life Sci., Univ. Tokyo, ²Inst. Crop. Sci., NARO, ³Inst. Plant Biochem. & Photosynth, CSIC–Univ. of Seville, Spain)
- 2P186 Elucidation of morphological regulation mechanism of curly leaf in parsley
Shinnosuke Ishino¹, Eri Kamon¹, Takeshi Ishimizu^{1,2}, Kazuya Ishikawa² (¹College of Life Sciences, Ritsumeikan University, ²R-GIRO, Ritsumeikan University)

- 2P187 Ethanol application enhances drought stress tolerance in cabbage
Shunsuke Adegawa^{1,2}, Daisuke Todaka¹, Junko Ishida¹, Maho Tanaka¹, Tomoyuki Takeda¹, Farhan Aziz¹, Motoaki Seki^{1,2,3} (¹Plant Genomic Network Research Team, RIKEN Center for Sustainable Resource Science, ²Graduate School of Science and Engineering, Saitama University, Saitama, ³Kihara Institute for Biological Research, Yokohama City University)
- 2P188 Analysis of quantitative trait loci associated with photosynthetic adaptation to iron deficiency in barley
Karin Irie¹, Soichiro Matsuoka¹, Takehiro Kobayashi¹, Mayuko Furuhashi¹, Nobuhiro Tanaka², Yusuke Shikanai¹, Akihiro Saito¹, Kyoko Higuchi¹ (¹Grad. Sch. Appl. Biosci., Tokyo Univ. Agri., ²Inst. Crop. Sci, NARO)
- 2P189 Functional analysis of rice small Heat Shock Proteins (sHSPs) under heat stress conditions
Minaho Aramaki¹, Toyohiro Tanaka¹, Yuki Kojima¹, Junya Mizoi², Fuminori Takahashi^{1,3} (¹Grad. Sch. Fac. Adv. Eng., TUS, ²Grad. Sch. Agr. Life Sci., Univ. Tokyo, ³Fac. Adv. Eng., TUS)
- 2P190 Effect Of Heterologous Minor-Type Ferredoxin AtFd1 In *Solanum Lycopersicum* Against *Ralstonia Solanacearum* Rd4 And Heat Stress
Bing Rong Chiu, Chong Yu Lin, Wen Chi Fang, Xiang En Huang (National Taitung university)
- 2P191 Pyramiding of wild rice QTLs enhanced grain yield under low nitrogen conditions
Bright Gyamfi Adu¹, Yoshihiro Ohmori², Toru Fujiwara¹, Akifumi Shimizu³, Hiroaki Hayashi⁴ (¹Grad. Sch. SCI., Univ. of Tokyo, ²Agricultural Bioinformatics Research Unit, The University of Tokyo, ³School of Environmental Science, University of Shiga Prefecture, ⁴Hayashi Farm, Kunisaki City, Oita)
- 2P192 Isolation of Heavy-ion beam-Induced Mutants and Alkaline Stress Response in the Minimal-Gene-Set Green Alga *Medakamo hako*
Yayoi Inui¹, Yoji Okabe¹, Hayato Ozaki¹, Shinichiro Maruyama¹, Kazuhide Tsuneizumi², Tsuyoshi Takeshita^{1,3}, Mayuko Sato⁴, Kiminori Toyooka⁴, Tomoko Abe², Sachihiko Matsunaga¹ (¹Grad. Sch. of Front. Sci., Univ. of Tokyo, ²RIKEN Nishina Center for Accelerator-Based Science, ³Graduate School of Human and Environmental Studies, Kyoto University, ⁴RIKEN Center for Sustainable Resource Science)
- 2P193 Isolation and genetic analyses of *salt overly tolerant4* and *6* mutants of *Arabidopsis*
Tomoyo Ohashi¹, Akito Hosoi², Izumi Yotsui¹, Yoichi Sakata¹, Teruaki Tajiri¹ (¹Dept. of Biosci., Tokyo Univ. of Agri., ²Nodai Genome Research Center)
- 2P194 Analysis of molecular functions of brassinosteroid signaling factor BIL7 in environmental stress resistance
Shogo Kitayama¹, Kaisei Nishida¹, Ayumi Yamagami¹, Tadao Asami², Takeshi Nakano¹ (¹Grad. Sch. Bio., Univ. Kyoto, ²KIBR, Yokohama City Univ)
- 2P195 Identification of the locus responsible for the long-term heat tolerance of *Arabidopsis thaliana* Berg-1
Asumi Kitashima¹, Goro Masuda², Izumi Yotsui¹, Yoichi Sakata¹, Teruaki Tajiri¹ (¹Dept. of Biosci., Tokyo Univ. of Agri, ²Nodai genome research center)
- 2P196 DGD1 is Essential for Regulating the Number of Chloroplasts in the Guard Cells of *Arabidopsis*
Li-Xin Zhang, Chun-Wei Yu (Institute of Molecular and Cellular Biology, National Taiwan University)
- 2P197 Quinoa: an emerging model experimental plant with high nutritional value and adaptability to harsh environments
Yasunari Fujita^{1,2}, Yasufumi Kobayashi¹, Miki Fujita³, Takuya Ogata¹, Yukari Nagatoshi¹, Yasuo Yasui⁴ (¹JIRCAS, ²Grad. Sch. Life Environ. Sci., Univ. Tsukuba, ³RIKEN CSRS, ⁴Grad. Sch. Agr., Kyoto Univ.)
- 2P198 Deciphering the mechanisms of copper tolerance through transcriptome analysis in two contrasting rice cultivars with different Cu toxicity phenotypes
Min-Yu Yang¹, Chin-Yu Wu², Chwan-Yang Hong¹ (¹Department of Agricultural Chemistry, National Taiwan University, Taipei, Taiwan, ²Department of Plant Industry, National Pingtung University of Science and Technology, Pingtung, Taiwan)
- 2P199 Increased anthocyanin accumulation and plant growth by driving *PAP1* expression using the 3' downstream region of the sulfate transporter *SULTR2;1* gene
 Nguyen Ha Trang, Abdul Wakil Sulemana, Moeka Fujita, Li Hongqiao, Akiko Maruyama (Kyushu University)
- 2P200 Potential Involvement of PIF4 Protein Interactions in NO₂-Responsive Growth
Misa Takahashi, Atsushi Sakamoto (Graduate School of Integrated Sciences for Life, Hiroshima University)

■ Plant-organism interaction A

- 2P201 Mechanism of induction of plant immune responses by a bacterial endophyte, *Delftia* sp. BR1R-2
Takafumi Hashimoto, Seiya Takeishi, Ryo Sato, Kazuyuki Kuchitsu, Toshiki Furuya (Dept. Appl. Biol. Sci., Tokyo Univ. of Sci.)

- 2P202 miR396 controls *SVP* and *CIB4* accumulation while SVP bypasses direct interaction with PHYLL1
Bing-Nan Shen, Yu-Ling Hung, Zhao-Jun Pan, Supidcha Jirawitchalerl, Huong Giang Nguyen, Shih-Shun Lin (Inst. Biotech., NTU)
- 2P203 Decoding Lipid-based Molecular Dialogues Between Plants And Microorganisms
Lin-Jie Shu¹, Anuphon Laohavisit², Takamasa Suzuki³, Yasuhiro Kadota¹, Ken Shirasu¹ (¹Plant Immunity Group, CSRS, RIKEN, ²Institute of Transformative Bio-Molecules, Nagoya University, ³Department of Biological Chemistry, Chubu University)
- 2P204 Unraveling the role of a lncRNA near plant immune receptor gene *SNC1*
Takuma Horimoto¹, Misaki Chino¹, Tokuji Tsuchiya², Hiroshi Uchiyama¹ (¹Grad. Sch. Bioresource Sci., Nihon Univ., ²The Sainsbury Laboratory, Norwich, UK)
- 2P205 Expression Analysis of Defense-Related Genes in *Arabidopsis thaliana* Treated with Fermented Botanical Product (FBP)
Yuri Mizuno¹, Ryota Kato², Shigeyuki Betsuyaku², Kotaro Fujioka¹, Hideto Torii¹ (¹Manda Fermentation Co. Ltd., ²Fac. Agric., Ryukoku Univ.)
- 2P206 Elucidation of plant-herbivore interactions mediated by VOCs in plant immunity
Miyu Watanabe¹, Kazuha Mori¹, Hiroshi Mori¹, Liu Zhang², Rintaro Moriyama², Ryosuke Sugiyama^{3,4}, Shinya Ariyasu¹, Osami Shoji¹, Kenji Matsui⁵, Akiko Maruyama², Kanako Sekimoto^{4,6}, Mika Nomoto^{1,4,7}, Yasuomi Tada^{1,7} (¹Grad. Sch. Sci., Nagoya Univ., ²Grad. Sch. Agr., Kyusyu Univ., ³Grad. Sch. Pharm. Sci., Chiba Univ., ⁴JST, PRESTO, ⁵Grad. Sch. Sci. Tech. Innov., Yamaguchi Univ., ⁶Grad. Sch. Nanobiosci., Yokohama City Univ., ⁷Centr. Gene Res., Nagoya Univ.)
- 2P207 A novel rice transcription factor modulates AM symbiosis by interacting with SLR1 and PHR2 and recognizing specific motifs
Pei-Jung Chen, Wan-Ning Kuo, Man-Chi Ho, Yu-Ting Chang, Zheng-Lin Guo, Hsuan-Chih Shih, Shu-Yi Yang (Institute of Plant Biology, Department of Life Science, National Taiwan University, Taipei, Taiwan)
- 2P208 Nutrient-dependent Volatile Signaling by *Pseudomonas aeruginosa* Shapes *Arabidopsis* Growth Outcomes
Yuniar Devi Utami¹, Atsushi Suwa², Atsushi Minami², Kei Hiruma¹ (¹Grad. Sch. Arts and Sci., Univ. Tokyo, ²Dept. Chem., Science Tokyo)
- 2P209 Expression analysis of *NIN* in *Lotus japonicus* treated with spermine
Moe Shinozaki¹, Sho Okamoto², Kensuke Kawade² (¹Fac. Sci., Univ. Saitama, ²Grad. Sch. Sci., Univ. Saitama)
- 2P210 Analysis of Symbiotic Responses to Nitrogen-Fixing Bacteria in the Strawberry Rhizosphere
Miyabi Sakata¹, Marika Umetsuki¹, Yoshikazu Shimoda², Sachiko Isobe³, Hideki Hirakawa⁴, Kenta Shirasawa⁵, Takashi Soyano⁶, Masayoshi Kawaguchi⁶, Takuya Suzaki⁷, Akiyoshi Tominaga⁸, Shigeru Hanano⁹, Shusei Sato⁹, Toshiki Uchiumi¹, Mitsutaka Fukudome¹ (¹Grad. Sch. Sci. and Eng., Univ. Kagoshima, ²Inst. Agrobiol. Sci., NARO, ³Grad. Sch. Agri. Life Sci., Univ. of Tokyo, ⁴Grad. Sch. Biores. and Bioenviron., Univ. Kyushu, ⁵Kazusa DNA Res. Inst., ⁶NIBB, ⁷Life Environ Sci., Univ. Tsukuba, ⁸Fac. Agric., Univ. Shizuoka, ⁹Grad. Sch. Life Sci., Univ. Tohoku)
- 2P211 Unraveling CEP2 Upstream Signaling and the Role of Tomato ECIPI in Lateral Root Regulation
Shu-Rui Yang, Yu-Chi Zhao, Shu-Yi Yang (Institute of Plant Biology, Department of Life Science, National Taiwan University, Taipei, Taiwan)
- 2P212 Analysis of organelle dynamics during rhizobial infection in *Lotus japonicus*
Kazusato Oikawa^{1,2}, Sachiko Tanaka¹, Takashi Soyano^{1,2}, Masayoshi Kawaguchi^{1,2} (¹Divi. Symb. Sys., NIBB, ²School of Life Science, SOKENDAI)
- 2P213 Functional Analysis of Caffeate O-methyltransferase in Root Nodule Symbiosis
Yuki Ueuchi¹, Akito Hase¹, Shoko Inaba¹, Akira Akamatsu², Naoya Takeda¹ (¹Grad. Sch. of Sci. and Eng., Univ. Kwansai Gakuin, ²CSRS)
- 2P214 Function of trehalase in autotrophic plant–fungal interactions
Takaya Tominaga¹, Risa Sasaki¹, Ayae Sakai², Hironori Kaminaka³ (¹Grad. Sch. Sci. and Tech., NAIST, ²United Grad. Sch. Agr., Tottori Univ., ³Fac. Agr., Tottori Univ.)
- 2P215 Identification of biosynthesis enzymes for Myc-LCOs, key signaling molecules in arbuscular mycorrhizal symbiosis
Daiki Sano¹, Rin Mamiya¹, Taro Maeda², Atsushi J. Nagano², Satoshi Kondo³, Shoko Inaba¹, Akira Akamatsu⁴, Naoya Takeda¹ (¹Grad. Sch. of Sci. and Eng., Univ. Kwansai Gakuin, ²Univ. Keio, ³Toyota Conpon Research Institute, ⁴RIKEN • CSRS)
- 2P216 Model-guided microbiome engineering for crop resilience
Shinichi Yamazaki^{1,2}, Masaru Nakayasu³, Keiko Kanai³, Rie Mizuno³, Rumi Kaida⁴, Sachiko Masuda², Arisa Shibata², Ken Shirasu², Atsushi J. Nagano^{5,6}, Yoshiharu Fujii⁴, Akifumi Sugiyama³, Yuichi Aoki^{1,7} (¹ToMMo, Tohoku Univ., ²CSRS, RIKEN, ³RISH, Kyoto Univ., ⁴Tokyo Univ. of Agri. Tech., ⁵BBC, Nagoya Univ., ⁶IAB, Keio Univ., ⁷GSIS, Tohoku Univ.)

- 2P217 Nutrient-dependent co-inoculation effects of the fungus *Colletotrichum tofieldiae* and multiple bacteria in *Arabidopsis thaliana*
Risa Ayano, Yuniar Devi Utami, Kei Hiruma (Grad. Sch. Arts and Sci., Univ Tokyo)
- 2P218 G Protein-Mediated Perception of Plant Phenolics Regulates UmPR-1La-Dependent Filamentation in *Ustilago maydis*
Pin Chih Chang¹, Minh-Quang Chau^{1,2}, Lay-Sun Ma¹ (¹Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan, ²Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, Chung-Hsing University and Academia Sinica, Taipei, Taiwan)
- 2P219 Elucidating the Genetic Basis of Strigolactone Signaling in *Colletotrichum tofieldiae*-Mediated Plant Growth Promotion
Momoko Takagi, Masami Nakamura, Kei Hiruma (Grad. Sch. Arts and Sci., Univ. Tokyo)
- 2P220 Function of cysteinyl-tRNA synthetase of rhizobia in the root nodule symbiosis with *Lotus japonicus*
Mitsutaka Fukudome¹, Asuka Ikuta², Mika Nomura², Toshiki Uchiumi¹ (¹Grad. Sch. of Sci. and Eng. Kagoshima Univ., ²Fac. of Agri. Kagawa Univ.)
- 2P221 Unipolar polysaccharide-mediated attachment of the N₂O-reducing bacterium *Bradyrhizobium ottawaense* SG09 to plant roots
Yudai Takeguchi¹, Ryota Shibuya¹, Momoi Kondo², Natsuki Yamamoto², Eriko Betsuyaku², Manabu Itakura³, Kiwamu Minamisawa³, Masayuki Sugawara⁴, Shigeyuki Betsuyaku² (¹Graduate School of Agriculture, Ryukoku University, ²Faculty of Agriculture, Ryukoku University, ³Graduate School of Life Sciences, Tohoku University, ⁴Department of Life and Food Sciences, Obihiro University of Agriculture and Veterinary Medicine)
- 2P222 Plasticity of interactions between plants and root symbiotic bacteria and fungi in solfatara fields
Akifumi Murata¹, Mikihito Noguchi¹, Keitaro Fukushima², Hirokazu Toju³ (¹Grad. Sch. Sci., Univ. Kyoto, ²Sch. Food & Agri., Univ. Fukushima, ³Grad. Sch. Bio., Univ. Kyoto)
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Masahiko Otani¹, Yui Onodera¹, Haruka Ohno², Ryota Suzuki³, Tomohiko Harada³, Shun Hashimoto³, Masaru Bamba⁴, Kotaro Nishiyama¹, Shusei Sato³, Yoshiya Seto^{1,2} (¹Sch. Agri., Meiji. Univ., ²Grad. Sch. Agri., Meiji. Univ., ³Grad. Sch. Life Sci., Tohoku Univ., ⁴Fac. Agri., Shizuoka Univ.)
- 2P224 TurboID-Based Profiling Reveals Molecular Links Between XA21 Signaling and WRKY62-Mediated Immune Regulation in Rice
Ching-Hong Chao (Department of Life Sciences, National Central University, Taoyuan, Taiwan)
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Tsung-Chi Chen (Department of Life Sciences, National Central University)
- 2P226 Identification of rice genes involved in regulating the abundance of iron-reducing bacteria in the rhizosphere soil
Chikashi Tanaka¹, Chikako Shimoshige¹, Li-Yen Lin¹, Zhihang Feng¹, Hiroto Ohba², Yoko Masuda^{1,3}, Keishi Senoo^{1,3}, Yoshihiro Ohmori¹, Toru Fujiwara¹ (¹Grad. Sch. Agr. Life Sci., Univ. Tokyo, ²Niigata Agr. Res. Inst., ³CRIIM, Univ. Tokyo)
- 2P227 Functional Analysis of Actin Depolymerizing Factors in the Response to Brassicaceae Anthracnose
Miku Ohashi¹, Sakura Aoki¹, Takashi L. Shimada², Takashi Ueda³, Masaaki Umeda⁴, Noriko Inada¹ (¹Sch. of Agri., Osaka Metropolitan Univ., ²Grad. Sch. of Horticult., Chiba Univ., ³NIBB, ⁴Adv. Sci., NAIST)
- 2P228 The potyviral suppressor HC-Pro^{Tu} inhibits miRNA methylation and cooperates with HESO1 to destabilize AGO1 in *Arabidopsis thaliana*
Huong Giang Nguyen, Bing-Nan Shen, Shih-Shun Lin (Institute of Biotechnology, National Taiwan University)

■ Genome function/gene regulation

- 2P229 Equipping *A. halleri* gemmifera with Genetics: A Perennial Framework for All-Season Epigenetic Memory
Shuiyi Liu, Annisa Krama, Hiroshi Shiba, Diana Buzas (Tsukuba-Plant Innovation Research Centre and Faculty of Life and Environmental Sciences, University of Tsukuba)
- 2P230 Hc-Pro insertion change whole-genome DNA methylation and increases structural variation in *Arabidopsis thaliana*
Yi-Hsuan Li¹, Liang-He Chen², Yu-Shin Nai^{1,3}, Shih-Shun Lin² (¹Doctoral Program in Microbial Genomics, National Chung Hsing University and Academia Sinica, Taiwan, ²Institute of Biotechnology, National Taiwan University, Taipei, Taiwan, ³Department of Entomology, National Chung Hsing University, Taichung City, Taiwan)
- 2P231 Comparative analysis of spatial arrangement of chromosomal domains among *Arabidopsis* ecotypes
Kento Yano¹, Natsumaro Kutsuna², Takuya Sakamoto¹ (¹Grad. Sci., Kanagawa Univ, ²LPIXEL Inc)

- 2P232 Multi-omics Analyses Provide Insights Into The Interplay Between DNA Methylation And Transcriptional Programs During Black Raspberry (*Rubus occidentalis*) Fruit Ripening
Wei-Hsun Hsieh^{1,2}, Yu-Hung Hung^{3,4}, Jian-Hui Zhang^{3,4}, Han-Yi Chen^{3,4}, Liang-Peng Lin^{1,2}, Meng-Hsun He^{1,2}, Yen-Ching Wang^{1,2}, Yu-Yu Ho^{1,2}, Gina Fernandez⁵, Penelope Perkins-Veazie^{4,5}, Brandon Le⁶, Xu Li^{3,4}, Tzung-Fu Hsieh^{3,4}, Jer-Young Lin^{1,2}
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- 2P233 Suppressor analysis of the *Arabidopsis droll* mutant reveals ABA-like signaling triggered by intron-retaining mRNAs
Takamasa Suzuki (Col. Biosci. Biotech., Chubu Univ.)
- 2P234 DCL4 functions in reproductive stage in *Marchantia polymorpha*
TzuYu Wang, Jia-Zhen Yu, Yu-Ling Hung, Shih-Shun Lin (National Taiwan University)
- 2P235 DCP5 recruits selective mRNAs to processing bodies to ensure the developmental precision of young Arabidopsis seedlings
Tsen Ying Lin¹, Sim Lin Lim², Shu-Hsing Wu¹ (¹Institute of Plant and Microbial Biology, Academia Sinica, ²Biodiversity Research Center, Academia Sinica)
- 2P236 Formation of useful agricultural traits via flavonoid-mediated regulation of Dicer activity
Toshiyuki Fukuhara, Riho Yamanashi, Kazunori Kuriyama (Tokyo University of Agriculture & Technology)
- 2P237 MpDCL4 Generates Both miRNA-like and siRNA Species to Regulate Male Gamete Differentiation in *Marchantia polymorpha*
Yu-Ling Hung (Institute of Biotechnology, National Taiwan University)
- 2P238 MAC3A and MAC3B regulate the alternative splicing of RNA-binding proteins in flowering time regulation
Yun-Tung Ly¹, Hsin-Yu Hsieh², Wen Dar Lin², Shih-Long Tu², Chin-Mei Lee¹ (¹Institution of Plant Biology, National Taiwan University, Taipei, Taiwan, ²Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan)
- 2P239 Regulation of the free-running period length via alternative splicing of the central circadian clock oscillator gene *PRR7* in *Arabidopsis thaliana*
Seiya Izawa, Marina Kishi, Chiaki Teramae, Yusuke Takata, Takafumi Yamashino (Grad. Sch. Bioagri. Sci., Nagoya Univ.)
- 2P240 AtCFI function on gene expression regulation through cleavage and polyadenylation site regulation at the 3' ends of pre-mRNAs
 Xiaojuan Zhang¹, Lukasz Szewc^{2,3}, Mateusz Bajczyk², David Bielewicz⁴, Kei Yura^{5,6,7}, Miku Odoi¹, Cyrose Suzie Silvosa-Millado^{1,8}, Mariko Kato¹, Marta Garcia-León⁹, Vicente Rubio⁹, Mika Nomoto¹⁰, Yasuomi Tada¹⁰, Tsuyoshi Furumoto¹¹, Zofia Szweykowska-Kulinska², Dorothee Staiger³, Takashi Aoyama¹, Artur Jarmolowski², Tomohiko Tsuge¹ (¹ICR/Grad. Sch. Sci., Kyoto Univ., ²Inst. Mol. Biol. Biotech., Adam Mickiewicz Univ., ³Biology, Bielefeld Univ., ⁴WCAT, ⁵Grad. Sch. Humanit. Sci., Ochanomizu Univ., ⁶Ctr. Interdiscip. AI and Data Sci., Ochanomizu Univ., ⁷Sch. Adv. Sci. Eng., Waseda Univ., ⁸DBSES, Univ. Philippines Mindanao, ⁹CNB-CSIC, ¹⁰Ctr. Gene Res., Nagoya Univ., ¹¹Sch. Agric., Ryukoku Univ.)
- 2P241 Characterization of Spliceosome Associated Protein 130 (SAP130L) Like Protein in Arabidopsis
Cyrose Suzie Silvosa-Millado^{1,2}, Kei Yura^{3,4}, Vicente Rubio⁵, Shiori S. Aki⁶, Mariko Kato¹, Tomohiko Tsuge¹ (¹ICR/ Grad. Sch. Sci., Kyoto Univ., ²DBSES, CSM, Univ. Philippines Mindanao, ³Grad. Sch. Humanit. Sci., Ochanomizu Univ., ⁴Sch. Adv. Sci. Eng., Waseda Univ., ⁵CNB-CSIC, ⁶Biol. Life Sci., Fac. Sci. Eng., Yamato Univ.)
- 2P242 Genome-wide survey of ribosome collision in de-etiolating Arabidopsis
Yueh Cho, Shu-Hsing Wu (Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan)
- 2P243 Loss of both wobbleU₃₄ modifications in mcm^s2U tRNAs impairs rRNA biosynthesis, growth, and development in *Arabidopsis thaliana*
Yumi Nakai¹, Yukio Kurihara², Yuko Makita³, Gorou Horiguchi⁴, Kosei Iwabuchi⁵, Akiko Harada⁵, Masato Nakai⁶, Takato Yano¹
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- 2P244 Upstream ORF-mediated translational regulation of the Arabidopsis *CIPK6* gene in response to sugar starvation
Miyu Kitagawa, Ke Ma, Mariko Takemoto, Karin Murakami, Taihei Karino, Yuta Hiragori, Satoshi Naito, Hitoshi Onouchi (Grad. Sch. Agr., Hokkaido Univ.)
- 2P245 Investigation of peptide sequences that affect mRNA translation in *Arabidopsis thaliana*
Daichi Araki, Yuhei Chadani, Taku Takahashi (Grad. Sch. Env. Lif. Nat. Sci. Okayama Univ.)

- 2P246 Optimized Ribosome Profiling Reveals New Insights Into Translational Regulation In Synchronized *Chlamydomonas reinhardtii* Cultures
Yen-Ling Lin^{1,2}, Eva Yuhua Kuo^{1,2,3}, Shih-Yi Wang^{1,2}, Chih-Chi Lee^{1,2}, Su-Chiung Fang^{1,2,3} (¹Agricultural Biotechnology Research Center, Academia Sinica, Taipei, Taiwan, ²Biotechnology Center in Southern Taiwan, Academia Sinica, Tainan, Taiwan, ³Department of Marine Biotechnology and Resources, National Sun Yat-sen University, Kaohsiung, Taiwan)
- 2P247 SUMO protease SMT7 modulates cell division through translation
Yu-Hua Kuo^{1,2,3}, Shih-Yi Wang^{1,2}, Yen-Ling Lin^{1,2}, Su-Chiung Fang^{1,2,3} (¹Biotechnology Center in Southern Taiwan, Academia Sinica, ²Agricultural Biotechnology Research Center, Academia Sinica, ³Department of Marine Biotechnology and Resource, Sun Yat-Set University)
- 2P248 Investigating the role and the regulatory mechanisms of eIF4E in light and heat responses
Chih-Yung Fan (Department of Biochemical Science and Technology, National Taiwan University)
- 2P249 Modulating AtJ3 Prenylation to Investigate Plant Thermotolerance in Arabidopsis
Yun-Jen Chang, Jia-Rong Wu, Pei-Hua Chang, Rida Zhora, Shaw-Jye Wu (Department of Life Science, National Central University, Taoyuan, Taiwan)
- 2P250 Exploring the Role of SUMO-Specific Proteases in Size-Dependent Cell Division in *Chlamydomonas reinhardtii*
Hua-Chen Chang^{1,2,3}, Yen-Ling Lin^{2,3}, Su-Chiung Fang^{1,2,3} (¹Institute of Tropical Plant Sciences and Microbiology, National Cheng Kung University, Tainan, Taiwan, ²Biotechnology Center in Southern Taiwan, Academia Sinica, Tainan, Taiwan, ³Agricultural Biotechnology Research Center, Academia Sinica, Taipei, Taiwan)
- 2P251 Functional Analysis of Cytosolic Thioredoxins in the Primitive Red Alga *Cyanidioschyzon merolae*
Rihito Hayashi, Kan Tanaka, Keisuke Yoshida (CLS, Science Tokyo)
- 2P252 A concerto orchestrated between *O*-GlcNAcylation and salinity stress
Pei-Wen Lo¹, Keiko Kano¹, Jiun-Jie Shie², Emi Mishiro-Sato¹, Akira Yoshinari¹, Wolf B. Frommer^{1,4}, Masayoshi Nakamura^{1,3} (¹ITbM, Nagoya University, ²Institute of Chemistry, Academia Sinica, ³Dept. Biochem. Mol. Biol., Saitama U., ⁴Heinrich Heine University)
- 2P253 Functional analysis of *Prochlorococcus* NATL1A KaiC in vitro
Daisuke Kawanaka, Shinsuke Kutsuna, Kento Yosida (Grad. Micro. Sci., Univ. Yokohama)
- 2P254 Identification of miR159 in MpAGO1 Highlights Its Regulatory Roles with miR319 in Marchantia polymorpha
Jia-Ling Guo¹, Jia-Zhen Yu¹, Phuong Anh Tran¹, Christian Møller², Shih-Shun Lin¹ (¹Institute of Biotechnology, National Taiwan University, Taipei, Taiwan, ²Department of System Biology, Yonsei University, Seoul, Korea)
- 2P255 Decoding 3' UTR-mediated Nonsense-mediated mRNA Decay in Arabidopsis with Degradome Profiling and Machine Learning
Tzu-Hsiang Lin^{1,2,3}, Wen-Chi Lee¹, Tze-Ching Chan¹, Bo-Han Hou¹, Ho-Ming Chen^{1,2} (¹Agricultural Biotechnology Research Center, Academia Sinica, Taiwan, ²Bioinformatics Program, Taiwan International Graduate Program, National Yang Ming Chiao Tung University, Academia Sinica, Taiwan, ³Institute of Biomedical Informatics, National Yang Ming Chiao Tung University, Taiwan)

■ Systems biology

- 2P256 Exploring understudied genes and proteins responsive to the phytohormone abscisic acid by integrating omics data
Takuya Yoshida^{1,2} (¹Trans-Omics Facility, NIBB, ²Basic Biology Program, SOKENDAI)
- 2P257 A database for exploring transcriptomic effects of chemical and genetic perturbations
Haying Lee^{1,2}, Hiroki Yagi³, Ayato Sato⁴, Atsushi J. Nagano^{2,5} (¹Faculty of Agriculture, Ryukoku Univ., ²Bioscience and Biotechnology Center, Nagoya Univ., ³Sch Vet Med, Kitasato Univ., ⁴WPI-ITbM, Nagoya Univ., ⁵IAB, Keio University)
- 2P258 MiRiQ3.0: an updated database for *in silico* screening of rice mutants
Takahiko Kubo¹, Yoshiyuki Yamagata¹, Takehiko Ogura¹, Hiroaki Matsusaka¹, Atsushi Toyoda², Yutaka Sato², Toshihiro Kumamaru¹ (¹Fac. Agr. Kyushu Univ., ²National Inst. Genetics)

■ New Technology

- 2P259 Establishment of a Non-sterile Double Flowering Technology in *Eustoma grandiflorum* by Genome Editing of the *EgAP2* Homologous Gene
Shiori Sakamoto¹, Yukiko Shimbo¹, Noriko Ohnuma², Yuriko Ikeda¹, Tsubasa Yano³, Maki Ohtsubo¹, Kimitoshi Sakaguchi², Takashi Kasai², Teruhiko Terakawa³, Kazuyoshi Fujita⁴, Seiji Takeda^{1,5}, Norihiro Ohtsubo¹ (¹Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ., ²Miyoshi & Co., Ltd., ³Inplanta Innovations Inc., ⁴Miyoshi Agritech & Co., Ltd., ⁵FSE, Yasuda Women's Univ.)
- 2P260 Development of efficient and accurate prime editing system in plants
Ayako Nishizawa-Yokoi¹, Keiko Iida¹, Akiko Mori¹, Miho Takemura², Yutaro Shuto³, Ryoya Nakagawa³, Osamu Nureki³, Seiichi Toki^{4,5} (¹Inst. Agrobiol. Sci. s, NARO, ²Res. Inst. Biores. Biotech., Ishikawa Pref. Uni., ³Grad. Sch. Sci., Univ. Tokyo, ⁴Grad. Sch. Nanobiosci., Yokohama City Univ., ⁵Fac. Agric., Ryukoku Univ.)
- 2P261 Organelle-Specific Random Mutagenesis by N-recognizing TALE Repeats Fusion Proteins
Chiyo Fujii, Nanami Kosaka, Issei Nakazato, Shin-ichi Arimura (Grad. Sch. Agri. and Life Sci., Univ. Tokyo)
- 2P262 Attempt to establish a method to evaluate chloroplast translation rates by using anti-ribosome antibodies
Daiki Nishikawa, Sho Fujii (Fac. Agri. Life Sci., Univ. HIROSAKI)
- 2P263 The influence of positive charge on *A. thaliana* root growth
Marcel Pascal Beier¹, Liyu Deng², Fernando Arteaga Arteaga³ (¹Soil Plant Multi-Dyn. Res. Unit, Fukushima Inst. Res. Edu. Innov., ²Hokkaido Univ., ³Nat. Inst. Tech, Tomakomai Coll.)
- 2P264 Developing a Molecular Method for Interspecific Identification of *Nannochloropsis*
Chun Fan Chang, Chun-Wei Yu (Institute of Molecular and Cellular Biology, National Taiwan University)
- 2P265 Percoll gradient pre-treatment improves the quality of high molecular DNA in *Streptocarpus*
Kanae Nishii^{1,2}, Michelle Hart², Nathan Kelso², Sadie Barber², Michael Moeller² (¹Kanagawa Uni, ²Roy. Bot. Gard. Edinburgh)
- 2P266 Development of cellulose structure-based hydrogels aimed at application in plant cultivation
Nozomi Kamiya¹, Shusuke Okamoto², Kentaro Tamura², Daisuke Nagai² (¹Grad. Sch. Integ. Pharma. Nutri. Sci., Univ. Shizuoka, ²Sch. Food Nutri. Sci., Univ. Shizuoka)
- 2P267 Development and Research Support of Plant Hormone Analysis
Emi Yumoto¹, Koji Miyamoto^{1,2}, Masashi Asahina^{1,2} (¹Adv. Inst. Anal. Ctr., Teikyo Univ., ²Env. & Biotech., Dept. Integ. Sci. & Eng., Teikyo Univ.)
- 2P268 RIKEN CSRS Metabolome and Phytohormone Analysis Platform 2026 Supporting Research of Plant Physiology
Tetsuya Mori, Yuta Ihara, Mikiko Kojima, Makoto Kobayashi, Ryosuke Sasaki, Muneo Sato, Kouji Takano, Yumiko Takebayashi, Yutaka Yamada, Masami Y. Hirai (RIKEN CSRS)