

# GENERAL PRESENTATIONS

## PROGRAM OF POSTER PRESENTATIONS

- Poster viewings and discussions will be carried out using the ORSAM portal site and its Comments section during the annual meeting (from March 10th, 9:00 to March 14th, 16:00).
- Poster discussions using Zoom Meeting are also scheduled for from March 13th, 9:00 to 16:00. It should be noted that it is NOT necessary for a presenter to create and register a Zoom ID. The organizing committee will arrange the Zoom Meeting for poster discussion.
- Poster numbers are divided into PA–PD groups, and core times have been set for each group during the time periods listed below. Presenters are requested to enter their respective Zoom breakout rooms during the corresponding core time and discuss with the participants.

March 13th (Mon) AM PA/PB: 9:00–10:30, PC/PD: 10:30–12:00

March 13th (Mon) PM PA/PC: 13:00–14:30, PB/PD: 14:30–16:00

## ■ Photosynthesis

### PA Fri., March 17 09:00–10:30 / 13:00–14:30

- PA-001 Dehydration of zinc bacteriochlorophyllide *d* and its homologs by BchF and BchV catalyzing the hydration of C3-vinyl group, and its application  
Mitsuaki Hirose<sup>1</sup>, Yusuke Tsukatani<sup>2</sup>, Jiro Harada<sup>3</sup>, Hitoshi Tamiaki<sup>1</sup> (<sup>1</sup>Grad. Sch. Life Sci., Ritsumeikan Univ., <sup>2</sup>Inst. Extra-cutting-edge Sci. Technol. Avant-garde Res. (X-star), Jap. Agency Marine-Earth Sci. Technol. (JAMSTEC), <sup>3</sup>Dept. Med. Biochem., Kurume Univ. Sch. Med.)
- PA-005 Identification and Functional Analysis of Red-Light Induced FCP in *Chaetoceros gracilis*  
Midori Nakamura<sup>1</sup>, Minoru Kumazawa<sup>1</sup>, Ryo Nagao<sup>2</sup>, Noriko Ishikawa<sup>1</sup>, Jian-Ren Shen<sup>2</sup>, Kentaro Ifuku<sup>1</sup> (<sup>1</sup>Grad. Sch. Agri., Kyoto Univ., <sup>2</sup>RIIS, Okayama Univ.)
- PA-009 Comparison of the photosystem protein distribution on the thylakoid membranes separated by differential centrifugation between two barley cultivars, "Ehimehadadaka-1" and "Sarab-1"  
Tomoki Shigematsu, Kimika Hoshi, Akihiro Saito, Kyoko Higuchi (Tokyo University of Agriculture, Faculty of applied Biological Science)
- PA-013 The amino acid substitution, PETC-Pro171Leu, slowdown electron transfer in the cytochrome *b<sub>6</sub>f* complex under anoxic conditions in the green alga *Chlamydomonas reinhardtii*  
Shin-ichiro Ozawa<sup>1</sup>, Felix Buchert<sup>2</sup>, Ruby Reuys<sup>2</sup>, Michael Hippler<sup>1,2</sup>, Yuichiro Takahashi<sup>3</sup> (<sup>1</sup>Institute of Plant Science and Resources, Okayama University, <sup>2</sup>Institute of Plant Biology and Biotechnology, University of Münster, <sup>3</sup>Research Institute for Interdisciplinary Science, Okayama University)
- PA-017 Characterization of DLDG1 that controls H<sup>+</sup> translocation across the envelope membrane of chloroplasts  
Hinako Kataoka<sup>1</sup>, Mai Duy Luu Trinh<sup>1</sup>, Chikahiro Miyake<sup>2</sup>, Shinji Masuda<sup>1</sup> (<sup>1</sup>Dep. Life Sci. Technol., Tokyo Inst. Tech., <sup>2</sup>Grad. Sch. Agr., Kobe Univ)
- PA-021 Chloroplast functions in *Arabidopsis* cultured green cells  
Kotaro Ogasawara<sup>2</sup>, Kento Tomoishi<sup>3</sup>, Satomi Takeda<sup>1</sup> (<sup>1</sup>Dept. Biological Chemistry, Grad. Sch. Sci., Osaka Metropolitan Univ., <sup>2</sup>Dept. Biological Science, Grad. Sch. Sci., Osaka Prefecture Univ., <sup>3</sup>Dept. Biological Science, Faculty of Sci., Osaka Prefecture Univ.)
- PA-025 Environmental response of *Parachlorella* cells attached to a solid surface  
Tomoharu Ishikawa, Yutaro Hirakawa, Hiroki Miyauchi, Katsuhiko Okada, Norihiro Sato, Shoko Fujiwara (School of Life Sciences, Tokyo Univ. of Life Sciences)

### PB Fri., March 17 09:00–10:30 / 14:30–16:00

- PB-002 Substrate specificity for the *in vitro* SGR enzymatic reactions of synthetic chlorophyll derivatives possessing a variety of C3- and C8-substituents  
Soma Sato<sup>1</sup>, Mitsuaki Hirose<sup>1</sup>, Ryouichi Tanaka<sup>2</sup>, Hisashi Ito<sup>2</sup>, Hitoshi Tamiaki<sup>1</sup> (<sup>1</sup>Life Sci., Ritsumeikan Univ., <sup>2</sup>Inst. Low Temp. Sci., Hokkaido Univ.)
- PB-006 PSI-PSII megacomplexes are increased in stroma thylakoid membranes isolated from barley grown under the prolonged iron-deficient condition  
Akihiro Saito, Ryoko Yamada, Takahiro Matsuzaki, Shuhei Sumiki, Kyoko Higuchi (Fac. Appl. Biosci., Tokyo Univ. Agric)
- PB-010 Effects of inhibition of the mitochondrial respiratory chain to the regulation of photosynthetic electron transport system  
Tatsuhisa Konishi, Ko Noguchi (Sch. Life Sci., Tokyo Univ. Pharm. Life Sci.)
- PB-014 Functions of the novel pyrenoid factor PyShell in the marine diatom *Phaeodactylum tricorutum*  
Kohei Ueda, Ginga Shimakawa, Yusuke Matsuda (Grad. Sch. Sci. Univ. Kwangaku. Matsuda Lab)
- PB-018 Loss of the *rsbU* gene enhances heterotrophic growth in the dark and represses photoautotrophic growth in the cyanobacterium *Leptolyngbya boryana*  
Marie Nishio<sup>1</sup>, Kazuma Uesaka<sup>1</sup>, Shintaro Hida<sup>1</sup>, Kunio Ihara<sup>2</sup>, Nobuyuki Takatani<sup>3</sup>, Haruki Yamamoto<sup>1</sup>, Yuichi Fujita<sup>1</sup> (<sup>1</sup>Grad. Sch. Bioagr. Sci., Nagoya Univ., <sup>2</sup>Gene Res. Ctr., Nagoya Univ., <sup>3</sup>Dept. Biochem., Chubu Univ.)
- PB-022 Screening for the transcription factors enhancing the photosynthetic activity using the seed library of the chimeric repressor-expressing transgenic plants  
KwiMi Chung<sup>1</sup>, Shunichi Takahashi<sup>2</sup>, Masaru Ohme-Takagi<sup>3</sup>, Nobutaka Mitsuda<sup>1</sup> (<sup>1</sup>Bioprod. Res. Inst./GZR, AIST, <sup>2</sup>Tropical Center, Univ. Ryukyus, <sup>3</sup>Grad. Sch. Sci. Eng. Saitama Univ.)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-003 Regulation of antenna and energy transfer in photosystems of *Acaryochloris marina* in response to different light qualities  
Zhe Wang<sup>1</sup>, Miyu Furutani<sup>1</sup>, Yoshifumi Ueno<sup>2</sup>, Reona Toyofuku<sup>3</sup>, Tatsuya Tomo<sup>3</sup> (<sup>1</sup>Grad. Sch. Sci., Kobe Univ., <sup>2</sup>Inst. Arts Sci., Tokyo Univ. Sci., <sup>3</sup>Grad. Sch. Sci., Tokyo Univ. Sci.)
- PC-007 Structural dynamics of the Mn<sub>4</sub>CaO<sub>5</sub> cluster during the S<sub>2</sub>-S<sub>3</sub> transition in photosystem II  
Hongjie Li<sup>1</sup>, Yoshiki Nakajima<sup>1</sup>, Daichi Yamada<sup>2</sup>, Kana Hashimoto<sup>1</sup>, Minoru Kubo<sup>2,3</sup>, So Iwata<sup>3,4</sup>, Michihiro Suga<sup>1</sup>, Jian-Ren Shen<sup>1</sup> (<sup>1</sup>Research Institute for Interdisciplinary Science and Graduate School of Natural Science and Technology, Okayama University, Okayama, Japan, <sup>2</sup>Graduate School of Science, University of Hyogo, Hyogo, Japan, <sup>3</sup>RIKEN SPring-8 Center, Hyogo, Japan, <sup>4</sup>RIKEN SPring-8 Center, Hyogo, Japan, <sup>5</sup>Department of Cell Biology, Graduate School of Medicine, Kyoto University, Kyoto, Japan)
- PC-011 Analysis of NPQ7 expression suppressed lines of *C<sub>4</sub> Flaveria bidentis* showing defects in PSII activity  
Ai Ishizaki<sup>1</sup>, Sayaka Koshi<sup>1</sup>, Ryouichi Tanaka<sup>2</sup>, Atsushi Takabayashi<sup>2</sup>, Kentaro Ifuku<sup>3</sup>, Yuri Munekegaki<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci. Tech., Kwansai Gakuin Univ., <sup>2</sup>Inst. Low Temperature Science, Hokkaido Univ., <sup>3</sup>Grad. Sch. Arg., Kyoto Univ.)
- PC-015 Elucidation of sink-source transition mechanism in soybean leaves using radioisotope-labeled carbons  
Ai Soma<sup>1</sup>, Ryohei Sugita<sup>2</sup>, Yuko Kurita<sup>1</sup>, Natsuko I. Kobayashi<sup>1</sup>, Keitaro Tanoi<sup>1</sup>, Tomoko M. Nakanishi<sup>1</sup> (<sup>1</sup>Grad. Sch. Agri. Life Sci. UTokyo, <sup>2</sup>Nagoya University)
- PC-019 The construction of heterocyst-forming cyanobacteria mutants that selectively express the alternative nitrogenase, and its possible usefulness in photobiological H<sub>2</sub> production  
Daisuke Bando<sup>1</sup>, Takahiro Matsuda<sup>1</sup>, Hidehiro Sakurai<sup>2</sup>, Kazuhito Inoue<sup>1,2</sup>, Takeshi Sato<sup>1</sup> (<sup>1</sup>Dept. Biol. Sci., Grad. Sch. Sci., Kanagawa Univ., <sup>2</sup>Res. Inst. Integr. Sci., Kanagawa Univ.)
- PC-023 Diversity and evolution of membrane-bound cytochrome *c*, participating in respiration and photosynthesis in aerobic anoxygenic photosynthetic bacteria  
Sakiko Nagashima<sup>1,2</sup>, Kazuhito Inoue<sup>2</sup>, Kenji Nagashima<sup>1,2</sup> (<sup>1</sup>Res. Inst. Integr. Sci., Kanagawa Univ., <sup>2</sup>Biol. Sci., Fac. Sci., Kanagawa Univ.)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-004 Different modifications in two types of *Euglena gracilis* under a far-red light condition  
Yuki Sorihashi<sup>1</sup>, Yoshifumi Ueno<sup>2</sup>, Jian-Ren Shen<sup>3</sup>, Ryo Nagao<sup>3</sup>, Seiji Akimoto<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Kobe Univ., <sup>2</sup>Inst. Arts Sci., Tokyo Univ. Sci., <sup>3</sup>RIIS, Okayama Univ.)
- PD-008 Structures and binding modes of herbicides in photosystem II  
Yoshiki Nakajima<sup>1</sup>, Naoki Matsubara<sup>2</sup>, Jian-Ren Shen<sup>1,2</sup> (<sup>1</sup>Research Institute for Interdisciplinary Science, Okayama University, Japan, <sup>2</sup>Graduate School of Natural Science and Technology, Okayama University, Japan)
- PD-012 The analysis of guard cell photosynthesis by microscopic imaging methods  
Azusa Mori<sup>1</sup>, Sumio Iwai<sup>2</sup>, Kintake Sonoike<sup>1</sup> (<sup>1</sup>Fac Edu. Integ. Arts Sci., Waseda Univ., <sup>2</sup>Fac Agri., Kagoshima Univ)
- PD-016 Enhancement of Accumulation of Photosynthetic Pigments and Proteins during Chloroplast Biogenesis by Sulfide in *Arabidopsis thaliana*  
Zulnaray Osman, Takayuki Shimizu, Tatsuru Masuda (Grad. Sch. Art Sci., Uni Tokyo)
- PD-020 Effects of pericarp photosynthesis on sugar metabolisms in European pear  
Wakana Aoki<sup>1</sup>, Atsuko Miyagi<sup>2</sup>, Maki Kawai-Yamada<sup>3</sup>, Hideki Murayama<sup>2</sup> (<sup>1</sup>Grad. Sch. Agr., Yamagata Univ., <sup>2</sup>Fac. Agr., Yamagata Univ., <sup>3</sup>Grad. Sch. Sci. Eng., Saitama Univ.)
- PD-024 The reaction properties on the donor/acceptor sides in the photosynthetic reaction center of heliobacteria  
Risa Kojima<sup>1</sup>, Yuki Makino<sup>2</sup>, Chihiro Azai<sup>3</sup>, Akihiro Kawamoto<sup>4</sup>, Genji Kurisu<sup>4</sup>, Hirozo Oh-oka<sup>1,2</sup> (<sup>1</sup>CELAS, Osaka Univ., <sup>2</sup>Grad. Sch. Sci., Osaka Univ., <sup>3</sup>College of Life Sciences, Ritsumeikan Univ., <sup>4</sup>Inst. Protein Res., Osaka Univ.)

**■ Primary metabolism**

**PA Fri., March 17 09:00–10:30 / 13:00–14:30**

- PA-029 Roles of NIGT1 transcriptional factors and LBD proteins in Gln-induced repression of nitrate transporter genes  
Yosuke Torii, Mineko Konishi, Yasuhito Sakuraba, Shuichi Yanagisawa (Agro-Biotechnology Research Center, Graduate School of Agricultural and Life Sciences, The University of Tokyo)

**PB Fri., March 17 09:00–10:30 / 14:30–16:00**

- PB-026 Nitrogen response and cellular distribution of OsATL5, a paralog of the vacuolar glutamine efflux transporter, in rice  
Toshihiko Hayakawa, Yusei Kodama (Grad. Sch. Agri. Sci., Tohoku Univ.)
- PB-030 Ammonium-induced regulation of GS/GOGAT gene in Arabidopsis root  
Soichi Kojima, Keiki Ishiyama (Grad. Sch. Agr., Tohoku Univ.)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-027 Functional analyses of SnRK1 regulatory subunits in nitrogen-responsive flowering in *Arabidopsis thaliana*  
Akio Kubo<sup>1</sup>, Miho Sanagi<sup>2,3</sup>, Yasutake Sato<sup>1</sup>, Rolland Filip<sup>4</sup>, Junpei Takagi<sup>2</sup>, Takeo Sato<sup>2</sup> (<sup>1</sup>Grad. Sch. Life Sci., Hokkaido Univ., <sup>2</sup>Fac. Sci., Hokkaido Univ., <sup>3</sup>CRIS, Hokkaido Univ., <sup>4</sup>Biology Department, KU Leuven)
- PC-031 Analysis of oligogalactolipid synthesis and function in *Marchantia Polymorpha*  
Shinsuke Shimizu<sup>1</sup>, Koichi Hori<sup>1</sup>, Kimitsune Ishizaki<sup>2</sup>, Mie Shimojima<sup>1</sup>, Hiroyuki Ohta<sup>1</sup> (<sup>1</sup>Sch. Life Sci. and Tech., Tokyo Tech, <sup>2</sup>Grad. Sch. of Sci., Kobe Univ.)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-028 Functional analysis of the transcription factor FBH4 regulating nitrogen-responsive flowering in Arabidopsis  
Miho Sanagi<sup>1,2</sup>, Van Quoc Giang<sup>3</sup>, Akio Kubo<sup>3</sup>, Yasutake Sato<sup>3</sup>, Soichi Inagaki<sup>4</sup>, Junpei Takagi<sup>1</sup>, Takeo Sato<sup>1</sup> (<sup>1</sup>Fac. Sci., Hokkaido Univ., <sup>2</sup>CRIS, Hokkaido Univ., <sup>3</sup>Grad. Sch. Life Sci., Hokkaido Univ., <sup>4</sup>Grad. Sch. Sci. Univ. Tokyo)

**■ Specialized (secondary) metabolism**

**PB Fri., March 17 09:00–10:30 / 14:30–16:00**

- PB-034 Cross-species Comparative Genomics of Transcriptional Regulators in the Hydroxycinnamate Biosynthetic Pathway  
Maria Kenosis Emmanuelle Lachica, Shinichiro Komaki, Mutsumi Watanabe, Takayuki Tohge (Nara Institute of Science and Technology)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-035 Non-targeted Analysis of Volatile Organic Compounds in Soybean (*Glycine max*) Grown Field Soil  
Hikari Kuchikata<sup>1</sup>, Naoto Nihei<sup>2</sup>, Shoichiro Hamamoto<sup>3</sup>, Yasunori Ichihashi<sup>4</sup>, Miyako Kusano<sup>5</sup> (<sup>1</sup>Grad. Sch. Agri Bio. Sci Tech., Univ. Tsukuba, <sup>2</sup>Fac. Food Agri. Sci., Fukushima Univ., <sup>3</sup>Grad. Sch. Agri Life. Sci., Univ. Tokyo, <sup>4</sup>BRC, RIKEN, <sup>5</sup>Life & Env. Sci., Univ. Tsukuba)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-032 UPLC-Q-TOF-MS analysis of hydrolyzable tannins in an aluminum-resistant tree *Eucalyptus camaldulensis*  
Ko Tahara<sup>1</sup>, Hideyuki Ito<sup>2</sup>, Mitsuru Nishiguchi<sup>1</sup> (<sup>1</sup>Forestry and Forest Products Research Institute, <sup>2</sup>Faculty of Health and Welfare Science, Okayama Prefectural University)
- PD-033 Heterologous gene expression enables biosynthesis of hydrolyzable tannin precursors in herbaceous model plants  
Chihiro Yamamizo<sup>1</sup>, Nobutaka Mitsuda<sup>2</sup>, Ko Tahara<sup>1</sup> (<sup>1</sup>FFPRI, <sup>2</sup>AIST)

**■ Biomembrane/Ion and solute transport**

**PA Fri., March 17 09:00–10:30 / 13:00–14:30**

- PA-037 Tissue Distribution and Physiological Roles of Aquaporins in *Nopalea cochenillifera*  
Ryosuke Sato<sup>2</sup>, Hikaru Sakakibara<sup>1</sup>, Shintaro Mizuguchi<sup>1</sup>, Ikuko Mido<sup>1</sup>, Takamasa Suzuki<sup>1</sup>, Takanori Horibe<sup>1</sup>, Takashi Tsuge<sup>1</sup>, Maki Katsuhara<sup>3</sup>, Masayoshi Maeshima<sup>1</sup> (<sup>1</sup>Chubu Univ., <sup>2</sup>Forest BioRes. Cent., <sup>3</sup>IPSR, Okayama Univ.)
- PA-041 Regulation of plasma membrane H<sup>+</sup>-ATPase activity in streptophyte alga *Klebsormidium nitens*  
Koji Takahashi<sup>1,2</sup>, Koichi Hori<sup>3</sup>, Hiroyuki Ohta<sup>3</sup>, Toshinori Kinoshita<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Sci., Nagoya Univ., <sup>2</sup>ITbM, Nagoya Univ., <sup>3</sup>Sch. Life Sci. Tech., Tokyo Tech.)

**PB Fri., March 17 09:00–10:30 / 14:30–16:00**

- PB-038 Outward-rectifying K<sup>+</sup> channel SPORK2 from *Samanea saman* exhibits temperature-sensitive ion transport activity  
Yuki Muraoka<sup>1</sup>, Gangqiang Yang<sup>2</sup>, Shintaro Munemasa<sup>3</sup>, Yusuke Takeuchi<sup>1</sup>, Yasuhiro Ishimaru<sup>4</sup>, Yoshiyuki Murata<sup>3</sup>, Nobuyuki Uozumi<sup>4</sup>, Minoru Ueda<sup>1,5</sup> (<sup>1</sup>Grad. Sch. Sci., Tohoku Univ., <sup>2</sup>Sch. Pharm., Yantai Univ., <sup>3</sup>Grad. Sch. Environ. and Life Sci., Okayama Univ., <sup>4</sup>Grad. Sch. Eng., Tohoku Univ., <sup>5</sup>Grad. Sch. Life Sci., Tohoku Univ.)
- PB-042 Simultaneous imaging of potassium and sodium dynamics using Compton camera  
Kyoko Higuchi<sup>1</sup>, Nobuo Suzuki<sup>2</sup>, Yong-Gen Yin<sup>2</sup>, Yuta Miyoshi<sup>2</sup>, Yusaku Noda<sup>2</sup>, Kazuyuki Enomoto<sup>2</sup>, Yuto Nagao<sup>2</sup>, Mitsutaka Yamaguchi<sup>2</sup>, Makoto Sakai<sup>3</sup>, Hayato Ikeda<sup>4,5</sup>, Hidetoshi Kikunaga<sup>4</sup>, Naoki Kawachi<sup>2</sup> (<sup>1</sup>Tokyo Univ. Agric., <sup>2</sup>TARRI, QST, <sup>3</sup>HMC, Gunma Univ., <sup>4</sup>ELPH, Tohoku Univ., <sup>5</sup>CYRIC, Tohoku Univ.)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-039 Analysis of CO<sub>2</sub> transport activity of plasma membrane-associated aquaporins of tomato  
Anri Mitsumoto, Shigeo Utsugi, Yoshiyuki Tsuchiya, Maki Katsuhara, Izumi Mori (Mitsumoto, Anri)
- PC-043 Controls of the water transport activities of *Arabidopsis* tonoplast intrinsic proteins 3, AtTIP3s and the effects on seed development and germination  
Shigeo Utsugi, Maki Katsuhara (IPSR, Okayama University)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-036 Na<sup>+</sup> and K<sup>+</sup> Transport Mechanism of Ion Channel Aquaporins  
Shuntaro Ono, Maki Katsuhara (Univ. Okayama, IPSR)
- PD-040 Effects of a mutation in the *Tonoplast Intrinsic Protein 2;2 (TIP2;2)* gene on metabolites in leaves of *Arabidopsis thaliana*  
Yuka Motohiro<sup>1</sup>, Ririka Doi<sup>1</sup>, Tomoko Matsumoto<sup>2</sup>, Jun Kikuchi<sup>2</sup>, Tsuneo Kuwagata<sup>3</sup>, Yuko T. Hanba<sup>4</sup>, Kumi Sato-Nara<sup>5</sup> (<sup>1</sup>Grad. Sch. Human. Sci., Nara Women's Univ., <sup>2</sup>CSRS, RIKEN, <sup>3</sup>NIAES, NARO, <sup>4</sup>Dep. Appl. Biol., Kyoto Inst. Tech., <sup>5</sup>Div. Nat. Sci., Nara Women's Univ.)

**■ Membrane trafficking**

**PA Fri., March 17 09:00–10:30 / 13:00–14:30**

- PA-045 Dynamics of the VAMP72 group in pollen tube elongation  
Anna Toude<sup>1</sup>, Emi Ito<sup>3</sup>, Yoko Ito<sup>3</sup>, Kazuo Ebine<sup>4,5</sup>, Takashi Ueda<sup>4,5</sup>, Akihiko Nakano<sup>6</sup>, Tomohiro Uemura<sup>1,2</sup> (<sup>1</sup>Undergrad. Sch. Sci., Biol., Ochanomizu Univ., <sup>2</sup>Grad. Sch. Humanities and Sciences, Ochanomizu Univ., <sup>3</sup>IHLS., Ochanomizu Univ., <sup>4</sup>Div. Cell Dynamics, NIBB, <sup>5</sup>Dept. Basic Bio., SOKENDAI, <sup>6</sup>RIKEN RAP)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-044 Research on physiological function of novel proteins with Sytaxin6 N-terminal region  
Sara Toude<sup>1</sup>, Reina Nagao<sup>2</sup>, Emi Ito<sup>3</sup>, Yoko Ito<sup>3</sup>, Yutaro Shimizu<sup>4</sup>, Kei Yura<sup>1,2,5</sup>, Akihiko Nakano<sup>4</sup>, Tomohiro Uemura<sup>1,2</sup> (<sup>1</sup>Undergrad. Sch. Sci., Biol., Ochanomizu Univ., <sup>2</sup>Grad. Sch. Humanities and Sciences, Ochanomizu Univ., <sup>3</sup>IHLS., Ochanomizu Univ., <sup>4</sup>Live Cell Super-Resolution Imaging Research Team, RIKEN Center for Advanced Photonics., <sup>5</sup>School of Advanced Science and Engineering, Waseda Univ.)

**■ Organelles/Cytoskeleton**

**PA Fri., March 17 09:00–10:30 / 13:00–14:30**

- PA-049 Suppression mechanism of early senescence phenotype in *atg5* mutant by DPD1 mutation  
Tsuneaki Takami, Wataru Sakamoto (Inst. Plant Sci. Res., Okayama Univ.)
- PA-053 Functional analysis of chloroplastic peptidoglycan-binding LysM proteins in *Physcomitrium patens*  
Mizuki Kuronita<sup>1</sup>, Keisuke Miyazaki<sup>2</sup>, Katsuaki Takechi<sup>3</sup>, Hitoshi Mori<sup>4</sup>, Hiroyoshi Takano<sup>3</sup> (<sup>1</sup>Graduate School of Science and Technology, Kumamoto University, <sup>2</sup>Faculty of Science, Kumamoto University, <sup>3</sup>Faculty of Advanced Science and Technology, Kumamoto University, <sup>4</sup>Graduate School of Bioagricultural Sciences, Nagoya University)

PA-057 Functional analysis of ATG9, a sole transmembrane autophagy related protein, in plant autophagy  
Ryoya Tadaki, Satoshi Kurosaki, Kazuya Inoue, Daiki Shinozaki, Kohki Yoshimoto (Sch. Agri., Meiji Univ.)

**PB Fri., March 17 09:00–10:30 / 14:30–16:00**

PB-046 Characterization of rice mutants lacking organelle exonuclease DPDI  
Md. Faridul Islam<sup>1</sup>, Hiroshi Yamatani<sup>2</sup>, Tsuneaki Takami<sup>1</sup>, Makoto Kusaba<sup>3</sup>, Wataru Sakamoto<sup>1</sup> (<sup>1</sup>Inst. Plant Sci. Res., Okayama Univ., <sup>2</sup>QST-Takasaki, <sup>3</sup>Grad. Sch. Integr. Sci., Hiroshima Univ.)

PB-050 RETICULATA RELATED 3 localized to the chloroplast inner envelope is involved in transcription of the chloroplast genome  
Takumi Ito<sup>1</sup>, Hayate Machino<sup>1</sup>, Ryusei Inoue<sup>1</sup>, Tsuyoshi Furumoto<sup>2</sup>, Kenji Nishimura<sup>1</sup>, Yuri Munekage<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci. Tech., Kwansai Gakuin Univ., <sup>2</sup>Facu. Sch. Arg., Univ. Ryukoku.)

PB-054 Mechanisms of regulation for greening suppressor *BGHs* expression by BR signaling and light  
Rino Akema<sup>1</sup>, Ryo Tachibana<sup>1</sup>, Ayumi Yamagami<sup>1</sup>, Tadao Asami<sup>2</sup>, Takeshi Nakano<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Univ. Kyoto, <sup>2</sup>Grad. Sch. Sci., Univ. Tokyo)

PB-058 Overaccumulation of Starch Breakdown Products Triggers Autophagy-dependent Chloroplast Degradation  
Sakuya Nakamura<sup>1</sup>, Hiroyuki Ishida<sup>2</sup>, Shinya Hagihara<sup>1</sup>, Masanori Izumi<sup>1</sup> (<sup>1</sup>CSRS, Riken, <sup>2</sup>Grad. Sch. Agri. Sci., Tohoku Univ.)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

PC-047 Exploring the Role of Chloroplast Nucleoids in the Maintenance of Pyrenoid, a Phase-separated Structure in Chloroplasts  
Haruki Kanazawa, Mari Takusagawa, Aine Kawashima, Toshiharu Shikanai, Yoshiki Nishimura (Grad. Sch. Sci., Kyoto Univ.)

PC-051 Exploration of protein factors involved in the nucleus-chloroplast adhesion  
Yuki Sakamoto, Shingo Takagi (Grad. Sch. Sci., Osaka Univ.)

PC-055 Cross-species Complementation Analyses Using *MurE* Mutants Showing the Giant Chloroplast Phenotype in *Physcomitrium patens* and Albino Traits in Arabidopsis  
Takashi Imabeppu<sup>1</sup>, Izumi Saito<sup>1</sup>, Katsuaki Takechi<sup>2</sup>, Hiroyoshi Takano<sup>2</sup> (<sup>1</sup>Graduate School of Science and Technology, Kumamoto University, <sup>2</sup>Faculty of Advanced Science and Technology, Kumamoto University)

PC-059 Comprehensive imaging analysis of peroxisomal membrane proteins in *Arabidopsis thaliana*  
Junpei Takagi<sup>1</sup>, Satoshi Nozaki<sup>2</sup>, Takeo Sato<sup>1</sup>, Haruko Ueda<sup>2</sup>, Ikuko Hara-Nishimura<sup>2</sup> (<sup>1</sup>Fac. Sci., Hokkaido Univ., <sup>2</sup>Fac. Sci. and Eng., Konan Univ.)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

PD-048 PpARC6 mediates FtsZ-ring remodeling at the division site of chloroplast in *Physcomitrium patens*  
Thi Huong Do<sup>1</sup>, Hiroyoshi Takano<sup>2</sup>, Tomomichi Fujita<sup>1</sup> (<sup>1</sup>Hokkaido University, <sup>2</sup>Kumamoto University)

PD-052 Exploratory research on interacting factors of MFP1, a DNA-binding protein in the thylakoid membrane  
Kousei Noto<sup>1</sup>, Yoshiki Nishimura<sup>2</sup>, Sho Fujii<sup>1,2</sup> (<sup>1</sup>Fac. Ag. Life Sci., Hirosaki Univ., <sup>2</sup>Grad. Sch. Sci., Kyoto Univ.)

PD-056 A novel factor is required for mitochondrial intron splicing in *Arabidopsis thaliana*  
Brody Frink<sup>1</sup>, Matthias Burger<sup>2</sup>, Oren Osterserter-Biran<sup>3</sup>, Mizuki Takenaka<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Kyoto Univ., <sup>2</sup>Molecular Botany, Ulm Univ., <sup>3</sup>Alexander Silberman Inst. of Life Sci., The Hebrew Univ. of Jerusalem)

PD-060 Development of an Experimental System to Investigate Organelle Behavior in Darkness  
Kota Tsuchida, Shingo Takagi, Yuki Sakamoto (Dept. Biol. Sci., Fac. Sci., Osaka Univ.)

■ Cell wall

**PA Fri., March 17 09:00–10:30 / 13:00–14:30**

PA-061 Function of KONAJC1 protein in the synthesis of L-ascorbic acid  
Megumi Miyagawa, Daisuke Takahashi, Toshihisa Kotake (Grad. Sch. Sci. & Eng., Saitama Univ.)

PA-065 Effects of soil potassium supply on ion adsorption properties of rice and tomato root surfaces  
Keina Motegi<sup>1</sup>, Satoshi Miyagi<sup>2</sup>, Emi Kameoka<sup>1,3</sup>, Yoshihiro Kobae<sup>1,3</sup>, Nobutake Nakatani<sup>1,2</sup>, Mikoto Kaneko<sup>2</sup>, Mihoko Moriizumi<sup>4</sup>, Junko Kasuga<sup>5</sup>, Shingo Matsumoto<sup>5</sup>, Noriharu Ae<sup>4</sup>, Satoru Hobara<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Daily Sci., Rakuno Gakuen Univ., <sup>2</sup>Dept. Env., Rakuno Gakuen Univ., <sup>3</sup>Dept. Sust. Agr., Rakuno Gakuen Univ., <sup>4</sup>Dept. Agr., Ryukoku Univ., <sup>5</sup>Fac. Life Env. Sci., Shimane Univ.)

**PB Fri., March 17 09:00–10:30 / 14:30–16:00**

- PB-062 Arabidopsis novel proteins involved in the formation of pollen exine 3D structure  
Kota Suzuki, Kota Matsuoka, Kohei Tsuchida, Sumie Ishiguro (Bio-Agric. Sci., Nagoya Univ.)
- PB-066 Micropillar devices for the assessment of root mechanical properties of *A. thaliana*  
Marcel Pascal Beier<sup>1,2</sup>, Yunshu Wang<sup>2</sup>, Yuta Nakagawa<sup>5</sup>, Andres Aguilar Ariza<sup>2</sup>, Shumpei Hayashi<sup>3</sup>, Kyoko Miwa<sup>4</sup>, Akihiro Isozaki<sup>5</sup>, Keisuke Goda<sup>5,6,7</sup>, Hiroataka Hida<sup>3</sup>, Toru Fujiwara<sup>2</sup> (<sup>1</sup>Faculty of Science/ Institute for the Advancement of Higher Education, Hokkaido University, Kita10 Nishi8, Kita-ku, Sapporo 060-0810, 060-0810 Japan, <sup>2</sup>Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo, 1-1-1 Yayoi, Bunkyo, Tokyo, 113-8657, Japan, <sup>3</sup>Department of Mechanical Engineering, Graduate School of Engineering, Kobe University, 1-1 Rokkodai-cho, Nada-ku, Kobe 657-8501, Japan, <sup>4</sup>Division of Biosphere Science, Graduate School of Environmental Science, Hokkaido University, North-10, West-5, Kita-ku, Sapporo, Hokkaido 060-0810, Japan, <sup>5</sup>Department of Chemistry, Graduate School of Science, The University of Tokyo, 7-3-1 Hongo, Bunkyo, Tokyo, 113-0033, Japan, <sup>6</sup>Department of Bioengineering, Samueli School of Engineering, University of California, Los Angeles, 420 Westwood Plaza, 5121E Engineering V, Los Angeles, CA 90095, USA, <sup>7</sup>Institute of Technological Sciences, Wuhan University, Wuchang District, Wuhan City, Hubei 430072, China)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-063 Development of ectopic vascular cell induction system in a coniferous tree, *Cryptomeria japonica*  
Ryosuke Sato, Ken-ichi Konagaya, Naoki Takata (Forest BioRes. Cent.)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-064 Changes in Soluble Sugars and Cell Wall in Wheat Cultivars during Cold Acclimation  
Sushan Chowhan<sup>1</sup>, Tatsuya Kutsuno<sup>1</sup>, Hiroto Handa<sup>2</sup>, Toshihisa Kotake<sup>1</sup>, Daisuke Takahashi<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci. & Eng., Saitama Univ., <sup>2</sup>Dept. Biochem. & Mol. Biol., Fac. Sci., Saitama Univ.)

**■ Cell cycle/Cell division**

**PA Fri., March 17 09:00–10:30 / 13:00–14:30**

- PA-069 Characterization of toxic metal stress responses of Arabidopsis root tips using QuBAREY (quantitative PCR-based Arabidopsis root DNA-damage assay)  
Shimpei Uraguchi, Risa Todoroki, Masakazu Sato, Yuka Ohshiro, Ryosuke Nakamura, Yasukazu Takanezawa, Masako Kiyono (Sch. Pharm., Kitasato Univ.)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-067 Mechanisms of endocycle induction by controlling histone methylation  
Zhongkuan He, Akiko Masada, Kar Yee Moo, Yuki Iwata, Shiori S Aki, Masaaki Umeda (Graduate School of Science and Technology, Nara Institute of Science and Technology)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-068 Development of Arabidopsis transformants for chromosome live imaging of meiotic mutants  
Yoshitaka Azumi (Fac. Science, Kanagawa Univ.)

**■ Development/Morphogenesis**

**PA Fri., March 17 09:00–10:30 / 13:00–14:30**

- PA-073 Experimental study on the effect of meristem size on floral transition  
Shinji Watanabe, Takashi Okamoto, Atsuko Kinoshita (Tokyo Metropolitan Univ.)
- PA-077 Sporophyte development and its meristem in hornworts  
Kazune Ezaki, Keiko Sakakibara (College of Science, Rikkyo University)
- PA-081 Functional analysis of IDD4, a novel transcription factor regulating root growth through sugar signaling in early developmental stage  
Ryoichi Shiroma, Akiko Kozaki (Grad. Sch. Integ. Sci and Tech., Shizuoka Univ.)

- PA-085 Role of vacuolar membrane fluidity in the development of vegetative tissue in the moss *Physcomitrium patens*  
Mana Nakamura<sup>1</sup>, Fuyumi Yamamoto<sup>1</sup>, Ikumi Kajikawa<sup>2</sup>, Yosuke Tamada<sup>1,2,3,4</sup> (<sup>1</sup>Grad. Sch. Reg. Dev. Creat., Utsunomiya Univ.,  
<sup>2</sup>Sch. Eng., Utsunomiya Univ., <sup>3</sup>CORE, Utsunomiya Univ., <sup>4</sup>REAL, Utsunomiya Univ.)
- PA-089 Analysis for phosphorylation dynamics of BIL7 that promotes plant growth in brassinosteroid signaling  
Kaisei Nishida<sup>1</sup>, Yusuke Nakamura<sup>1</sup>, Tomoko Miyaji<sup>2</sup>, Ayumi Yamagami<sup>1</sup>, Akira Nozawa<sup>3</sup>, Tatsuya Sawazaki<sup>3</sup>, Takehiro Suzuki<sup>2</sup>,  
Naoshi Doumae<sup>2</sup>, Takuya Miyagawa<sup>1</sup>, Minami Matsui<sup>2</sup>, Syouzou Fujioka<sup>2</sup>, Tadao Asami<sup>4</sup>, Takeshi Nakano<sup>1</sup> (<sup>1</sup>Kyoto university · life  
science, <sup>2</sup>Riken · CSRS, <sup>3</sup>Ehime university · PROS, <sup>4</sup>Tokyo university · agriculture)
- PA-093 The role of thermosensors in the transition of stem-cell fate in the moss *Physcomitrium patens*  
Changxiu Yu<sup>1,2</sup>, Nan Gu<sup>3,4</sup>, Takumi Tomoi<sup>3,5</sup>, Ikumi Kajikawa<sup>3</sup>, Yukiko Kabeya<sup>2</sup>, Mitsuyasu Hasebe<sup>2,6</sup>, Yosuke Tamada<sup>1,2,3,4,6,7</sup>  
(<sup>1</sup>Grad. Sch. Reg. Dev. Creat., Utsunomiya Univ, <sup>2</sup>Div. Evol. Biol., Natl. Inst. Basic Biol, <sup>3</sup>Sch. Eng., Utsunomiya Univ, <sup>4</sup>REAL,  
Utsunomiya Univ, <sup>5</sup>Ctr. Innov. Spt., Utsunomiya Univ, <sup>6</sup>Sch. Life Sci., SOKENDAI, <sup>7</sup>CORE, Utsunomiya Univ)
- PA-097 Investigation of callus and shoot induction condition for establish *Phtheirospermum japonicum* transformation method  
Yusa Kashiwase<sup>1</sup>, Mina Ohtsu<sup>1,2</sup>, Satoko Yoshida<sup>1</sup> (<sup>1</sup>NAIST · Bioscience, <sup>2</sup>JST Sakigake)

**PB Fri., March 17 09:00–10:30 / 14:30–16:00**

- PB-070 Analysis of the *Marchantia polymorpha* adaxial-abaxial bipolar leaf2 mutant  
Kaito Chiba<sup>1</sup>, Rie Sato<sup>1</sup>, Satoshi Naramoto<sup>2</sup>, Nobuhiro Nagasawa<sup>1</sup>, Namiko Satoh-Nagasawa<sup>1</sup> (<sup>1</sup>Fac. Biores. Sci., Akita Pref.,  
<sup>2</sup>Faculty of Sciecn, Hokkaido U.)
- PB-074 Exploration of the mechanisms of stem cell formation shared between plants and animals  
Fuyumi Yamamoto<sup>1</sup>, Ikumi Kajikawa<sup>2</sup>, Takashi Aoi<sup>3</sup>, Yousuke Tamada<sup>1,2,4,5</sup> (<sup>1</sup>Grad. Sch. Reg. Dev. Creat., Utsunomiya Univ., <sup>2</sup>Sch.  
Eng., Utsunomiya Univ., <sup>3</sup>Grad. Sch. Med., Kobe Univ., <sup>4</sup>CORE, Utsunomiya Univ., <sup>5</sup>REAL, Utsunomiya Univ.)
- PB-078 SUR2 Fine-tunes Local Auxin Distribution for Lateral Root Formation in *Arabidopsis thaliana*  
Chieko Goto<sup>1</sup>, Akira Ikegami<sup>1</sup>, Tatsuaki Goh<sup>1,2</sup>, Hiroyuki Kasahara<sup>3,4</sup>, Yuki Kondo<sup>1</sup>, Kimitsune Ishizaki<sup>1</sup>, Tetsuro Mimura<sup>1,5,6</sup>,  
Hidehiro Fukaki<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Kobe Univ., <sup>2</sup>Div. Biol. Sci., NAIST, <sup>3</sup>Grad. Sch. of Agri., Tokyo Univ. of Agri. and Tech.,  
<sup>4</sup>RIKEN, CSRS, <sup>5</sup>Grad. Sch. Agri. Life Sci., Univ. Tokyo, <sup>6</sup>Col. Biosci. Biotech., National Cheng Kung Univ.)
- PB-082 KNOX and YABBY transcription factors shape nodes and internodes of the stem in rice  
Katsutoshi Tsuda<sup>1</sup>, Akiteru Maeno<sup>1</sup>, Wakana Tanaka<sup>2</sup>, Ken-ichi Nonomura<sup>1</sup> (<sup>1</sup>National Institute of Genetics, <sup>2</sup>Hiroshima University)
- PB-086 Position of meristems and the angles of the cell division regulate lateral organ shape: a simulation perspective  
Zining Wang<sup>1</sup>, Yasuhiro Inoue<sup>2</sup>, Atsushi Mochizuki<sup>3</sup>, Hirokazu Tsukaya<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Univ. Tokyo, <sup>2</sup>Dept. Micro Eng., Kyoto  
Univ., <sup>3</sup>Inst. Front. Life Med. Sci., Kyoto Univ.)
- PB-090 Analysis of vegetative reproduction in the hornwort *Anthoceros angustus*  
Hidemasa Suzuki, Junko Kyozuka (Grad. Sch. Life Sci., Tohoku Univ.)
- PB-094 Visualization of intracellular dynamics of *Marchantia* zygote to reveal the evolution of embryo axis formation in land plants  
Sohta Nakamura<sup>1</sup>, Yusuke Kimata<sup>1</sup>, Yoshikatsu Sato<sup>2</sup>, Minako Ueda<sup>1</sup> (<sup>1</sup>Grad. Sch. LifeSci., Tohoku Univ., <sup>2</sup>WPI-ITbM, Nagoya  
Univ.)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-071 Analysis of the functional relationship between AUXIN RESPONSE FACTOR and stem cell factor in the stem cell zone of *Marchantia polymorpha*  
Yusei Imai<sup>1</sup>, Emi Hainiwa<sup>2</sup>, Aya Iwaki<sup>1,2</sup>, Sakiko Ishida<sup>2,3</sup>, Takayuki Kohchi<sup>2</sup>, Ryuichi Nishihama<sup>1</sup> (<sup>1</sup>Department of Applied  
Biological Science, Faculty of Science and Technology, Tokyo University of Science, <sup>2</sup>Graduate School of Biostudies, Kyoto  
University, <sup>3</sup>Division of Biological Science, Nara Institute of Science and Technology)
- PC-075 Investigation of gall-inducing factors from *Mesalacidodes trifidus*  
Yuki Yamashita, Kanako Bessho-Uehara (Grad. Sch. Life Sci., Tohoku University)
- PC-079 Relationship between growth suppression and chromosome polytenization in the root tip of high-polyploids of *Arabidopsis thaliana*  
Suzuka Kikuchi<sup>1</sup>, Takuya Sakamoto<sup>2</sup>, Sachihiko Matsunaga<sup>3</sup>, Munetaka Sugiyama<sup>4</sup>, Akitoshi Iwamoto<sup>1,5</sup> (<sup>1</sup>Grad. Sch. Sci., Kanagawa  
Univ., <sup>2</sup>Fac. Sci. and Tech., Tokyo Univ. Sci., <sup>3</sup>Grad. Sch. Frontier Sci., Univ. Tokyo, <sup>4</sup>Dept. Sci., Grad. Sch. Sci., Univ. Tokyo, <sup>5</sup>Fac.  
Sci., Kanagawa Univ.)

- PC-083 Submergence-induced Epidermal Cell Chloroplasts Differentiation in *Rorippa Aquatica*  
Dwi Fajar Sidhiq<sup>1</sup>, Shuka Ikematsu<sup>2,3</sup>, Seisuke Kimura<sup>2,3</sup> (<sup>1</sup>Grad. Sch. Life Sci., Kyoto Sangyo Univ., <sup>2</sup>Fac. Life Sci., Kyoto Sangyo Univ., <sup>3</sup>Center for Plant Sci., Kyoto Sangyo Univ.)
- PC-087 An approach to the molecular function of the *ASYMMETRIC-LEAVES2 (AS2)* gene involved in leaf formation using viral virulence gene *βC1*  
 Takanori Suzuki<sup>1,6</sup>, Hidekazu Iwakawa<sup>2</sup>, Sayuri Ando<sup>3</sup>, Shoko Kojima<sup>3</sup>, Chiyoko Machida<sup>3</sup>, Michiko Sasabe<sup>4</sup>, Daisuke Kurihara<sup>6</sup>, Tetsuya Higashiyama<sup>5</sup>, Yasunori Machida<sup>6</sup> (<sup>1</sup>Iahihara Sangyo, Inst., <sup>2</sup>Grad. Sch. Sci., Kanazawa Univ., <sup>3</sup>Grad. Sch. Biosci. & Biotech., Chubu Univ., <sup>4</sup>Grad. Sch. Sci., Hirosaki Univ., <sup>5</sup>Grad. Sch. Sci., Univ. Tokyo, <sup>6</sup>Grad. Sch. Sci., Nagoya Univ.)
- PC-088 Function of maintenance of DNA methylation by AS2 and nucleolar proteins involved in leaf development of *Arabidopsis thaliana*  
Shoko Kojima<sup>1</sup>, Hidekazu Iwakawa<sup>2</sup>, Tetsunori Hibino<sup>1</sup>, Hiro Takahashi<sup>3</sup>, Sayuri Ando<sup>1</sup>, Michiko Sasabe<sup>4</sup>, Masaki Ito<sup>2</sup>, Yasunori Machida<sup>5</sup>, Chiyoko Machida<sup>1</sup> (<sup>1</sup>Grad. Sch. BioSci. Biotech., Chubu Univ., <sup>2</sup>Grad. Sch. Sci., Kanazawa Univ., <sup>3</sup>Grad. Sch. Medical Sci., Kanazawa Univ., <sup>4</sup>Grad. Sch. Agricul. & Life Sci. Hirosaki Univ., <sup>5</sup>Grad. Sch. Sci., Nagoya Univ.)
- PC-091 The single MYB gene *GROM* is required for gemma cup formation of the liverwort *Marchantia polymorpha* as a direct target of GCAM1  
Hirotaaka Kato<sup>1,2</sup>, Yukiko Yasui<sup>1,3</sup>, Yuki Kondo<sup>1</sup>, Hidehiro Fukaki<sup>1</sup>, Tetsuro Mimura<sup>1,4,5</sup>, Kimitsune Ishizaki<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Kobe Univ., <sup>2</sup>Grad. Sch. Sci. Eng., Ehime Univ., <sup>3</sup>Grad. Sch. Biostudies, Kyoto Univ., <sup>4</sup>Grad. Sch. Agri. Life Sci., Univ. Tokyo, <sup>5</sup>Col. Biosci. Biotech., National Cheng Kung Univ.)
- PC-095 GRAS Family Transcription Factor Is A New Regulator Of Asymmetric Cell Division And Polarity In Moss *Physcomitrium Patens*  
Alisa Vyacheslavova<sup>1</sup>, Ooi-Kock Teh<sup>2</sup>, Renqi Wang<sup>1</sup>, Mitsuyasu Hasebe<sup>3</sup>, Tomomichi Fujita<sup>4</sup> (<sup>1</sup>Hokkaido University, Graduate School of Life Science, <sup>2</sup>Institute of plant and microbial biology, Academia Sinica, <sup>3</sup>National Institute for Basic Biology, Division of Evolutionary Biology, <sup>4</sup>Hokkaido University, School of Science)

## **PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-072 Toward understanding the molecular mechanisms of specific meristems in one-leaf plants *Monophyllaea* by whole-mount *in situ* hybridization  
Shunji Nakamura, Ayaka Kinoshita, Hiroyuki Koga, Hirokazu Tsukaya (Grad. Sch. Sci., Univ. Tokyo)
- PD-076 Establishment of a vascular cell induction system using *Ginkgo biloba* leaves  
Keishi Yasui<sup>1</sup>, Shunji Shimadzu<sup>1,2</sup>, Aoi Narutaki<sup>1</sup>, Shota Maeda<sup>1</sup>, Kimitsune Ishizaki<sup>1</sup>, Hidehiro Fukaki<sup>1</sup>, Yuki Kondo<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Kobe Univ., <sup>2</sup>Grad. Sch. Sci., Univ of Tokyo)
- PD-080 Analysis of DNA damage response in a novel Arabidopsis mutant showing aberrant root and shoot development  
Ryoko Muraoka, Akihito Mamiya, Yuki Kondo, Kimitsune Ishizaki, Hidehiro Fukaki (Grad. Sch. Sci., Kobe Univ.)
- PD-084 Standing-up reaction of the pitchers in *Nepenthes alata* – gravitropic response and localization of amyloplasts –  
Kaho Teramachi, Tsuyoshi Kaneta (Grad. Sch. Sci. & Eng., Ehime Univ.)
- PD-092 A novel compound affects polarized cell expansion and cytoskeleton in *Physcomitrium patens*  
Prerna Singh<sup>1</sup>, Naoya Kadofusa<sup>2</sup>, Ayato Sato<sup>2</sup>, Satoshi Naramoto<sup>3</sup>, Tomomichi Fujita<sup>3</sup> (<sup>1</sup>Graduate School of Life Science, Hokkaido University, <sup>2</sup>WPI-ITbM, Nagoya University, <sup>3</sup>Faculty of Science, Hokkaido University)
- PD-096 Experimental Validation of a Possible Diversification Mechanism of Stomatal Development  
Yuki Doll, Hiroyuki Koga, Hirokazu Tsukaya (Grad. Sch. Sci., Univ. Tokyo)

## **■ Reproduction**

### **PA Fri., March 17 09:00–10:30 / 13:00–14:30**

- PA-101 Functional analysis of jasmonic acid biosynthetic gene, *SLOPR3*, in tomato embryo development  
Kaho Nakamura<sup>1</sup>, Tomoko Niwa<sup>2</sup>, Mayu Kajita<sup>1</sup>, Kojiro Yokota<sup>1</sup>, Shinobu Takada<sup>3</sup>, Hironaka Tsukagoshi<sup>4</sup>, Tsuyoshi Nakagawa<sup>5</sup>, Sumie Ishiguro<sup>1</sup> (<sup>1</sup>Grad. Sch. Bio-Agr., Nagoya Univ., <sup>2</sup>Coll. Biosci. Biotech., Chubu Univ., <sup>3</sup>Grad. Sch. Science, Osaka Univ., <sup>4</sup>Facul. Agriculture, Meijo Univ., <sup>5</sup>Dep. Mol. Func. Genomics, Shimane Univ.)

**PB Fri., March 17 09:00–10:30 / 14:30–16:00**

- PB-098 Functional analysis of the H3K27me3 demethylase genes involved in sporophyte formation of the moss *Physcomitrium patens*  
Yuya Kumagai<sup>1</sup>, Ikumi Kajikawa<sup>2</sup>, Yosuke Tamada<sup>1,2,3,4</sup> (<sup>1</sup>Grad. Sch. Reg. Dev. Creat., Univ. Utsunomiya, <sup>2</sup>Sch. Eng., Univ. Utsunomiya, <sup>3</sup>CORE., Univ. Utsunomiya, <sup>4</sup>REAL., Univ. Utsunomiya)
- PB-102 Plasma membrane Ca<sup>2+</sup>-ATPase is required for sperm flagellar motility in *Marchantia polymorpha*  
Madoka Miyazaki<sup>1</sup>, Naoki Minamino<sup>2</sup>, Satoshi Hirao<sup>3</sup>, Taisuke Togawa<sup>1</sup>, Takashi Ueda<sup>2,4</sup>, Katsuyuki T. Yamato<sup>3</sup> (<sup>1</sup>Grad. Sch. Biol. Sci. Technol., Kindai Univ., <sup>2</sup>Div. Cellular Dynamics, NIBB, <sup>3</sup>Fac. Biol. Sci. Technol., Kindai Univ., <sup>4</sup>Sch. Life Sci., SOKENDAI)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-099 Reliance of endosperm gene expression on *Arabidopsis* embryonic development  
Yilin Zhang<sup>1</sup>, Daisuke Maruyama<sup>2</sup>, Erika Toda<sup>3,6</sup>, Atsuko Kinoshita<sup>3</sup>, Takashi Okamoto<sup>3</sup>, Nobutaka Mitsuda<sup>4</sup>, Hironori Takasaki<sup>1</sup>, Masaru Ohme-Takagi<sup>1,5</sup> (<sup>1</sup>Grad. Sch. Sci. Eng., Saitama Univ., <sup>2</sup>KIBR., Yokohama City Univ., <sup>3</sup>Dept. Biol. Sci., Tokyo Metropolitan Univ., <sup>4</sup>BPRI., AIST., <sup>5</sup>Inst. Trop. Plant Biol. Microbiol., Natl. Cheng Kung Univ., <sup>6</sup>Dept. Biol. Sci., Tokyo Univ.)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-100 Comparison of gene expression between double and single fertilized seeds in *Arabidopsis thaliana*  
Hironori Takasaki<sup>1</sup>, Yilin Zhang<sup>1</sup>, Atsuko Kinoshita<sup>2</sup>, Takashi Okamoto<sup>2</sup>, Masaru Ohme-Takagi<sup>1,3</sup> (<sup>1</sup>Grad. Sch. Sci. Eng., Saitama Univ., <sup>2</sup>Dept. Biol. Sci., Tokyo Metropolitan Univ., <sup>3</sup>Inst. Trop. Plant Biol. Microbiol., Natl. Cheng Kung Univ.)

**■ Plant hormones/Signaling molecules**

**PA Fri., March 17 09:00–10:30 / 13:00–14:30**

- PA-109 Functional analysis of KL signaling in *Ceratopteris Richardii*, a model fern species  
Ayano Fujimura<sup>1</sup>, Yuki Hata<sup>3</sup>, Xiaonan Xie<sup>2</sup>, Junko Kyoizuka<sup>3</sup> (<sup>1</sup>Fac. Sci., Univ. Tohoku, <sup>2</sup>Univ. Utsunomiya, <sup>3</sup>Grad. Sch. Life Sci., Univ. Tohoku)
- PA-113 Chemical and physiological analyses in the Arabidopsis mutant for key enzyme genes in abscisic acid biosynthesis  
Minami Nakano<sup>1</sup>, Naoto Kawakami<sup>2</sup>, Masanori Okamoto<sup>1,3</sup> (<sup>1</sup>Utsunomiya Univ., <sup>2</sup>Meiji Univ., <sup>3</sup>Riken)
- PA-117 Interaction between MAPK cascade and abscisic acid in thermoinhibition of Arabidopsis seed germination  
Masahiko Otani<sup>1</sup>, Ryo Tojo<sup>1</sup>, Kohei Yokota<sup>2</sup>, Kazuya Ichimura<sup>2</sup>, Naoto Kawakami<sup>1</sup> (<sup>1</sup>Grad. Sch. Agri., Univ. Meiji, <sup>2</sup>Fac. Agri., Univ. Kagawa)
- PA-121 Screening of small molecules for the designing of INO1 antagonist toward improving mineral bioavailability in rice  
Tatsuki Akabane<sup>1</sup>, Naoki Hirotsu<sup>1</sup>, Satoshi Kamino<sup>2</sup>, Etsuko Katoh<sup>3</sup> (<sup>1</sup>Grad. Sch. Life Sci., Toyo Univ., <sup>2</sup>CRYO SHIP Inc., <sup>3</sup>Dept. Food Nutr. Sci., Toyo Univ.)
- PA-125 The *trans*-hydroxylation of cytokinin by *CYP735A3* and *CYP735A4* controls growth and development in rice  
Takatoshi Kiba<sup>1</sup>, Kahori Mizutani<sup>1</sup>, Aimi Nakahara<sup>1</sup>, Yumiko Takebayashi<sup>2</sup>, Mikiko Kojima<sup>2</sup>, Tokunori Hobo<sup>3</sup>, Yuriko Osakabe<sup>4</sup>, Keishi Osakabe<sup>5</sup>, Hitoshi Sakakibara<sup>1</sup> (<sup>1</sup>Grad. Sch. Bioagr. Sci., Nagoya Univ., <sup>2</sup>RIKEN CSRS, <sup>3</sup>Biosci. Biotech. Center, Nagoya Univ., <sup>4</sup>Dep. Life Sci. & Tech., Tokyo Tech., <sup>5</sup>Fac. Biosci. Bioindust., Tokushima Univ.)

**PB Fri., March 17 09:00–10:30 / 14:30–16:00**

- PB-110 Regulation of Strigolactone Production under Nutrient-Poor Conditions in *Marchantia paleacea*  
Akiyoshi Yoda<sup>1</sup>, Kyoichi Kodama<sup>1</sup>, Takahito Nomura<sup>2</sup>, Junko Kyoizuka<sup>1</sup> (<sup>1</sup>Grad. Sch. of Life Sci., Tohoku Univ., <sup>2</sup>Ctr. for Biosci. Res. & Educ., Utsunomiya Univ.)
- PB-114 Elucidation of structures and biosynthetic pathways of cytokinin-like compounds produced by leafy gall forming phytopathogens  
Kazuki Miyata<sup>1</sup>, Mika Yoshino<sup>1</sup>, Alicia Surjana<sup>1</sup>, Mikiko Kojima<sup>2</sup>, Kensuke Kouki<sup>1</sup>, Toshio Nishikawa<sup>1</sup>, Hitoshi Sakakibara<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Bio. Sci., Nagoya Univ., <sup>2</sup>RIKEN CSRS)
- PB-118 Glutamate activates salicylic acid signaling to promote stomatal closure and *PRI* expression in Arabidopsis  
Riichiro Yoshida, Toshihiko Tsuruda (Fac. Agri., Kagoshima Univ.)
- PB-122 Analysis of candidate of IBA metabolism inhibitor, SAK1035  
Fuya Kato, Nao Shimizu, Rie Kikuchi, Akiko Sato, Ayako Nakamura, Yukihisa Shimada (KIBR, Yokohama City Univ.)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-111 Distribution of Cytokinin in Stem Cells in *Phiscomitrium patens*  
Juri Ohtsuka, Yuki Hata, Yi Luo, Junko Kyozuka (Grad. Sch. Life Sci., Univ. Tohoku)
- PC-115 Isolation Of Arabidopsis Mutants With Altered Sensitivity To Thermospermine  
Mituru Saraumi, Takahiro Tanaka, Hiroyasu Motose, Taku Takahashi (Faculty of Science, Okayama Univ.)
- PC-119 Evolutionary analysis of gibberellin reception with protein structure prediction by AlphaFold2  
Hideki Yoshida<sup>1</sup>, Shunsuke Nishio<sup>1</sup>, Hidekazu Takahashi<sup>2</sup>, Makoto Matsuoka<sup>1</sup> (<sup>1</sup>IFeS, Fukushima Univ., <sup>2</sup>Fac. of Food and Agric. Sci., Fukushima Univ.)
- PC-123 Transcriptomic analyses on the mode of action of a novel compound that induce the accumulation of both jasmonic acid and salicylic acid in Arabidopsis  
Haruka Kajiro<sup>1</sup>, Kentaro Namiki<sup>1</sup>, Ryuhei Toya<sup>1</sup>, Mizuki Ogawa<sup>1</sup>, Sota Ogawa<sup>1</sup>, Nobutaka Kitahata<sup>1,2</sup>, Yuho Saito<sup>1</sup>, Masataka Nakano<sup>1</sup>, Taiki Funahashi<sup>1</sup>, Kenji Hashimoto<sup>1</sup>, Kouji Kuramochi<sup>1</sup>, Tadao Asami<sup>2</sup>, Hiroshi Abe<sup>3</sup>, Fuminori Takahashi<sup>3,4</sup>, Seisuke Kimura<sup>5</sup>, Kazuyuki Kuchitsu<sup>1</sup> (<sup>1</sup>Dept. Appl. Biol. Sci., Tokyo Univ. of Science, <sup>2</sup>Univ. of Tokyo, <sup>3</sup>RIKEN, <sup>4</sup>Dept Biol. Sci. & Tech., Tokyo Univ. of Science, <sup>5</sup>Kyoto Sangyo Univ.)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-112 Exploration of Transcription Factors Related to Auxin-inducible Gene Expressions Based on Cis-regulatory Motif Analysis in *Klebsormidium nitens*  
Noriaki Tounosu, Kanami Sesoko, Koichi Hori, Mie Shimojima, Hiroyuki Ohta (Schooll of Life Science and Technology, Tokyo Institute of Technology)
- PD-116 Functional Analysis of ABI3-like Transcriptional Regulators in the Drought Response of the Streptophyte Alga *Klebsormidium nitens*  
Takeru Miki, Koichi Hori, Noriaki Tounosu, Mie Shimojima, Hiroyuki Ohta (Sch. Life Sci. and Tech., Tokyo Tech)
- PD-120 Genetic analysis of  $\beta$ -carotene isomerase genes in Arabidopsis  
Hitomi Kobuna<sup>1</sup>, Daisuke Fukuhara<sup>1</sup>, Yoshiya Seto<sup>2</sup>, Tetsuo Kushiro<sup>2</sup>, Masanori Okamoto<sup>1,3</sup> (<sup>1</sup>Utsunomiya Univ., <sup>2</sup>Meiji Univ., <sup>3</sup>CSRS., Riken)
- PD-124 Development of Boron-Containing Small Molecules Enabling to Promote Plant Growth  
Yuma Shisaka, Shuhei Kusano, Sakuya Nakamura, Masanori Izumi, Shinya Hagihara (RIKEN CSRS)

**■ Photoreceptors/Photoresponses**

**PA Fri., March 17 09:00–10:30 / 13:00–14:30**

- PA-105 Functional Analysis of a Novel Cryptochrome Interacting Factor CIF5  
Ayano Yasuda, Takeshi Kanegae (Grad. Sch. Sci, Tokyo Metropolitan Univ.)

**PB Fri., March 17 09:00–10:30 / 14:30–16:00**

- PB-106 The MYB transcription factor interacting with the UV-B receptor, UVR8, in *Marchantia polymorpha*  
Youichi Kondou, Hyuga Haraguchi, Seigi Ooki, Satoshi Higeta (Kanto Gakuin University College of Science and Engineering)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-103 Light mediates transcription start sites of *heme oxygenase 1* for a cytoplasmic heme decomposition bypass in *Arabidopsis*  
Yingxi Chen<sup>1</sup>, Kohji Nishimura<sup>2</sup>, Yoshiharu Y. Yamamoto<sup>3</sup>, Yoshito Oka<sup>4</sup>, Tomonao Matsushita<sup>4</sup>, Takayuki Shimizu<sup>1</sup>, Tatsuru Masuda<sup>1</sup> (<sup>1</sup>Grad. Sch. Arts Sci., Univ. Tokyo, <sup>2</sup>Fac. Life Envi. Sci., Univ. Shimane, <sup>3</sup>U. Grad. Sch. Agr., Univ. Gifu, <sup>4</sup>Grad. Sch. Sci., Univ. Kyoto)
- PC-107 CO<sub>2</sub>-induced rapid dephosphorylation of guard-cell plasma membrane H<sup>+</sup>-ATPase underlies stomatal closure  
Eigo Ando<sup>1</sup>, Hannes Kollist<sup>2</sup>, Kohei Fukatsu<sup>3</sup>, Toshinori Kinoshita<sup>3,4</sup>, Ichiro Terashima<sup>1</sup> (<sup>1</sup>Dep. Biol. Sci., Sch. Sci., Univ. Tokyo, <sup>2</sup>Inst. Tech., Univ. Tartu, <sup>3</sup>Div. Biol. Sci., Grad. Sch. Sci., Nagoya Univ., <sup>4</sup>WPI-ITbM, Nagoya Univ.)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-104 Characterization of blue light-induced leaf movements in soy bean  
Yusuke Kubo<sup>1</sup>, Rie Mishima<sup>1</sup>, Toshinori Kinoshita<sup>2</sup>, Shin-ichiro Inoue<sup>1</sup> (<sup>1</sup>Nagoya Univ. Grad. Sch. Sci., <sup>2</sup>Nagoya Univ. ITbM)

- PD-108 Light dependent granule formation of PHOTOSYNTHESIS-RELATED RAF kinase in *Marchantia polymorpha*  
Nodoka Handa<sup>1</sup>, Asuka Shintaku<sup>2</sup>, Eri Koide<sup>2</sup>, Megumi Iwano<sup>2</sup>, Takayuki Kohchi<sup>2</sup>, Ryuichi Nishihama<sup>1</sup> (<sup>1</sup>Department of Applied Biological Science, Faculty of Science and Technology, Tokyo University of Science, <sup>2</sup>Graduate School of Biostudies, Kyoto University)

## ■ Flowering/Clock

### **PA** Fri., March 17 09:00–10:30 / 13:00–14:30

- PA-129 Relationship between cyclic di-GMP and cyanobacterial circadian clock  
Chihiro Yamaguchi<sup>1</sup>, Robert Kanaly<sup>1</sup>, Eri Nisizaki<sup>1</sup>, Kei-ichi Yamashita<sup>1</sup>, Yamato Sasho<sup>1</sup>, Mei Harada<sup>1</sup>, Momoe Hirai<sup>1</sup>, Masaki Tsukamoto<sup>2</sup>, Setsuyuki Aoki<sup>2</sup>, Yoichi Nakahira<sup>3</sup>, Yoshihiko Huruie<sup>4</sup>, Shuji Akiyama<sup>4</sup>, Mingxu Fang<sup>5</sup>, Susan Golden<sup>5</sup>, Shinsuke Kutsuna<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Univ. Yokohama City, <sup>2</sup>Grad. Sch. Info., Univ. Nagoya, <sup>3</sup>Col. Agric., Univ. Ibaraki, <sup>4</sup>Research Center of Integrative Molecular Systems (CIMoS), Institute for Molecular Science, <sup>5</sup>Univ. California, San Diego)

### **PB** Fri., March 17 09:00–10:30 / 14:30–16:00

- PB-126 Flowering-inducing small protein is expressed in the *FT* expressing cells  
Hiroshi Takagi, Takato Imaizumi (Nagoya University, Center for Gene Research)
- PB-130 Newly suggested relationship between N-terminal methionine excision and response to light  
Kazuki Oda<sup>1</sup>, Shiori Muraoka<sup>1</sup>, Takamasa Suzuki<sup>2</sup>, Muneo Sato<sup>3</sup>, Masami Yokota Hirai<sup>3,4</sup>, Hitoshi Onouchi<sup>1</sup>, Satoshi Naito<sup>1</sup>, Yui Yamashita<sup>1</sup> (<sup>1</sup>Grad. Schl. Agr., Hokkaido Univ., <sup>2</sup>College of Bioscience and Biotechnology, Chubu Univ., <sup>3</sup>RIKEN CSRS, <sup>4</sup>Grad. Schl. Bioagric. Sci., Nagoya Univ.)

### **PC** Fri., March 17 10:30–12:00 / 13:00–14:30

- PC-127 Function of the nuclear speckle of florigen activation complex  
Ken-ichiro Taoka<sup>1,2</sup>, Mari Tanaka<sup>1</sup>, Keiji Nishida<sup>2</sup>, Akihiko Kondo<sup>2</sup>, Chojiro Kojima<sup>3,4</sup>, Hiroyuki Tsuji<sup>1,5</sup> (<sup>1</sup>KIBR, YCU, <sup>2</sup>EGBRC, Kobe Univ., <sup>3</sup>Inst. Prot. Res., Osaka Univ., <sup>4</sup>Grad. Sch. Eng. Sci., YNU, <sup>5</sup>BBC, Nagoya Univ.)

### **PD** Fri., March 17 10:30–12:00 / 14:30–16:00

- PD-128 Annual transcriptome analysis of transgenic Japanese cedar over-expressing clock gene *CjGI*  
Mine Nose<sup>1</sup>, Ken-ichi Konagaya<sup>2</sup>, Manabu Kurita<sup>1</sup> (<sup>1</sup>Forest Tree Breed. Ctr., FFPRI, <sup>2</sup>Forest Bio-Res. Ctr., FFPRI)

## ■ Environmental response A/Physiological responses

### **PA** Fri., March 17 09:00–10:30 / 13:00–14:30

- PA-133 Identification of *MYB52* Gene That is Involved in Differences of Root Hydrotropism Through Regulate the Mechanical Strength of Roots in Arabidopsis Ecotypes by GWAS  
Boyuan Mao<sup>1</sup>, Kouichi Soga<sup>2</sup>, Hiroki Takahashi<sup>1</sup>, Hideyuki Takahashi<sup>1</sup>, Nobuharu Fujii<sup>1</sup> (<sup>1</sup>Grad. Sch., Univ. Tohoku, <sup>2</sup>Grad. Sch. Sci., Univ. Osaka metropolitan)
- PA-137 Roles of the Protein Kinase, TAG Accumulation Regulator 1, in the Nitrogen-Deficient Responses of the Green Alga *Chlamydomonas reinhardtii*  
Takumi Ishikawa<sup>1</sup>, Yoshinori Tsuji<sup>1</sup>, Akari Kinoshita<sup>1</sup>, Haruka Shinkawa<sup>1,2</sup>, Takashi Yamano<sup>1</sup>, Hideya Fukuzawa<sup>1</sup> (<sup>1</sup>Grad. Sch. Biostudies., Kyoto Univ., <sup>2</sup>Res. Inst. Biores. Biotech., Ishikawa Pref. Univ.)

### **PB** Fri., March 17 09:00–10:30 / 14:30–16:00

- PB-134 Auxin response negatively regulates root hydrotropism via a pathway apart from that of MIZ1/MIZ2  
Kotaro Akita<sup>1</sup>, Yutaka Miyazawa<sup>2</sup> (<sup>1</sup>Grad. Sch. Sci & Eng., Yamagata Univ., <sup>2</sup>Fac. Sci., Yamagata Univ)
- PB-138 Effect of metacaspase on dark-induced senescence of Arabidopsis leaves  
Hiroshi Hayashi, Hiroko Kato, Shiori Shiobara (Dept. Biosc. and Biotech., Fukui Pref. Univ.)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-131 Effect of light on nitritropism in rice roots  
Md Nashir Uddin<sup>1,2</sup>, Kiyoshi Yamazaki<sup>1</sup>, Yoshihiro Ohmori<sup>1</sup>, Toru Fujiwara<sup>1</sup> (<sup>1</sup>Grad. Sch. Agri. & Life Sci., Tokyo Univ. Yayoi, Bunkyo, Tokyo 113-8657, Japan, <sup>2</sup>Sch. Health and Life Sci., North South Univ., Dhaka, Bangladesh)
- PC-135 Involvement of ROS in Sr inductive growth inhibition in *Arabidopsis thaliana*  
Takeshi Nagata, Masaki Arai, Toshiya Nakamura (Setsunan Univ.)
- PC-139 Histone H3 Lysine 4 Trimethylation is Activated by Light Illumination in the Unicellular Red Alga *Cyanidioschyzon merolae*  
Anasthasia Devithania Nelce<sup>1,2</sup>, Xie Weiqi<sup>1,2</sup>, Anais Lacroix<sup>1,2</sup>, Yuki Kobayashi<sup>2</sup>, Kan Tanaka<sup>2</sup> (<sup>1</sup>School of Life Science and Technology, Tokyo Institute of Technology, <sup>2</sup>Laboratory for Chemistry and Life Science, Institute of Innovative Research, Tokyo Institute of Technology)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-132 Global impact of PM H<sup>+</sup>-ATPase activation on gene expression in *Arabidopsis* seedling  
Satoru N. Kinoshita<sup>1</sup>, Kyomi Taki<sup>1</sup>, Mayuko Naganawa<sup>1</sup>, Riko Hasegawa<sup>1</sup>, Hironaru Kiriyama<sup>2</sup>, Junko Ohkanda<sup>2</sup>, Toshinori Kinoshita<sup>1,3</sup> (<sup>1</sup>Grad. Sch. of Science, Nagoya Univ., <sup>2</sup>Institute of Agriculture, Shinshu Univ., <sup>3</sup>WPI-ITbM, Nagoya Univ.)
- PD-136 Transcriptome and Co-expression analyses identify gene network regulating N-deficiency responses in *Oryza rufipogon* x *Koshihikari* introgression line  
Bright Adu, Yoshihiro Ohmori, Toru Fujiwara (Lab of Plant Nutrition, Grad Sch of Agric. Life Sciences, Univ. Tokyo)
- PD-140 Effects of Simulated Microgravity on Cell Division and Thallus Formation in *Coleochaete scutata*  
Mayuka Naruse<sup>1</sup>, Ichiro Karahara<sup>2</sup>, Daisuke Tamaoki<sup>2</sup> (<sup>1</sup>Grad. Sci. Eng., Univ. Toyama, <sup>2</sup>Fac. Sci., Acad. Assemb., Univ. Toyama)

**■ Environmental response B/Environmental stresses**

**PA Fri., March 17 09:00–10:30 / 13:00–14:30**

- PA-141 Transcriptome analysis of a halotolerant cyanobacterium: Relationship between environmental salt concentration and circadian clock  
Rungaroon Waditee-Sirisattha<sup>1</sup>, Hiroshi Ito<sup>2</sup>, Takashi Hibino<sup>3,4</sup>, Hakuto Kageyama<sup>3,4</sup> (<sup>1</sup>Fac. Sci., Chulalongkorn Univ, <sup>2</sup>Fac. Des., Kyusyu Univ., <sup>3</sup>Grad. Sch. Environ. Hum. Sci., Meijo Univ., <sup>4</sup>Fac. Sci. Tech., Meijo Univ.)
- PA-145 Functional analysis of SAL1-PAP pathway in environmental stress responses of tomato  
Shinnosuke Kimura, Izumi Yotsui, Teruaki Taji, Yoichi Sakata (Dept. of Biosci., Tokyo Univ. of Agri.)
- PA-149 Effects of ROS production on plant grafting  
Kentarō Okada<sup>1</sup>, Lalita Jantean<sup>2</sup>, Ken-ichi Kurotani<sup>1</sup>, Michitaka Notaguchi<sup>1,2</sup> (<sup>1</sup>Bioscience and Biotechnology Center, Nagoya University, <sup>2</sup>Graduate School of Bioagricultural Sciences, Nagoya University)
- PA-153 The Effect Of Plant Intracellular Flavin Levels On Environmental Stress Responses  
Takamasa Sugii<sup>1</sup>, Miho Harada<sup>1</sup>, Takanori Maruta<sup>1</sup>, Takahiro Ishikawa<sup>1</sup>, Kazuya Yoshimura<sup>2</sup>, Shigeru Shigeoka<sup>3</sup>, Takahisa Ogawa<sup>1</sup> (<sup>1</sup>Grad. Sch. Nat. Sci. Technol., Shimane Univ., <sup>2</sup>Dept. Food Nutr. Sci., Coll. Biosci. Biotech., Chubu Univ., <sup>3</sup>Exp. Farm, Kindai Univ.)
- PA-157 Role of Phosphorylation of Activation Loop in Arabidopsis B3-RAF kinase for SnRK2 Activation  
Koki Nakayama<sup>1</sup>, Naoya Kohara<sup>1</sup>, Daisuke Takezawa<sup>2</sup>, Izumi Yotsui<sup>1</sup>, Teruaki Taji<sup>1</sup>, Yoichi Sakata<sup>1</sup> (<sup>1</sup>Dept. of Biosci., Tokyo Univ. of Agri., <sup>2</sup>Grad. Sch. Sci and Eng., Saitama Univ.)
- PA-161 Functional Analyses of Arabidopsis bZIP Transcription Factor Involved in Drought Tolerance  
Yoshimi Nakano, Keiko Kigoshi, Sumire Fujiwara (National Institute of Advanced Industrial Science and Technology (AIST))
- PA-165 Fast Environmental adaptation through mutation stacking and its application  
Natsuno Morisaki<sup>1</sup>, Marcel Pascal Beier<sup>2</sup>, Tomomichi Fujita<sup>3</sup> (<sup>1</sup>Grad. Sch. Life sci., Hokkaido Univ., <sup>2</sup>IAHE, Fac. Sci., Hokkaido Univ., <sup>3</sup>Fac. Sci., Hokkaido Univ.)

**PB Fri., March 17 09:00–10:30 / 14:30–16:00**

- PB-142 Differential effects of excessive mM-order-levels of alkaline-metal ions (Na<sup>+</sup>, Li<sup>+</sup>, Cs<sup>+</sup>) on growth patterns of 6 plant seedlings cultivated under the same soil and medium conditions  
Masahiro Inoue<sup>1</sup>, Yui Katsuta<sup>1</sup>, Hirotaka Kato<sup>2</sup>, Yoh Sakuma<sup>2</sup>, Dharmendra K. Gupta<sup>3</sup> (<sup>1</sup>Dept. Biol. Faculty Sci., Ehime Univ., <sup>2</sup>Grad. Sch. Sci. & Eng., Ehime Univ., <sup>3</sup>Min. Environ. Forest Clim. Change (Ind))

- PB-146 What is wounding stress? Relationship between regeneration and pattern recognition receptors in *Arabidopsis*  
Yosuke Sasai<sup>1,2</sup>, Akira Iwase<sup>2,3</sup>, Keiko Sugimoto<sup>1,2</sup> (<sup>1</sup>Univ. Tokyo, Dep. Biol. Sci., <sup>2</sup>RIKEN, CSRS, <sup>3</sup>PRESTO)
- PB-150 DnaK2 mediates a negative feedback regulation of the heat shock and redox stress-responsive Hik2-Rre1 two-component system in the cyanobacterium *Synechococcus elongatus* PCC 7942  
Hazuki Hasegawa<sup>1,3</sup>, Nachiketa Bairagi<sup>1</sup>, Ikki Kobayashi<sup>1</sup>, Satoru Watanabe<sup>2</sup>, Kan Tanaka<sup>1</sup> (<sup>1</sup>CLS, Tokyo Tech, <sup>2</sup>Dep. Bio, TUA, <sup>3</sup>LST, Tokyo Tech)
- PB-154 The time-series transcriptome analysis reveals the variation of gene expression of leaf and root in drought response of two *Brachypodium distachyon* ecotypes  
Anzu Minami<sup>1,2</sup>, Minami Shimizu<sup>1,2</sup>, Asaka Kanatani<sup>1</sup>, Keiichi Mochida<sup>1,2,3</sup> (<sup>1</sup>RIKEN Center for Sustainable Resource Science, <sup>2</sup>Kihara Institute for Biological Research, Yokohama City University, <sup>3</sup>School of Information and Data Sciences, Nagasaki University)
- PB-158 Analysis of signal transduction pathways mediated by group C Raf-like kinases in *Arabidopsis*  
Hinano Takase<sup>1</sup>, Yoshiaki Kamiyama<sup>2</sup>, Kota Yamashita<sup>2</sup>, Saashia Fuji<sup>4</sup>, Hodaka Sugimoto<sup>3</sup>, Koji Takahashi<sup>3</sup>, Atsushi Takemiya<sup>4</sup>, Toshinori Kinoshita<sup>3</sup>, Taishi Umezawa<sup>2</sup> (<sup>1</sup>Tokyo Univ. Agric. Tech., <sup>2</sup>Tokyo Univ. Agric. Tech., <sup>3</sup>Nagoya Univ., <sup>4</sup>Yamaguchi Univ.)
- PB-162 1-butanol treatment induces drought stress tolerance in *Arabidopsis thaliana*  
Quynh Do<sup>1,4</sup>, Daisuke Todaka<sup>1</sup>, Maho Tanaka<sup>1,2</sup>, Satoshi Takahashi<sup>1,2</sup>, Junko Ishida<sup>1,2</sup>, Xuan Hoi Pham<sup>4</sup>, Motoaki Seki<sup>1,2,3</sup> (<sup>1</sup>Plant Genomic Network Research Team, RIKEN CSRS, <sup>2</sup>Plant Epigenome Regulation Laboratory, RIKEN CPR, <sup>3</sup>Kihara Institute for Biological Research, Yokohama City University, <sup>4</sup>Agricultural Genetics Institute, Vietnam Academy of Agricultural Sciences)
- PB-166 An Establishment of Novel Technique for cpDNA Specific DSBs Induction  
Aine Kawashima, Toshiharu Shikanai, Yoshiki Nishimura (Grad. Sci., Kyoto Univ.)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-143 Functional analysis of a gene which is responsive to long-term cold during winter  
Hanako Shimizu, Akari Shibata, Hiroshi Kudoh (CER, Kyoto Univ.)
- PC-147 Functional characterization of Slr2103 protein in the synthesis of a novel neutral lipid in *Synechocystis*  
Mimari Kondo, Motohide Aoki, Kazuho Hirai, Taku Sagami, Ryo Ito, Mikio Tsuzuki, Norihiro Sato (Grad. Sch. Sci., Univ. Toyaku)
- PC-151 Comparative Analysis of Regulatory Functions of ABA Responses in Land Plant Ethylene Receptor-Type Histidine Kinases  
Taketo Sasaki, Tsukasa Toriyama, Izumi Yotsui, Teruaki Taji, Yoichi Sakata (Dept. of Biosci., Tokyo Univ. of Agri.)
- PC-155 Functional analysis of the DREB2 pathway in the regulation of heat stress response in rice  
Jiajun Mo (Grad. Sch. Agr. Life Sci., Univ. Tokyo)
- PC-159 Phytoeyanin-encoding Genes Confer Enhanced Ozone Tolerance In *Arabidopsis thaliana*  
 Shoko Saji<sup>1</sup>, Hikaru Saji<sup>1</sup>, Kimiyo Sage-Ono<sup>2</sup>, Michiyuki Ono<sup>2</sup>, Nobuyoshi Nakajima<sup>1</sup>, Mitsuko Aono<sup>1</sup> (<sup>1</sup>Biodiversity Div., Natl. Inst. Environ. Studies, <sup>2</sup>Grad. Sch. Life & Environ. Sci., Univ. Tsukuba)
- PC-163 Comprehensive analysis of a nitrate-independent function of the Arabidopsis nitrate receptor NRT1.1/NPF6.3  
Takushi Hachiya<sup>1</sup>, Tsuyoshi Nakagawa<sup>1</sup>, Hitoshi Sakakibara<sup>2</sup> (<sup>1</sup>Int. Cent. Sci. Res., Shimane Univ., <sup>2</sup>Grad. Sch. Bioagr. Sci., Nagoya Univ.)
- PC-167 Functional analysis of Sll1951 involved in biofilm formation in the cyanobacterium *Synechocystis* sp. PCC6803  
Masane Tsuruta<sup>1</sup>, Koh-ichi Takahashi<sup>1</sup>, Ishikawa Haruna<sup>2</sup>, Yuki Ide<sup>3</sup>, Junji Uchiyama<sup>1,4</sup>, Hisataka Ohta<sup>1,4</sup> (<sup>1</sup>Dept. of Math. and Sci. Edu., Grad. Sch. of Sci., Tokyo Univ. of Sci., <sup>2</sup>Dept. of Math. and Sci. Edu., Grad. Sch. of Math. and Sci. Edu., Tokyo Univ. of Sci., <sup>3</sup>Dept. of Phy., Grad. Sch. of Sci., Tokyo Univ. of Sci., <sup>4</sup>Inst. Arts and Sci., Tokyo Univ. of Sci.)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-144 SphS senses the acid stress and regulate the cell enlargement mechanisms involving DivK in *Synechocystis* sp. PCC6803  
Airi Nakamura, Yoshikazu Saitou, Hidetaka Kohga, Ryoukuke Asakura, Junji Uchiyama, Hisataka Ohta (Grad. Sch. Sci., Tokyo Uni. of Science)
- PD-148 Toxin-antitoxin in the cyanobacterium *Synechocystis* sp. PCC6803 Role of *ssr1765*, which is involved in the system, in acidic stress in the cyanobacterium *Synechocystis* sp.  
Marina Miyata (Grad. Sci, Univ. TUS)

- PD-152 *Physcomitrium patens* respond to the magnitude of the gravitational force with varying the amount of growth  
Shintaro Aoki<sup>1</sup>, Yuki Yamashita<sup>1</sup>, Yuko T. Hanba<sup>2</sup>, Hiroyuki Kamachi<sup>3</sup>, Ichiro Karahara<sup>3</sup>, Atsushi Kume<sup>4</sup>, Tomomichi Fujita<sup>5</sup> (<sup>1</sup>Grad. Sch. Life Sci., Hokkaido Univ., <sup>2</sup>Apl. Bio., Kyoto Inst Tech., <sup>3</sup>Sch. sci., Toyama Univ., <sup>4</sup>Grad. Sch., Biorse Bioenv Sci., Kyusyu Univ., <sup>5</sup>Fac. Sci., Hokkaido Univ.)
- PD-156 Long-Distance Transport and Functions of MicroRNAs in Poplar Dormancy  
Moritara Matsuzawa, Shinya Hirooka, Kimiyo Ono, Jun Furukawa, Michiyuki Ono, Shinobu Satoh (Grad. Life Env. Sci., Univ. Tsukuba)
- PD-160 AtTRB3 is involved in the salt stress tolerance by ethanol  
Kouta Urushihara<sup>1</sup>, Hiroki Ishihara<sup>1</sup>, Akihiro Matsui<sup>2</sup>, Maho Tanaka<sup>2</sup>, Sumire Fujiwara<sup>3</sup>, Nobutaka Mitsuda<sup>3</sup>, Masaru Takagi<sup>3</sup>, Kyoko Mogami<sup>4</sup>, Atsushi J. Nagano<sup>4,5</sup>, Masahiro Tamoi<sup>1</sup>, Motoaki Seki<sup>2</sup>, Kaori Sako<sup>1,2</sup> (<sup>1</sup>Dep. Adv. Biosci., Kindai Univ., <sup>2</sup>CSRS, RIKEN, <sup>3</sup>AIST, Bioprod. Res. Inst., <sup>4</sup>Fac. Agri., Ryukoku Univ., <sup>5</sup>Inst. Adv. Biosci., Keio Univ.)
- PD-164 Analysis of the transcription factor SGR5 that functions in the drought resistance mechanism  
Moeca Arai<sup>1,2</sup>, Keiko Kigoshi<sup>1</sup>, Maki Kawai<sup>1,2</sup>, Yoshimi Nakano<sup>1</sup>, Nobutaka Mitsuda<sup>1</sup>, Sumire Fujiwara<sup>1,2</sup> (<sup>1</sup>Bioprod. Res. Inst., AIST, <sup>2</sup>Grad. Biol. Sci., Univ. Tsukuba)
- PD-168 Discovery of a novel mutation conferring herbicide resistance in a weed  
Tomomi Kubo<sup>1</sup>, Masaki Endo<sup>2</sup>, Ayako Nishizawa-Yokoi<sup>2</sup>, Rintaro Suzuki<sup>3</sup>, Akira Uchino<sup>4</sup>, Satoshi Iwakami<sup>1</sup> (<sup>1</sup>Grad. Sch. Agr., Univ. Kyoto, <sup>2</sup>Institute of Agrobiological Sciences, NARO, <sup>3</sup>Research Center for Advanced Analysis, NARO, <sup>4</sup>Central Region Agricultural Research Center, NARO)

## ■ Plant-organism interaction A

### **PA** Fri., March 17 09:00–10:30 / 13:00–14:30

- PA-169 Identifying transcription factors necessary for the development of root parasitism structures in the parasitic plant *Phtheirospermum japonicum*  
Yuki Tanaka<sup>1,2</sup>, Takanori Wakatake<sup>3</sup>, Ken Shirasu<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Sci., Univ. Tokyo, <sup>2</sup>RIKEN CSRS, <sup>3</sup>Research Center of Genetic Resources, NARO)
- PA-173 Brown planthopper harbors an abundance of microbes for utilization as innovative source of plant defense elicitors  
David Wari, Yuko Hojo, Akio Tani, Tomonori Shinya, Ivan Galis (Inst. Plant Sci. & Res., Okayama Univ.)
- PA-177 Proteomic analysis of flagellin recognition signaling in rice  
Yuya Katsuragi<sup>1</sup>, Koki Wataya<sup>2</sup>, Hanamichi Katagiri<sup>1</sup>, Fang-Sik Che<sup>1,2,3</sup> (<sup>1</sup>Nagahama Inst. of Bio-Sci. and Tech., <sup>2</sup>Grad. Sch. of Biosci. Nagahama Inst. of Bio-Sci. and Tech., <sup>3</sup>Genome Editing Res. Inst., Nagahama Inst. of Bio-Sci. and Tech.)

### **PB** Fri., March 17 09:00–10:30 / 14:30–16:00

- PB-170 Mechanism of plant-bacteria interaction studied by onion and bacterial genus *Burkholderia*  
Shouta Nonoyama, Shinji Masuda (Dep. Life Sci. Technol., Tokyo Tech.)
- PB-174 Rapid silicon distribution and defense in rice exposed to herbivory stress  
Dandy Ahamefula Osibe<sup>1,2</sup>, Yuko Hojo<sup>1</sup>, Tomonori Shinya<sup>1</sup>, Ivan Galis<sup>1</sup> (<sup>1</sup>Inst. Plant Sci. & Res., Okayama Univ., <sup>2</sup>Dept. Plant Sci. & Biotech., Univ. Nigeria Nsukka Nigeria)

### **PC** Fri., March 17 10:30–12:00 / 13:00–14:30

- PC-171 Root infection competition behaviors between plant-parasitic nematodes and rhizobia  
Mai Jinkawa<sup>1</sup>, Yi-Lun Tsai<sup>1,2</sup>, Masayoshi Kawaguchi<sup>3</sup>, Shinichiro Sawa<sup>1,2</sup> (<sup>1</sup>Fac. Adv. Sci. & Tech., Kumamoto Univ., <sup>2</sup>IRCAEB, Kumamoto Univ., <sup>3</sup>Div. Symbiotic Systems, NIBB)
- PC-175 Effects of *Fusarium graminearum* Inoculation on Metabolite Production and Protein Expression in *Arabidopsis* Leaf Epidermis  
Kyoka Kato<sup>1</sup>, Takumi Nishiuchi<sup>2</sup>, Ichiro Karahara<sup>3</sup>, Daisuke Tamaoki<sup>3</sup> (<sup>1</sup>Grad. Sci. Eng., Univ. Toyama, <sup>2</sup>Bio. Cor. Fac., Univ. Kanazawa, <sup>3</sup>Fac. Sci., Acad. Assemb., Univ. Toyama)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-172 Effects of a mutation in fatty acid synthase KAS-II on the resistance to rice bacterial blight  
Ryota Okamoto<sup>1</sup>, Yuuki Gatayama<sup>2</sup>, Tomoaki Muranaka<sup>3</sup>, Satoru Taura<sup>4</sup>, Katsuyuki Ichitani<sup>3</sup>, Toshiki Uchiumi<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci. Eng., Kagoshima Univ., <sup>2</sup>Grad. Sch. Agri. Forest. Fish., Kagoshima Univ., <sup>3</sup>Fac. Agri., Kagoshima Univ., <sup>4</sup>Cent. Adv. Sci. Res. Pro., Kagoshima Univ.)
- PD-176 Understanding of the molecular mechanisms of rice immunity mediated by a nuclear-localized NLR Xa1  
Ayaka Yoshihisa<sup>1</sup>, Sayaka Sato<sup>1</sup>, Satomi Yoshimura<sup>1</sup>, Motoki Shimizu<sup>2</sup>, Koji Yamaguchi<sup>1</sup>, Tsutomu Kawasaki<sup>1</sup> (<sup>1</sup>Grad. Sch. Agr., Univ. Kindai, <sup>2</sup>Iwate. Biotech. Res. Cen)
- PD-180 Defense signal sensitization under phosphate deficiency following perception of damage-associated Pep peptides in *Arabidopsis thaliana*  
Natsuki Tsuchida, Tae Hong Li, Kentaro Okada, Kei Hiruma, Taiga Ishihara, Shigetaka Yasuda, Yusuke Saijo (NAIST)

**■ Plant-organism interaction B**

**PA Fri., March 17 09:00–10:30 / 13:00–14:30**

- PA-181 Functional analysis of *cis-trans* isomerase Cyclophilin in rhizobial infection  
Takashi Goto<sup>1,2</sup>, Masayoshi Kawaguchi<sup>1,2</sup> (<sup>1</sup>National Institute for Basic Biology, <sup>2</sup>The Graduate University for Advanced Studies)

**PB Fri., March 17 09:00–10:30 / 14:30–16:00**

- PB-178 Function of class 1 phytooglobins in the leaves of *Lotus japonicus*  
Toshiki Uchiumi<sup>1</sup>, Yuta Shimokawa<sup>1</sup>, Mitsutaka Fukudome<sup>2</sup> (<sup>1</sup>Dept. Sci., Kagoshima Univ., <sup>2</sup>Fac. Agri., Kagawa Univ.)
- PB-179 Role of cystathionine  $\gamma$ -lyase of *Mesorhizobium loti* in root nodule symbiosis  
Mitsutaka Fukudome<sup>1</sup>, Yuta Shimokawa<sup>2</sup>, Toshiki Uchiumi<sup>2</sup>, Masayoshi Kawaguchi<sup>3</sup> (<sup>1</sup>Fac. of Agri. Kagawa Univ., <sup>2</sup>Grad. Sch. Of Sci. and Eng. Kagoshima Univ., <sup>3</sup>NIBB)
- PB-182 Relationship between the plant cell wall and the symbiotic microbes in the infection process, focusing on *COBRA* genes in *Lotus japonicus*  
Daniela Romero Montero, Mayu Kawasaki, Akira Akamatsu, Naoya Takeda (Kwansei Gakuin University)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-183 Genome wide association studies in rice to improve nitrogen fixation capacity in paddy fields  
Hikaru Asano<sup>1,2</sup>, Zhihang Feng<sup>2</sup>, Yoshihiro Ohmori<sup>2</sup>, Yoko Masuda<sup>2,3</sup>, Hiroto Ohba<sup>4</sup>, Keishi Senoo<sup>2,3</sup>, Toru Fujiwara<sup>2</sup> (<sup>1</sup>Tokyo Col. Biotech., <sup>2</sup>Grad. Sch. Agr. Life Sci., Univ. Tokyo, <sup>3</sup>CRIM, Univ. Tokyo, <sup>4</sup>Niigata Agr. Res. Inst.)

**■ Genome function/gene regulation**

**PA Fri., March 17 09:00–10:30 / 13:00–14:30**

- PA-185 Transition of distribution patterns of histone H2A.Z in the evolution of *Arabidopsis thaliana*  
Soichirou Satoh<sup>1,2</sup>, Kazuki Mukae<sup>1</sup>, Shoma Morita<sup>2</sup>, Haruno Narukawa<sup>2</sup>, Kohei Kawaguchi<sup>1</sup>, Takayuki Hata<sup>3</sup>, Junichi Obokata<sup>4</sup> (<sup>1</sup>Grad. Sch. Life Env. Sci., Kyoto Pref. Univ., <sup>2</sup>Fac. Life Env. Sci., Kyoto Pref. Univ., <sup>3</sup>Grad. Sch. Med., Hirosaki Univ., <sup>4</sup>Fac. Agri., Setsunan Univ.)
- PA-189 Origins and convergent evolutions in fruit ripening pathways of angiosperm  
Eriko Kuwada<sup>1</sup>, Takashi Akagi<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Environ & Life Sci., Univ. Okayama, <sup>2</sup>JST-PRESTO)
- PA-193 Explainable deep learning predicts small RNAs enrichment patterns across wide plant varieties  
Natsumi Enoki<sup>1</sup>, Naoko Fujita<sup>1</sup>, Seiichi Uchida<sup>2</sup>, Takashi Akagi<sup>1</sup> (<sup>1</sup>Grad. Sch. Environ & Life Sci., Univ. Okayama, <sup>2</sup>Dept. Adv. Info. Tech., Univ. Kyusyu)
- PA-197 The effect of flavonoids on dsRNA-cleaving activities of Dicer-like proteins  
Midori Tabara<sup>1</sup>, Riho Yamanashi<sup>2</sup>, Atsushi Takeda<sup>3</sup>, Toshiyuki Fukuhara<sup>2</sup> (<sup>1</sup>R-GIRO, Ritsumeikan Univ., <sup>2</sup>Grad. Agri., Tokyo Univ. Agri. Tech., <sup>3</sup>Grad. Life Sci., Ritsumeikan Univ.)
- PA-201 Analysis of activation mechanism of *Physcomitrella Patens* S6 kinase (S6K)  
Tatsuki Abe<sup>1</sup>, Kaito Yuki<sup>2</sup>, Akiko Kozaki<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Integ. Sci and Tech., Univ. Shizuoka, <sup>2</sup>Fac. Sci., Univ. Shizuoka)

**PB Fri., March 17 09:00–10:30 / 14:30–16:00**

- PB-186 Development of *de novo* DNA Methylation Editing Technology in *Arabidopsis thaliana*  
Shunya Hirata<sup>1</sup>, Yuna Okawa<sup>2</sup>, Yoko Ikeda<sup>3</sup>, Taisuke Nishimura<sup>4</sup>, Kappei Kobayashi<sup>1,2</sup>, Hidetaka Kaya<sup>1,2</sup> (<sup>1</sup>Graduate School of Agriculture, Ehime University, <sup>2</sup>Faculty of Agriculture, Ehime University, <sup>3</sup>IPSR, Okayama University, <sup>4</sup>Department of Bioengineering, Nagaoka University of Technology)
- PB-190 Observation of transcription active region in RNA polymerase II C-terminal domain modification enzyme induced cells  
Mio Shibuta K. (Fac. Sci., Yamagata Univ.)
- PB-194 Arabidopsis *TTL* gene is involved in the splicing of AT–AC-type introns  
Tomoko Niwa<sup>1</sup>, Junshin Miyamoto<sup>2</sup>, Daisuke Kurihara<sup>3,4</sup>, Takamasa Suzuki<sup>1</sup> (<sup>1</sup>Col. Biosci. Biotech., Chubu Univ., <sup>2</sup>Grad. Sch. Biosci. Biotech., Chubu Univ., <sup>3</sup>ITbM, Nagoya Univ., <sup>4</sup>Inst. Adv. Res., Nagoya Univ.)
- PB-198 The molecular-based mechanism for activation of the CRR4-DYW1 RNA editing complex  
Tenghua Wang, Mizuki Takenaka (Kyoto university)

**PC Fri., March 17 10:30–12:00 / 13:00–14:30**

- PC-187 Co-localization of histone H4K16ac and H2A.Z around DSB loci in *Arabidopsis thaliana*  
Kohei Kawaguchi<sup>1</sup>, Mei Kazama<sup>1</sup>, Takayuki Hata<sup>2</sup>, Mitsuhiro Matsuo<sup>3</sup>, Junichi Obokata<sup>3</sup>, Soichirou Satoh<sup>1</sup> (<sup>1</sup>Grad. Sch. Life Env. Sci., Kyoto Pref. Univ., <sup>2</sup>Grad. Sch. Med., Hirosaki Univ., <sup>3</sup>Fac. Agri., Setsunan Univ.)
- PC-191 Transcriptional Regulation in Rice Anther under High-Temperature-Induced Male Sterility Conditions  
Makiko Kawagishi-Kobayashi<sup>1</sup>, Makoto Kashima<sup>2</sup>, Atsushi Higashitani<sup>3</sup>, Yuzuru Tozawa<sup>4</sup> (<sup>1</sup>NIAS, NARO, <sup>2</sup>Col. Sci. Eng., Aoyama Gakuin Univ., <sup>3</sup>Grad. Sch. Life Sci., Tohoku Univ., <sup>4</sup>Grad. Sch. Sci. Eng., Saitama Univ.)
- PC-195 Identification of genes involved in boron-dependent mRNA degradation of the boron transporter NIP5:1 in *Arabidopsis thaliana*  
Mayuki Tanaka, Sotomayor L. Saul, Naoyuki Sotta, Toru Fujiwara (Grad. Sch. Agri. Life Sci)
- PC-199 Involvement of Ribosomal Protein uL13 in Regulation of Boron-dependent Translation Process in Shoots of *Arabidopsis thaliana*  
Hirofumi Fukuda<sup>1</sup>, Naoyuki Sotta<sup>1</sup>, Mayuki Tanaka<sup>1</sup>, Yukako Chiba<sup>2,3</sup>, Kyoko Miwa<sup>4</sup>, Yui Yamashita<sup>5</sup>, Haruka Aoyama<sup>3</sup>, Satoshi Naito<sup>3,5</sup>, Toru Fujiwara<sup>1</sup> (<sup>1</sup>Agri., Univ. Tokyo, <sup>2</sup>Grad. Sch. Sci., Hokkaido Univ., <sup>3</sup>Grad. Sch. Life Sci., Hokkaido Univ., <sup>4</sup>Grad. Sch. Envr. Sci., Hokkaido Univ., <sup>5</sup>Grad. Sch. Agri., Hokkaido Univ.)

**PD Fri., March 17 10:30–12:00 / 14:30–16:00**

- PD-184 Analysis of the mechanism and significance of centromere arrangement in *Arabidopsis thaliana*  
Takuya Sakamoto<sup>1</sup>, Yuki Sakamoto<sup>2</sup>, Daniel Slane<sup>3</sup>, Nanami Ito<sup>3</sup>, Sachihito Matsunaga<sup>3</sup> (<sup>1</sup>Dept. Appl. Biol. Sci., Fac. Sci. Tech., Tokyo Univ. Sci., <sup>2</sup>Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ., <sup>3</sup>Dept. Integr. Biosci., Grad. Sch. Front. Sci., Univ. Tokyo)
- PD-188 DNA methylation profiling in Arabidopsis egg cells  
Hiroki Tsutsui<sup>1</sup>, Marc Schmid<sup>2</sup>, Ueli Grossniklaus<sup>1</sup> (<sup>1</sup>Department of Plant and Microbial Biology, University of Zurich, <sup>2</sup>MWSchmid GmbH)
- PD-192 Intergenic splicing-mediated readthrough transcripts are targeted by NMD in *Arabidopsis*  
Yukio Kurihara<sup>1,2</sup>, Yoko Makita<sup>1,3</sup>, Masaharu Kawauchi<sup>1</sup>, Ami Kageyama<sup>1</sup>, Tomoko Kuriyama<sup>1</sup>, Minami Matsui<sup>1</sup> (<sup>1</sup>RIKEN CSRS, <sup>2</sup>Grad. Sch. Arts Sci., Univ. Tokyo, <sup>3</sup>Fac. Eng. Maebashi Inst. Tech.)
- PD-196 AtCCR4-NOT, an mRNA decay machinery, is important for shoot regeneration  
Toshihiro Arae<sup>1</sup>, Sota Kurachi<sup>2</sup>, Kosuke Kawai<sup>2</sup>, Yuya Suzuki<sup>2</sup>, Yukako Chiba<sup>2,3</sup>, Misato Ohtani<sup>1</sup> (<sup>1</sup>Grad. Sch. Frontier Sci., Univ. Tokyo, <sup>2</sup>Grad. Sch. Life Sci., Hokkaido Univ., <sup>3</sup>Fac. Sci., Hokkaido Univ.)
- PD-200 Ribosome stalling involved in plants' unfolded protein response  
Tomoya Imamichi<sup>1,2</sup>, Nao Kusumoto<sup>2</sup>, Seidai Takamatsu<sup>2</sup>, Yugo Honda<sup>1</sup>, Shiori Muraoka<sup>1</sup>, Hitoshi Onouchi<sup>1</sup>, Satoshi Naito<sup>1,2</sup>, Yui Imamichi<sup>1</sup> (<sup>1</sup>Grad. Sch. Agric., Univ. Hokkaido, Japan, <sup>2</sup>Grad. Sch. Life Sci., Univ. Hokkaido, Japan)

## ■ Systems biology

### **PA** Fri., March 17 09:00–10:30 / 13:00–14:30

- PA-205 Marpolbase: development of the genome and expression database for the liverwort *Marchantia polymorpha*  
Yasuhiro Tanizawa<sup>1</sup>, Shogo Kawamura<sup>2</sup>, Facundo Romani<sup>3</sup>, Masaru Yagura<sup>1</sup>, Takako Mochizuki<sup>1</sup>, Mika Sakamoto<sup>1</sup>, Shohei Yamaoka<sup>2</sup>, Ryuichi Nishihama<sup>4</sup>, Yasukazu Nakamura<sup>1</sup>, Katsuyuki T. Yamato<sup>5</sup>, John Bowman<sup>6</sup>, Takayuki Kohchi<sup>2</sup> (<sup>1</sup>Dept. Informatics, NIG, <sup>2</sup>Grad. Sch. Biostudies, Kyoto Univ., <sup>3</sup>Dept. Plant Sci., Univ. Cambridge, <sup>4</sup>Fac. Sci. Tech., Tokyo Univ. Sci., <sup>5</sup>B.O.S.T., Kindai Univ., <sup>6</sup>Monash Univ.)

### **PB** Fri., March 17 09:00–10:30 / 14:30–16:00

- PB-202 Genome sequence and analysis of *Nicotiana benthamiana*, the model plant for interaction between organisms  
Ken-ichi Kurotani<sup>1</sup>, Hideki Hirakawa<sup>2</sup>, Kenta Shirasawa<sup>2</sup>, Yasuhiro Tanizawa<sup>3</sup>, Yasukazu Nakamura<sup>3</sup>, Sachiko Isobe<sup>2</sup>, Michitaka Notaguchi<sup>1</sup> (<sup>1</sup>Biosci. Biotech. Center, Nagoya Univ., <sup>2</sup>Kazusa DNA Research Inst., <sup>3</sup>Natl. Inst. Genetics)

### **PC** Fri., March 17 10:30–12:00 / 13:00–14:30

- PC-203 Transcriptomics of NAM parental lines of wheat from its eastern transmitted area  
Yasuyuki Nomura<sup>1</sup>, Shuhei Nasuda<sup>2</sup>, Kentaro Shimizu<sup>3,4</sup>, Atsushi J. Nagano<sup>5,6</sup> (<sup>1</sup>Res. Inst. Food Agri., Ryukoku Univ., <sup>2</sup>Grad. Sch. Agri., Kyoto Univ., <sup>3</sup>Dept. Evol. Biol. Envir. Studies, Univ. Zurich, <sup>4</sup>Kihara Biol. Inst. Res., Yokohama City Univ., <sup>5</sup>Fac. Agri., Ryukoku Univ., <sup>6</sup>IAB, Keio Univ.)

### **PD** Fri., March 17 10:30–12:00 / 14:30–16:00

- PD-204 Neighbor eGWAS: Incorporating neighbor genotypic identity into field transcriptomics of *Arabidopsis thaliana*  
Yasuhiro Sato<sup>1,2</sup>, Rie Shimizu-Inatsugi<sup>1</sup>, Kentaro K. Shimizu<sup>1,3</sup>, Atsushi J. Nagano<sup>2,4</sup> (<sup>1</sup>Univ. of Zurich, <sup>2</sup>Ryukoku Univ., <sup>3</sup>Yokohama City Univ., <sup>4</sup>Keio Univ.)

## ■ New technology

### **PA** Fri., March 17 09:00–10:30 / 13:00–14:30

- PA-209 Development of plant culture devices for observing root systems under heterogeneous nutrient conditions  
Naoyuki Sotta, Toru Fujiwara (Grad. Sch. Agr. Life Sci., Univ. Tokyo)

### **PB** Fri., March 17 09:00–10:30 / 14:30–16:00

- PB-206 Simple Agrobacterium-Mediated Infiltration Methods can be used for Single-Cell Genome Editing, and Hormone-Free Adventitious Bud and Somatic Embryo Induction in *Arabidopsis thaliana*  
Jun Nakayama<sup>2</sup>, Mai Satoh<sup>2</sup>, Toru Ishizuka<sup>2</sup>, Yosuke Takeuchi<sup>2</sup>, Tubasa Yamagata<sup>2</sup>, Miho Ikeda<sup>1,2</sup> (<sup>1</sup>Biosci. Biotech., Fukui Pref. Univ., <sup>2</sup>Grad. Sch. Sci. Eng., Saitama Univ.)
- PB-210 Chinese cabbage weight prediction using individual spatio-multi-temporal UAV imagery and deep learning techniques  
Andres Aguilar Ariza<sup>1</sup>, Masanori Ishii<sup>2</sup>, Toshio Miyazaki<sup>3</sup>, Toru Fujiwara<sup>1</sup>, Wei Guo<sup>2</sup>, Takehiro Kamiya<sup>1</sup> (<sup>1</sup>Graduate School of Agricultural and Life Sciences, The University of Tokyo, <sup>2</sup>Institute for Sustainable Agro-Ecosystem Services, The University of Tokyo, <sup>3</sup>Nippon Norin Seed Co)

### **PC** Fri., March 17 10:30–12:00 / 13:00–14:30

- PC-207 Attempts toward the development of protocols required for the transformation of *Coleochaete scutata*  
Haruna Nomizo<sup>1</sup>, Naoyuki Uchida<sup>2</sup> (<sup>1</sup>Grad. Sch. Sci., Nagoya Univ., <sup>2</sup>Ctr. Gene. Res., Nagoya Univ.)
- PC-211 The amount of total soluble protein produced in an etiolated rice seedling and conditions that enhance the protein amount  
Akiko Watanabe<sup>1</sup>, Yukino Takeshima<sup>1,2</sup>, Airi Kanouchi<sup>2,3</sup>, Shuri Takahashi<sup>2,4</sup>, Karin Sasaki<sup>2,5</sup>, Noa Takahashi<sup>2,6</sup>, Yukihiro Ito<sup>1,2</sup> (<sup>1</sup>Grad Sch Agri Sci, Tohoku Univ., <sup>2</sup>EGGS, Tohoku Univ., <sup>3</sup>Yamagata Higashi HS, <sup>4</sup>Hanamaki Kita HS, <sup>5</sup>Renaissance HS, <sup>6</sup>Sakata Higashi HS)

**PD** Fri., March 17 10:30–12:00 / 14:30–16:00

- PD-208 Establishment of novel viral vector for foreign protein expression in *Vigna* species  
Hirota Ariga, Tamaki Ichiki-Uehara, Ken Naito (Res. Center of Genetic Resources, NARO)
- PD-212 Development of a vector system (Boost Gateway vector system) that facilitates the preparation of GAL4/UAS constructs and enhancement of expression with various promoter  
Tsuyoshi Nakagawa<sup>1</sup>, Mostafa Aboulela<sup>1</sup>, Yuya Yamada<sup>1</sup>, Sumie Ishiguro<sup>2</sup>, Takushi Hachiya<sup>1</sup>, Hironaka Tsukagoshi<sup>3</sup> (<sup>1</sup>Dep. Mol. Func. Genomics, Shimane Univ., <sup>2</sup>Grad. Sch. Agr., Nagoya Univ., <sup>3</sup>Faculty of Agriculture, Meijo University)

■ Others

**PA** Fri., March 17 09:00–10:30 / 13:00–14:30

- PA-213 Isolation and analysis of high lipid accumulation strains by random DNA insertion in *Nannochloropsis oceanica* NIES-2145  
Kai Hoshina<sup>1</sup>, Masako Iwai<sup>1,2</sup>, Kumiko Okazaki<sup>3</sup>, Tomokazu Kurita<sup>3</sup>, Shinichiro Maeda<sup>4</sup>, Akihide Takami<sup>4</sup>, Noriaki Tounosu<sup>1</sup>, Mie Shimojima<sup>1</sup>, Takashi Yamamoto<sup>3</sup>, Atsushi Sakamoto<sup>3</sup>, Hiroyuki Ohta<sup>1,2</sup> (<sup>1</sup>Sch. Life Sci. and Tech., Tokyo Tech., <sup>2</sup>Phytolipid Technologies Co., Ltd., <sup>3</sup>Division of Integrated Science for Life, Graduate School of Integrated Science for Life, Hiroshima University, <sup>4</sup>Mazda Motor Corporation)

**PB** Fri., March 17 09:00–10:30 / 14:30–16:00

- PB-214 Information basis for wild accessions of *Lotus /Glycine*, and their application  
Shusei Sato<sup>1</sup>, Yusdar Mustamin<sup>1</sup>, Masaru Bamba<sup>1</sup>, Shun Hashimoto<sup>1</sup>, Masatsugu Hashiguchi<sup>2</sup>, Takuyu Hashiguchi<sup>2</sup>, Hidenori Tanaka<sup>3</sup> (<sup>1</sup>Grad. Sch. Life Sci., Tohoku Univ., <sup>2</sup>Fac. Regional Innovation, Univ. of Miyazaki, <sup>3</sup>Fac. Agr., Univ. of Miyazaki)

**PC** Fri., March 17 10:30–12:00 / 13:00–14:30

- PC-215 How to survive in the organizations with serious research ethics issue  
Emiko Harada (The Univ. of Shiga Pref.)