

# GENERAL PRESENTATIONS

## PROGRAM OF POSTER PRESENTATIONS

- Poster viewings are basically carried out in the ORSAM portal site from 9:00 on Day 1 to 16:00 on Day 3. Questions and answers will be held in the Comments section in the ORSAM portal site.
- Poster discussions using Zoom meeting (only for presenters who wish it) are also scheduled at 13:00–14:30 on Day 3 (poster numbers beginning with PF) and at 14:30–16:00 on Day 3 (poster numbers beginning with PL).

■ Photosynthesis

- PF-001      [Cancelled]
- PF-002      Regulation of light-harvesting functions during non-photochemical quenching induction in green microalgae grown under different light intensity  
Yoshifumi Ueno<sup>1</sup>, Shimpei Aikawa<sup>2</sup>, Seiji Akimoto<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Kobe Univ., <sup>2</sup>JIRCAS)
- PF-003      Effects of red-shifted light-harvesting complexes accumulated by eukaryotic algae under far-red light conditions on the primary process of photosynthesis  
Hiroto Matsuzaka<sup>1</sup>, Yoshifumi Ueno<sup>1</sup>, Fei Wang<sup>2</sup>, Hideaki Miyashita<sup>2</sup>, Jian-Ren Shen<sup>3</sup>, Ryo Nagao<sup>3</sup>, Makio Yokono<sup>4</sup>, Seiji Akimoto<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Kobe Univ., <sup>2</sup>Grad. Sch. Hum. Environ. Stud., Kyoto Univ., <sup>3</sup>RIIS, Okayama Univ., <sup>4</sup>Inst. Low Temp. Sci., Hokkaido Univ.)
- PF-004      Light-independent chlorophyll *d* biosynthesis in marine cyanobacteria *Acaryochloris*  
Yuki Tsuzuki<sup>1</sup>, Hisanori Yamakawa<sup>1</sup>, Shigeru Itoh<sup>2</sup>, Yuichi Fujita<sup>1</sup>, Haruki Yamamoto<sup>1</sup> (<sup>1</sup>Grad. Sch. Bioagr. Sci., Nagoya Univ., <sup>2</sup>Grad. Sch. Sci., Nagoya Univ.)
- PF-005      In-vitro reconstitution of light-harvesting complexes of a siphonous green alga, *Codium fragile*  
Chiari Akiyama<sup>1</sup>, Naoko Norioka<sup>2</sup>, Naohiro Oka<sup>3</sup>, Yuki Isaji<sup>1</sup>, Tetsuko Nakaniwa<sup>2</sup>, Rei Tohda<sup>4</sup>, Hideaki Tanaka<sup>2,4</sup>, Genji Kurisu<sup>2,4</sup>, Ritsuko Fujii<sup>1,5</sup> (<sup>1</sup>Division of Molecular Materials Science, Graduate School of Science, Osaka City University, Osaka, Japan, <sup>2</sup>Institute for Protein Research, Osaka University, Suita, Japan, <sup>3</sup>Graduate School of Technology, Industrial and Social Science, Tokushima University, Tokushima, Japan, <sup>4</sup>Department of Macromolecular Science, Graduate School of Science, Osaka University, Osaka, Japan, <sup>5</sup>Research Center for Artificial Photosynthesis, Osaka City University, Osaka, Japan)
- PF-006      Regulation in the expression of *Arabidopsis*  $\beta$ -carotene hydroxylase genes *Chy1* and *Chy2* by blue light  
Asako Okano<sup>1</sup>, Ryohei Yamada<sup>2</sup>, Satomi Takeda<sup>2</sup> (<sup>1</sup>College of Life, Env., Advanced Sci., Osaka Prefecture Univ., <sup>2</sup>Grad. Sch. Sci., Osaka Prefecture Univ.)
- PF-007      Adaptation of 8-vinyl reductase to the iron environment and its role in *Acaryochloris*  
Haruka Suehiro, Ryouichi Tanaka, Hisashi Ito (Inst. Low Temp. Sci., Hokkaido Univ.)
- PF-008      The function of barley-unique HvLhcb1.12 in rice under Fe deficiency stress  
Yuna Wakabayashi<sup>1</sup>, Akihiro Saito<sup>2</sup>, Takuji Ohyama<sup>2</sup>, Kyoko Higuchi<sup>2</sup> (<sup>1</sup>Grad. Sch. Agri. Chem., Tokyo Univ. of Agri., <sup>2</sup>Dept. Agri. Chem., Tokyo Univ. of Agri.)
- PF-009      Relationship between the redox condition of plastoquinone pool and non-photochemical quenching in the cyanobacterium *Synechocystis* sp. PCC6803  
Ryohei Tachikake, Kintake Sonoike (Fac. Edu. Integ. Arts Sci., Waseda Univ.)
- PF-010      Deprivation of outer membrane enhances extracellular electron transfer activity of cyanobacterium *Synechocystis* sp. PCC 6803  
Shoko Kusama<sup>1,2</sup>, Seiji Kojima<sup>2</sup>, Ken Kimura<sup>1</sup>, Kenya Tanaka<sup>1</sup>, Ginga Shimakawa<sup>3</sup>, Yasuaki Okumura<sup>2</sup>, Shuji Nakanishi<sup>1,3</sup> (<sup>1</sup>Grad. Sch. Eng. Sci., Univ. Osaka, <sup>2</sup>Panasonic Corp., <sup>3</sup>RCSEC, Univ. Osaka)
- PF-011      The relationship between molecular hydrogen and photosystem reactions using *Synechocystis* sp. PCC6803  
Yuta Asano<sup>1</sup>, Hisataka Ohta<sup>2</sup>, Tatsuya Tomo<sup>2</sup> (<sup>1</sup>Grad. Sch. Sci., Tokyo University of Science, <sup>2</sup>Grad. Sch. Sci., Tokyo University of Science)

■ Environmental responses of photosynthesis

- PF-012      Responses of energy-transfer processes in *Euglena gracilis* to fluctuating lights  
Miyuki Tanabe<sup>1</sup>, Yoshifumi Ueno<sup>1</sup>, Makio Yokono<sup>2</sup>, Ka-Ho Kato<sup>3</sup>, Jian-Ren Shen<sup>3,4</sup>, Ryo Nagao<sup>4</sup>, Seiji Akimoto<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Kobe Univ., <sup>2</sup>Inst. Low Temp. Sci., Hokkaido Univ., <sup>3</sup>Grad. Sch. Sci. Tech., Okayama Univ., <sup>4</sup>RIIS, Okayama Univ.)
- PF-013      Analysis of regulatory signals for redox balance-sensing phycobilisome degradation using  $\Delta ndhD1/D2$  strain of *Synechocystis* sp. PCC 6803  
Masakazu Toyoshima<sup>1</sup>, Masumi Sakata<sup>1</sup>, Chiaki Yamamoto<sup>1</sup>, Yoshifumi Ueno<sup>2</sup>, Yoshihiro Toya<sup>1</sup>, Seiji Akimoto<sup>2</sup>, Hiroshi Shimizu<sup>1</sup> (<sup>1</sup>IST, Osaka univ., <sup>2</sup>Grad. Sch. Sci., Kobe univ.)

- PF-014 Ability of P700 Oxidation in Photosystem I Causes Varietal Difference of Chilling Tolerance in Cucumber  
Ko Takeuchi<sup>1</sup>, Yufen Che<sup>2</sup>, Minoru Kumazawa<sup>2</sup>, Takeshi Nakano<sup>1,2</sup>, Chikahiro Miyake<sup>3</sup>, Kentaro Ifuku<sup>1,2</sup> (<sup>1</sup>Fac. Agri., Kyoto Univ., <sup>2</sup>Grad. Sch. Biostudies., Kyoto Univ., <sup>3</sup>Grad. Sch. Agri., Kobe Univ.)
- PF-015 Response of *Acaryochloris* to different light qualities studied by time-resolved fluorescence spectroscopy  
Zhe Wang<sup>1</sup>, Yoshifumi Ueno<sup>1</sup>, Makio Yokono<sup>2</sup>, Reona Toyofuku<sup>3</sup>, Tatsuya Tomo<sup>3</sup>, Seiji Akimoto<sup>1</sup> (<sup>1</sup>Grad. Sch., Kobe Univ., <sup>2</sup>Inst. Low Temp. Sci., Hokkaido Univ., <sup>3</sup>Fac. Sci., Tokyo Univ. Sci)
- PF-016 Modifications of light-harvesting and energy-transfer processes of diatoms in response to fluctuating red light  
Miyuki Tanabe<sup>1</sup>, Yoshifumi Ueno<sup>1</sup>, Makio Yokono<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. Low Temp. Sci., Hokkaido Univ., <sup>3</sup>RIIS, Okayama Univ.)
- PF-017 Genetic analysis of the chloroplast-localized protein DLDG1 involved in pH control in chloroplasts  
Kasane Suzuki, Shinji Masuda (Department of Life Sciences and Technology, Tokyo Institute of Technology)
- PF-018 Responses of excitation energy-transfer processes in *Euglena gracilis* to light qualities  
Yuki Sorihashi<sup>1</sup>, Yoshifumi Ueno<sup>2</sup>, Makio Yokono<sup>3</sup>, Ka-Ho Kato<sup>4</sup>, Jian-Ren Shen<sup>4,5</sup>, Ryo Nagao<sup>5</sup>, Seiji Akimoto<sup>1,2</sup> (<sup>1</sup>Fac. Sci., Kobe Univ., <sup>2</sup>Grad. Sch. Sci., Kobe Univ., <sup>3</sup>Inst. Low Temp. Sci., Hokkaido Univ., <sup>4</sup>Grad. Sch. Sci. Tech., Okayama Univ., <sup>5</sup>RIIS, Okayama Univ.)
- PF-019 Photosynthesis influences *VTC2* expression providing a possible mechanism for light control of ascorbate accumulation in Arabidopsis leaves  
Takahiro Ishikawa<sup>1</sup>, Takanori Maruta<sup>1</sup>, Takahisa Ogawa<sup>1</sup>, Shigeru Shigeoka<sup>2</sup>, Mike Page<sup>3</sup>, Smirmoff Nicholas<sup>3</sup> (<sup>1</sup>Grad. Sch. Nat. Sci. Technol., Shimane Univ., <sup>2</sup>Exp. Farm, Kindai Univ., <sup>3</sup>Univ., Exeter, Biosci.)

## ■ Primary metabolism

- PF-020 Identification and characterization of transcription factors located at the center of the nitrogen-deficiency response network in rice  
Namie Ohtsuki<sup>1</sup>, Yoshiaki Ueda<sup>2</sup>, Yasuhito Sakuraba<sup>1</sup>, Shuichi Yanagisawa<sup>1</sup> (<sup>1</sup>Biotech. Res. Center, Univ. Tokyo, <sup>2</sup>JIRCAS)
- PF-021 Histone chaperon NAP1 proteins are involved in nitrogen responsive gene expression regulation in *Arabidopsis thaliana*  
Linnan Jie, Miho Sanagi, Yoshie Morita, Junpei Takagi, Junji Yamaguchi, Takeo Sato (Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ.)
- PF-022 Regulatory mechanisms of nitrogen responsive flowering through SnRK1-dependent phosphorylation signaling in *Arabidopsis*  
Akio Kubo<sup>1</sup>, Miho Sanagi<sup>1</sup>, Yasutake Sato<sup>2</sup>, Filip Rolland<sup>3</sup>, Junpei Takagi<sup>1</sup>, Junji Yamaguchi<sup>1</sup>, Takato Imaizumi<sup>4</sup>, Takeo Sato<sup>1</sup> (<sup>1</sup>Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ., <sup>2</sup>Sch. Sci., Hokkaido Univ., <sup>3</sup>Biology Department, KU Leuven, <sup>4</sup>Dept. Biol. Univ. Washington)
- PF-023 Elucidation of Different Traits of Five Genes Responsible for the First Reactions of Glutathione Degradation Pathways in Arabidopsis  
Takehiro Ito<sup>1</sup>, Minori Umahashi<sup>2</sup>, Shunsuke Miyaji<sup>2</sup>, Akiko Maruyama-Nakashita<sup>3</sup>, Masami Yokota Hirai<sup>4</sup>, Naoko Ohkama-Ohtsu<sup>1,5</sup> (<sup>1</sup>Tokyo University of Agriculture and Technology, Faculty of Agriculture, <sup>2</sup>Tokyo University of Agriculture and Technology, Graduate school of Agriculture, <sup>3</sup>Kyushu University, Faculty of Agriculture, <sup>4</sup>RIKEN Center for Sustainable Resource Science (CSRS), <sup>5</sup>Tokyo University of Agriculture and Technology, Institute of Global Innovation Research)

## ■ Secondary (specialized) metabolism

- PF-024 Biochemical characterization of glycosyltransferases involved in the formation of glycosylated scent compounds in petunia flowers  
Takao Koeduka<sup>1</sup>, Yukiko Ueyama<sup>1</sup>, Sakihito Kitajima<sup>2</sup>, Toshiyuki Ohnishi<sup>3</sup>, Kenji Matsui<sup>1</sup> (<sup>1</sup>Grad. Sch. Sc. Tech. Innov., Yamaguchi Univ., <sup>2</sup>Kyoto Inst. Tech., <sup>3</sup>Grad. Sch. Agr., Shizuoka Univ.)
- PF-025 Comparison of different methods and datasets for genome-wide association study -a case study in sorghum  
Xu Chen<sup>1</sup>, Kiyoshi Yamazaki<sup>1</sup>, Bian Bian<sup>1</sup>, Hideki Takanashi<sup>1</sup>, Masaru Fujimoto<sup>1</sup>, Nobuhiro Tsutsumi<sup>1</sup>, Junichi Yoneda<sup>2</sup>, Taichi Koshiba<sup>2</sup>, Hiromi Kajiya-Kanegae<sup>1</sup>, Motoyuki Ishimori<sup>1</sup>, Tsuyoshi Tokunaga<sup>2</sup>, Hiroyoshi Iwata<sup>1</sup>, Masaomi Yamamura<sup>3</sup>, Yuki Tobimatsu<sup>3</sup>, Toshiaki Umezawa<sup>3</sup>, Toru Fujiwara<sup>1</sup> (<sup>1</sup>Graduate School of Agricultural and Life Sciences, The University of Tokyo, <sup>2</sup>EARTHNOTE Co., Ltd., <sup>3</sup>Research Institute for Sustainable Humanosphere, Kyoto University)
- PF-026 Elucidation of regulation and accumulation machinery in proanthocyanidin biosynthesis  
Aoi Shimeno, Mutsumi Watanabe, Takayuki Tohge (Graduate School of Science and Technology, Nara Institute of Science and Technology (NAIST))

- PF-027 Comprehensive analyses of hydrolyzable tannins in aluminum-resistant tree *Eucalyptus camaldulensis*  
Ko Tahara<sup>1</sup>, Shoichi Suzuki<sup>2</sup>, Mitsuru Nishiguchi<sup>1</sup>, Koh Hashida<sup>1</sup>, Hideyuki Ito<sup>2</sup> (<sup>1</sup>Forestry and Forest Products Research Institute, <sup>2</sup>Graduate School of Health and Welfare Science, Okayama Prefectural University)
- PF-028 Glucosinolate Catabolism dependent on Two  $\beta$ -Glucosidases, BGLU28 and BGLU30, is critical for Plant Growth under Sulfur Deficiency  
Liu Zhang<sup>1</sup>, Ryota Kawaguchi<sup>1</sup>, Tomomi Morikawa-Ichinose<sup>1</sup>, Alaa Allahham<sup>1</sup>, Sun-Ju Kim<sup>2</sup>, Akiko Maruyama-Nakashita<sup>1</sup> (<sup>1</sup>Grad. Sch. Bioresour. & Bioenviron., Univ. Kyushu, <sup>2</sup>Grad. Sch. Bio-Enviro Chem., Univ. Chungnam National)

### ■ Biomembrane/Ion and solute transport

- PF-029 Mutations in a Golgi-localized proton pyrophosphatase *AVP2;1* alleviates low-boron stress in *Arabidopsis thaliana*  
Amarachukwu Faith Onuh, Kyoko Miwa (Grad. Sch. Environ. Sci., Hokkaido Univ)
- PF-030 Functional analysis of tonoplast intrinsic protein AtTIP2;2 in *Arabidopsis thaliana*  
 Yukako Yamanari<sup>1</sup>, Yoshiki Nakahara<sup>2</sup>, Hina Fujimoto<sup>1</sup>, Yuka Motohiro<sup>1</sup>, Tsuneo Kuwagata<sup>3</sup>, Yuko Hanba<sup>4</sup>, Maki Katsuhara<sup>2</sup>,  
Kumi Sato-Nara<sup>1</sup> (<sup>1</sup>Nara Women's Univ., <sup>2</sup>IPSR, Okayama Univ., <sup>3</sup>Nat. Inst. Agro-Environ. Sci., NARO, <sup>4</sup>Dep. Appl. Biol., Kyoto Inst. Tech.)
- PF-031 Analysis of the C-terminal region controlled the water transport activities of *Arabidopsis* tonoplast intrinsic proteins, AtTIP3s  
Shigeeko Utsugi, Maki Katsuhara (IPSR, Univ. Okayama)
- PF-032 The relationship between Fe influx into new leaf and downregulation of SUF machinery in Fe-deficient barley  
 Kyoko Higuchi<sup>1</sup>, Minori Sasaki<sup>1</sup>, Maya Katori<sup>1</sup>, Keisuke Kurita<sup>2</sup>, Takuro Sakai<sup>2</sup>, Nobuo Suzuki<sup>3</sup>, Naoki Kawachi<sup>3</sup>, Akihiro Saito<sup>1</sup>,  
 Takuji Ohyama<sup>1</sup> (<sup>1</sup>Tokyo University of Agriculture, Faculty of Applied Bioscience, Department of Agricultural Chemistry, <sup>2</sup>Materials Sciences Research Center, Japan Atomic Energy Agency, <sup>3</sup>National Institutes for Quantum and Radiological Science and Technology, Takasaki Advanced Radiation Research Institute)
- PF-033 Identification of RND-type free fatty acid exporters using of *Synechocystis* sp. PCC6803  
Harumi Jinno<sup>1</sup>, Tenma Suzuki<sup>2</sup>, Kodai Tanaka<sup>2</sup>, Tatsuki Mizutani<sup>2</sup>, Takanori Hasegawa<sup>2</sup>, Tatsuo Omata<sup>3</sup>, Makiko Aichi<sup>2</sup> (<sup>1</sup>Grad. Sch. of Biosci. and Biotech., Chubu Univ., <sup>2</sup>Col. of Biosci. and Biotech., Chubu Univ., <sup>3</sup>Grad. Sch. of Bioagric. Sci., Nagoya Univ.)
- PF-034 A novel factor involved in regulation of free fatty acid (FFA) efflux activity of the RND-type transporter RND1 in *Synechococcus elongatus* PCC 7942  
Jun Furuhashi, Nobuyuki Takatani, Tatsuo Omata, Seiryuu Motoyama (Grad. Sch. Bioagr. Sci., Nagoya Univ)

### ■ Membrane trafficking

- PF-035 Analysis of the subcellular localization of novel proteins with Syntaxin6 N-terminal region  
Leyna Nagao<sup>1</sup>, Yutaro Shimizu<sup>2,3</sup>, Takahiro Fujikura<sup>3</sup>, Emi Ito<sup>1</sup>, Kei Yura<sup>1,4</sup>, Akihiko Nakano<sup>2</sup>, Tomohiro Uemura<sup>1</sup> (<sup>1</sup>Graduate School of Humanities and Sciences, Ochanomizu Univ., <sup>2</sup>Live Cell Super-Resolution Imaging Research Team, RIKEN Center for Advanced Photonics., <sup>3</sup>Graduate School of Science, Univ. Tokyo, <sup>4</sup>School of Advanced Science and Engineering, Waseda Univ.)
- PF-036 Analysis of Rab6/RABH1 protein in *Arabidopsis thaliana*  
Chihiro Otori<sup>1</sup>, Emi Ito<sup>1</sup>, Akihiko Nakano<sup>2</sup>, Takashi Ueda<sup>3,4</sup>, Tomohiro Uemura<sup>1</sup> (<sup>1</sup>Sci. Bio., Univ. Ocha, <sup>2</sup>RIKEN Center for Advanced Photonics, <sup>3</sup>Div. Cellular Dynamics, NIBB, <sup>4</sup>Sch. Life Sci., SOKENDAI)
- PF-037 The role of the plant secretion system in the pathogen responses  
Sae Endo<sup>1</sup>, Emi Ito<sup>1</sup>, Akihiko Nakano<sup>2</sup>, Tomohiro Uemura<sup>1</sup> (<sup>1</sup>Sci. Bio., Univ. Ocha, <sup>2</sup>RIKEN Center for Advanced Photonics)
- PF-038 Analysis of *Arabidopsis thaliana* VAMP714 intracellular localization  
Tomoko Eguchi<sup>1</sup>, Sae Endo<sup>2</sup>, Emi Ito<sup>2</sup>, Akihiko Nakano<sup>3</sup>, Tomohiro Uemura<sup>1,2</sup> (<sup>1</sup>Graduate School of Humanities and Science, Ochanomizu Univ., <sup>2</sup>Faculty of Science, Ochanomizu Univ., <sup>3</sup>Live Cell Super-Resolution Imaging Research Team, RIKEN Center for Advanced Photonics.)
- PF-039 Salt stress response mediated by TGN-vacuolar transport pathway  
Yuzuki Inoue<sup>1</sup>, Yutaro Shimizu<sup>2,3</sup>, Emi Ito<sup>1</sup>, Akihiko Nakano<sup>2</sup>, Tomohiro Uemura<sup>1</sup> (<sup>1</sup>Graduate School of Humanities and Sciences, Ochanomizu Univ., <sup>2</sup>Live Cell Super-Resolution Imaging Research Team, RIKEN Center for Advanced Photonics., <sup>3</sup>Grad. Sch. Sci., Univ. Tokyo)

- PF-040 Involvement of ubiquitin signals in salt stress response regulations mediated by membrane trafficking regulator SYP61 in *Arabidopsis*  
Mayu Arai<sup>1</sup>, Yoko Hasegawa<sup>1</sup>, Yongming Luo<sup>1</sup>, Koki Mukuta<sup>1</sup>, Tomohiro Uemura<sup>2</sup>, Junpei Takagi<sup>1</sup>, Junji Yamaguchi<sup>1</sup>, Takeo Sato<sup>1</sup> (<sup>1</sup>Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ., <sup>2</sup>Graduate School of Humanities and Sciences, Ochanomizu Univ.)
- PF-041 Analysis of plant C/N-nutrient responses mediated by regulation of ubiquitin signaling and membrane trafficking  
Yoko Hasegawa<sup>1</sup>, Yongming Luo<sup>1</sup>, Koki Mukuta<sup>1</sup>, Mayu Arai<sup>1</sup>, Tomohiro Uemura<sup>2</sup>, Yohann Boutté<sup>3</sup>, Akihiko Nakano<sup>4</sup>, Junji Yamaguchi<sup>1</sup>, Takeo Sato<sup>1</sup> (<sup>1</sup>Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ., <sup>2</sup>Graduate School of Humanities and Sciences, Ochanomizu Univ., <sup>3</sup>Laboratory of Membrane Biogenesis - CNRS/Bordeaux Univ. - France, <sup>4</sup>Live Cell Super-Resolution Imaging Research Team, RIKEN Center for Advanced Photonics)

## ■ Organelles/Cytoskeleton

- PF-042 Distinctive properties in the ATP- and the GTP-hydrolysis activity of *Arabidopsis* VIPP1 protein involved in chloroplast membrane protection  
Norikazu Ohnishi<sup>1</sup>, Manabu Sugimoto<sup>1</sup>, Lingang Zhang<sup>2</sup>, Wataru Sakamoto<sup>1</sup> (<sup>1</sup>Institute for Plant Science and Resources, Okayama University, <sup>2</sup>School of Life Science, Inner Mongolia University)
- PF-043 *dpd1* mutation suppresses early senescence phenotype in *atg* mutant  
Tsuneaki Takami, Wataru Sakamoto (Inst. Plant Sci. Res., Okayama Univ.)
- PF-044 [Cancelled]
- PF-045 Plant mitophagy contributes to the maintenance of mitochondrial population and quality in *Arabidopsis* leaves  
Sakuya Nakamura<sup>1</sup>, Shinya Hagihara<sup>1</sup>, Kohei Otomo<sup>2,3,4</sup>, Hiroyuki Ishida<sup>5</sup>, Jun Hidema<sup>6</sup>, Tomomi Nemoto<sup>2,3,4</sup>, Masanori Izumi<sup>1</sup> (<sup>1</sup>CSRS, Riken, <sup>2</sup>EXCELLS, NINS, <sup>3</sup>Div. Biophoto., NIPS, <sup>4</sup>Sch. Life Sci., Sokendai, <sup>5</sup>Grad. Sch. Agri Sci., Tohoku Univ., <sup>6</sup>Grad. Sch. Life Sci., Tohoku Univ.)
- PF-046 Identification and analysis of the gene responsible for the suppression of *crl* in *Arabidopsis thaliana*  
Ryo Yoshimura<sup>1</sup>, Syun Minamikawa<sup>1</sup>, Ryohei Seta<sup>1</sup>, Sae Miyazaki<sup>1</sup>, Takamasa Suzuki<sup>2</sup>, Moussa Benhamed<sup>3</sup>, Yasushi Yoshioka<sup>1</sup> (<sup>1</sup>Div. Bio. Sci., Grad. Sch. Sci., Nagoya Univ., <sup>2</sup>Col. Biosci. Biothech., Chubu Univ., <sup>3</sup>Inst. Plant Sci. Paris-Saclay, Univ. Paris-Sud)
- PF-047 The search for new pest and pathogen resistance factors related to chloroplast proteins  
Yohei Matsunaga, Hiromi Kozen, Atsushi Kasai, Hisae Hirata, Reiko Motohashi (Grad. Sch. Inte. Sci. and Tech., Shizuoka Univ.)

## ■ Cell wall

- PF-048 Construction of *in vitro* grafting system of *Nicotiana benthamiana*  
Yaichi Kawakatsu<sup>1,2</sup>, Katsuhiko Shiratake<sup>2</sup>, Michitaka Notaguchi<sup>1</sup> (<sup>1</sup>Biosci. & Biotech. Center, Nagoya Univ., <sup>2</sup>Grad. Sch. Bioagri. Sci., Nagoya Univ.)
- PF-049 A novel Golgi protein, HOP, is required for integrated cell plate formation through callose accumulation  
Takema Sasaki<sup>1,2</sup>, Yoshihisa Oda<sup>1,2</sup> (<sup>1</sup>Department of Gene Function and Phenomics, NIG, <sup>2</sup>Department of Genetics, SOKENDAI)
- PF-050 FIBex: A New Online Transcriptome Platform to Analyze Development of Plant Cellulosic Fibers  
Hitomi Onodera<sup>1</sup>, Natalia Mokshina<sup>2</sup>, Oleg Gorshkov<sup>2</sup>, Hironori Takasaki<sup>3</sup>, Tatyana Gorshkova<sup>2</sup>, Nobutaka Mitsuda<sup>1</sup> (<sup>1</sup>BPRI AIST, <sup>2</sup>KIBB FRC Kazan Scientific Center of RAS, <sup>3</sup>Grad. Sch. Sci. and Eng., Saitama Univ.)

## ■ Cell cycle/Cell division

- PF-051 Quantitative analysis of the effect of polyploidization on root growth and chromosome polytenization in eupolyploids of *Arabidopsis thaliana*  
Suzuka Kikuchi<sup>1</sup>, Munetaka Sugiyama<sup>2</sup>, Akitoshi Iwamoto<sup>1,3</sup> (<sup>1</sup>Dept. Biol. Sci., Grad. Sch. Sci., Kanagawa Univ., <sup>2</sup>Bot. Gard., Grad. Sch. Sci., Univ. Tokyo, <sup>3</sup>Dept. Biol. Sci., Fac. Sci., Kanagawa Univ.)
- PF-052 Establishment of quantitative PCR-based *Arabidopsis* DNA-damage assay  
Shimpei Uraguchi, Natsuho Tamaru, Maho Suzuki, Yuka Ohshiro, Ryosuke Nakamura, Yasukazu Takanezawa, Masako Kiyono (Kitasato Univ.)
- PF-053 Regulatory mechanism of cell cycle arrest in response to DNA damage  
Minori Hosoya, Naoki Takahashi, Masaaki Umeda (Grad. Sch. Sci. Tech., NAIST)

## ■ Vegetative growth

- PF-054 MpPGDH-mediated serine synthesis is essential for plant growth in the dark and for sexual reproduction in *Marchantia polymorpha*  
Mengyao Wang<sup>1,2</sup>, Hiromitsu Tabeta<sup>1,3,5</sup>, Kinuka Ohtaka<sup>1,2,6</sup>, Ayuko Kuwahara<sup>1</sup>, Kiminori Toyooka<sup>1</sup>, Mayuko Sato<sup>1</sup>, Mayumi Wakazaki<sup>1</sup>, Hiromichi Akashi<sup>1</sup>, Yoriko Matsuda<sup>4</sup>, Takayuki Kohchi<sup>4</sup>, Ryuichi Nishihama<sup>4</sup>, Ali Ferjani<sup>5</sup>, Masami Yokota Hirai<sup>1,2</sup>  
(<sup>1</sup>RIKEN Center for Sustainable Resource Science, <sup>2</sup>Graduate School of Bioagricultural Sciences, Nagoya University, <sup>3</sup>Department of Life Sciences, Graduate School of Arts and Sciences, The University of Tokyo, <sup>4</sup>Graduate School of Biostudies, Kyoto University, <sup>5</sup>Department of Biology, Tokyo Gakugei University, <sup>6</sup>Department of Chemical and Biological Sciences, Faculty of Science, Japan Women's University)
- PF-055 NIN-like protein homologs regulate gametophyte-dependent sporophyte development in *Physcomitrium patens*  
Emiko Yoro, Keiko Sakakibara (Dep. of Life Sci., Rikkyo Univ.)
- PF-056 Analysis of genes affected by MpCLE2 peptide signaling in *Marchantia polymorpha*  
Go Takahashi (Grad. Sch. Sci., Univ. Gakushuin)
- PF-057 *ATML1* is activated in the outermost cells independently of cell lineage  
Shinobu Takada<sup>1</sup>, Ayaka Yoshida<sup>1</sup>, Nozomi Takada<sup>1</sup>, Miharuru Ito<sup>1</sup>, Gerd Jürgens<sup>3</sup>, Hiroyuki Iida<sup>2</sup> (<sup>1</sup>Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ, <sup>2</sup>Institute of Biotechnology, HiLIFE, University of Helsinki, <sup>3</sup>ZMBP, University of Tübingen)
- PF-058 Functional analysis of epigenetic regulators involved in the acquisition of plant regenerative capacity  
Rina Miura<sup>1</sup>, Takuya Sakamoto<sup>1</sup>, Mio Shibuta K.<sup>2</sup>, Satoyo Oya<sup>3</sup>, Soichi Inagaki<sup>3</sup>, Yutaka Suzuki<sup>4</sup>, Suzuki Kakutani<sup>3,5</sup>, Sachihiko Matsunaga<sup>2</sup> (<sup>1</sup>Dept. of Appl. Biol. Sci., Grad. Sch. of Sci. and Tech., Tokyo Univ. of Sci., <sup>2</sup>Dept. of Integr. Biosci., Grad. Sch. of Front. Sci., Tokyo Univ., <sup>3</sup>Dept. of Biol. Sci., Grad. Sch. of Sci., Tokyo Univ., <sup>4</sup>Dept. of Comput. Biol. & Med. Sci., Grad. Sch. of Front. Sci., Tokyo Univ., <sup>5</sup>Natl. Inst. of Genetics)
- PF-059  $\gamma$ -ray irradiation prior to callus induction enhances shoot regeneration in *Arabidopsis*  
Tomoka Tokairin<sup>1</sup>, Yuki Sakamoto<sup>2</sup>, Takamasa Suzuki<sup>3</sup>, Takuya Sakamoto<sup>1</sup>, Sachihiko Matsunaga<sup>4</sup> (<sup>1</sup>Dept. Appl. Biol. Sci., Grad. Sch. Sci. Tech., Tokyo Univ. Sci., <sup>2</sup>Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ., <sup>3</sup>Dept. Biol. Grad. Sch. Biosci. Biotechnol., Chubu Univ., <sup>4</sup>Dept. Integr. Biosci., Grad. Sch. Front. Sci., Univ. Tokyo)
- PF-060 Ectopic auxin accumulation and subsequent activation of cell cycling trigger spontaneous callus formation on *hope-1* mutant hypocotyls  
Mizuki Shiratori<sup>1,2</sup>, Kazuki Takahashi<sup>2</sup>, Hiromitsu Tabeta<sup>1,2,3</sup>, Hiroyuki Koga<sup>4</sup>, Shizuka Gunji<sup>2</sup>, Gorou Horiguchi<sup>5,6</sup>, Masami Yokota Hirai<sup>3</sup>, Hirokazu Tsukaya<sup>4</sup>, Ali Ferjani<sup>2</sup> (<sup>1</sup>Grad. Sch. Art Sci., <sup>2</sup>Dept. Biol., Tokyo Gakugei Univ., <sup>3</sup>RIKEN CSRS, <sup>4</sup>Grad. Sch. Sci., Univ. Tokyo, <sup>5</sup>Dept. Life Sci., Rikkyo Univ., <sup>6</sup>Res. Ctr. Life Sci., Rikkyo Univ.)
- PF-061 Establishment Of The Live Imaging Approach To Analyze Tip Growth of Conchocelis In The Red Alga *Neopyropia yezoensis*  
Yuji Hiwatashi<sup>1,2</sup>, Mizuho Shimada<sup>2</sup>, Nagisa Takada<sup>1</sup> (<sup>1</sup>Sch. Food Ind. Sci., Miyagi Univ., <sup>2</sup>Gad. Food Agri. Environ. Sci., Miyagi Univ.)
- PF-062 The orientation of cortical microtubules in cells of a vine in morning glory —Involvement of cortical microtubules in vine twining—  
Kasumi Saito<sup>1</sup>, Tomoe Yofune<sup>2</sup>, Tsuyoshi Kaneta<sup>2</sup> (<sup>1</sup>Fac. Sci., Ehime Univ., <sup>2</sup>Grad. Sch. Sci. & Eng., Ehime Univ.)
- PF-063 Time-series analysis of the developmental process of *Eucalyptus globulus* young tree in the field of Nara  
Miyuki Nakata<sup>1</sup>, Masahiro Takahara<sup>2</sup>, Taku Demura<sup>1</sup> (<sup>1</sup>NAIST, <sup>2</sup>Acacia Hort.)

## ■ Reproductive growth

- PF-064 A Novel Transcriptional Network that Underpins Stem Structural and Mechanical Integrity by Regulating Radial Cell Growth  
Mariko Asaoka<sup>1,2</sup>, Shingo Sakamoto<sup>3</sup>, Hiroyuki Koga<sup>4</sup>, Shizuka Gunji<sup>1</sup>, Nobutaka Mitsuda<sup>3</sup>, Hirokazu Tsukaya<sup>4</sup>, Shinichiro Sawa<sup>5</sup>, Olivier Hamant<sup>2</sup>, Ali Ferjani<sup>1</sup> (<sup>1</sup>Dept. Biol., Tokyo Gakugei Univ., <sup>2</sup>RDP, ENS de Lyon, <sup>3</sup>Bioprod. Res. Inst., AIST, <sup>4</sup>Grad. Sch. Sci., Univ. Tokyo, <sup>5</sup>Grad. Sch. Sci. Tech., Kumamoto Univ.)
- PF-065 A novel experimental system to study effects of mechanical forces on the floral development in *Arabidopsis thaliana*  
Akitoshi Iwamoto<sup>1</sup>, Yoshioka Yuna<sup>2</sup>, Oriko Okabe<sup>2</sup>, Yohei Tanoue<sup>2</sup>, Karube Ryuta<sup>1</sup>, Mizuki Negishi<sup>1</sup>, Sumire Yamamoto<sup>1</sup>  
(<sup>1</sup>Kanagawa Univ. Fac. Sci. Dept. Bilol., <sup>2</sup>Tokyo Gakugei Univ. Div. Sci. Dept Biol.)
- PF-066 Analysis of GH17 members regulating generative cell engulfment by the vegetative cell in *Arabidopsis*  
Kazuo Ebine<sup>1,2</sup>, Shohei Yamaoka<sup>3</sup>, Takashi Ueda<sup>1,2</sup> (<sup>1</sup>Div. Cellular Dynamics, NIBB, <sup>2</sup>Sch. Life Sci., SOKENDAI, <sup>3</sup>Grad. Sch. Biostudies, Kyoto Univ.)

PF-067 Streptophytes reproducing with motile sperm possess adenylyl cyclase/cAMP phosphodiesterase gene, *CAPE*  
Chiaki Yamamoto, Fumio Takahashi, Yousuke Ooe, Haruto Shirahata, Aika Shibata, Masahiro Kasahara (Grad. Sch. Life Sci., Univ. Ritsumeikan)

## ■ Plant hormones/Signaling molecules

- PF-068 *DIENLACTONE HYDROLASE LIKE PROTEIN1* negatively regulates KAI2-ligand pathway in *Marchantia polymorpha*  
Hiromu Kameoka<sup>1</sup>, Shota Shimazaki<sup>1</sup>, Yohei Mizuno<sup>1</sup>, Kyoichi Kodama<sup>1</sup>, Aino Komatsu<sup>1</sup>, Akiyoshi Yoda<sup>2</sup>, Kiyoshi Mashiguchi<sup>3</sup>, Bunta Watanabe<sup>3</sup>, Masanori Okamoto<sup>2</sup>, Takahito Nomura<sup>2</sup>, Shinjiro Yamaguchi<sup>3</sup>, Junko Kyoizuka<sup>1</sup> (<sup>1</sup>Grad. Sch., Life Sci., Tohoku Univ., <sup>2</sup>Ctr. for Biosci. Res. & Educ., Utsunomiya Univ., <sup>3</sup>Inst. Chem. Res. Kyoto Univ.)
- PF-069 The effect of root-specific reduction of cytokinin signals on shoot transcriptome in *Arabidopsis thaliana*  
Kota Monden<sup>1</sup>, Takamasa Suzuki<sup>2</sup>, Tsuyoshi Nakagawa<sup>1</sup>, Takushi Hachiya<sup>1</sup> (<sup>1</sup>Center for Integrated Research in Science, Univ. Shimane, <sup>2</sup>Department of Biological Chemistry, Univ. Chubu)
- PF-070 Tissue-specific expression analysis of plant intracellular Ras-group LRR Proteins (*PIRLs*) in *Arabidopsis thaliana*  
Md. Firose Hossain, Mst Momtaz Sultana, Ai Tanaka, Takushi Hachiya, Tsuyoshi Nakagawa (Dep. Mol. Func. Gen. Int. Cent. Sci. Res., Shimane Univ.)
- PF-071 An Ancestral Strigolactone Conserved in Land Plants  
Akiyoshi Yoda<sup>1,2</sup>, Xiaonan Xie<sup>2</sup>, Shota Shimazaki<sup>3</sup>, Kyoichi Kodama<sup>3</sup>, Kaori Yoneyama<sup>4</sup>, Kohki Akiyama<sup>5</sup>, Masaki Shimamura<sup>6</sup>, Junko Kyoizuka<sup>3</sup>, Takahito Nomura<sup>2</sup> (<sup>1</sup>United Grad. Sch. of Agri. Sci., Tokyo Univ. of Agri. and Tech., <sup>2</sup>Ctr. for Biosci. Res. & Educ., Utsunomiya Univ., <sup>3</sup>Grad. Sch. of Life Sci., Tohoku Univ., <sup>4</sup>Grad. Sch. of Agri., Ehime Univ., <sup>5</sup>Grad. Sch. of Life & Environ. Sci., Osaka Pref. Univ., <sup>6</sup>Grad. Sch. of Integrated Sci. for Life, Hiroshima Univ.)
- PF-072 Bioactive GAs synthesized by OsGA3ox1 in rice anther promote pollen starch synthesis  
Minami Morii, Akihiko Sugihara, Kyosuke Kawai, Toru Kashio, Aya Ito, Hisako Yoshimura, Masako Hattori, Sayaka Takehara, Makoto Matsuoka, Miyako Ueguchi-Tanaka (Biosci. and Biotech. Cen., Nagoya Univ.)
- PF-073 Identification of ABA-dependent phosphorylated bHLH transcription factors in guard cells of *Vicia faba* by mass spectrometry  
Yuki Hayashi<sup>1</sup>, Yohei Takahashi<sup>2</sup>, Keiko Kuwata<sup>3</sup>, Takamasa Suzuki<sup>4</sup>, Toshinori Kinoshita<sup>1,3</sup> (<sup>1</sup>Grad. Sch. Sci., Nagoya Univ., <sup>2</sup>Div. Biol. Sci., UCSD, <sup>3</sup>WPI-ITbM, Nagoya Univ., <sup>4</sup>Dept. Bio. Chem., Chubu Univ.)
- PF-074 Functional Analysis of A Novel Brassinosteroid Signaling Factor BMY2  
Kenya Haratani<sup>1</sup>, Kenjiro Fujita<sup>1,3</sup>, Reika Hasegawa<sup>4</sup>, Ayumi Yamagami<sup>1,2</sup>, Miho Ikeda<sup>4</sup>, Nobutaka Mitsuda<sup>5</sup>, Kazuo Shinozaki<sup>2</sup>, Masaru Takagi<sup>4,5</sup>, Tadao Asami<sup>6</sup>, Takeshi Nakano<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Biostudies., Kyoto Univ., <sup>2</sup>CSRS, RIKEN., <sup>3</sup>Grad. Agric., Meiji Univ., <sup>4</sup>Grad. Sch. Sci. Eng., Saitama Univ., <sup>5</sup>AIST., <sup>6</sup>Grad. Sch. Agri. Life Sci., University of Tokyo)
- PF-075 Elucidation of the physiological function of fairy chemicals in *Arabidopsis thaliana*  
Yuki Taniguchi<sup>1</sup>, Sooyeon Park<sup>1</sup>, Kotaro Iwamoto<sup>1</sup>, Toshiyuki Kan<sup>2</sup>, Hirohide Takemura<sup>4</sup>, Jae-Hoon Choi<sup>4</sup>, Xiaonan Xie<sup>3</sup>, Hirokazu Kawagishi<sup>4</sup>, Reiko Motohashi<sup>1</sup> (<sup>1</sup>Grad. Sch. Inte. Sci. and Tech., Shizuoka Univ., <sup>2</sup>Pharma., Univ. Shizuoka, <sup>3</sup>Center. Bio. Res. and Edu., Utsunomiya Univ., <sup>4</sup>Grad. Sch. Sci. and Tech., Shizuoka Univ)
- PF-076 Characterization of a Transcription Factor Related to Auxin Induced Gene Expression in *Klebsormidium nitens*  
Noriaki Tounosu, Kanami Sesoko, Koichi Hori, Mie Shimojima, Hiroyuki Ohta (School of Life Science and Technology, Tokyo Institute of Technology)
- PF-077 Molecular analysis of *RLD* gene family, novel regulator of auxin transport, in *Arabidopsis*  
Takeshi Nishimura<sup>1</sup>, Masahiko Furutani<sup>2</sup>, Masatoshi Taniguchi<sup>3</sup>, Miyo Terao Morita<sup>1</sup> (<sup>1</sup>NIBB, <sup>2</sup>Fujian Agriculture and Forestry Univ., <sup>3</sup>Nagoya Univ.)
- PF-078 Elucidation of the starch decomposition mechanism during rice pollen maturation  
Akira Hayama<sup>1</sup>, Kyosuke Kawai<sup>1</sup>, Akihiko Sugihara<sup>1</sup>, Minami Morii<sup>1</sup>, Sayaka Takehara<sup>1</sup>, Yoko Mizuta<sup>2</sup>, Miyako Ueguchi-Tanaka<sup>1</sup> (<sup>1</sup>Biosci. and Biotech. Cen., Nagoya Univ., <sup>2</sup>Ins. of Transformative Bio-Molecules (WPI-ITbM), Nagoya Univ.)

## ■ Photoreceptors/Photoresponses

- PF-079 *ZEITLUPE* enhances expression of *PIF4* and *YUC8* in the upper aerial parts of *Arabidopsis* seedlings to positively regulate hypocotyl elongation  
Aya Saitoh<sup>1</sup>, Tomoyuki Takase<sup>1</sup>, Hiroshi Abe<sup>2</sup>, Masaaki Watahiki<sup>3</sup>, Yuki Hirakawa<sup>1</sup>, Tomohiro Kiyosue<sup>1</sup> (<sup>1</sup>Graduate Course in Life Science, Graduate School of Science, Gakushuin University, <sup>2</sup>Experimental Plant Division, Department of Biological Systems, RIKEN, BioResource Center, <sup>3</sup>Faculty of Science, Division of Biological Sciences Hokkaido University)
- PF-080 Functional mapping of the kinase domain of BLUS1 in blue light-dependent stomatal opening  
Saashia Fujii<sup>1</sup>, Kyoka Tahara<sup>1</sup>, Shota Yamauchi<sup>1</sup>, Sakurako Hosotani<sup>1</sup>, Koji Okajima<sup>2</sup>, Ken-ichiro Shimazaki<sup>3</sup>, Atsushi Takemiya<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci. Tech. Innov., Yamaguchi Univ., <sup>2</sup>Fac. Sci. Tech., Keio Univ., <sup>3</sup>Grad. Sch. Sci., Kyushu Univ.)
- PF-081 Analysis of novel interacting partners of phot2 involved in chloroplast photorelocation movement  
Takeshi Higa<sup>1</sup>, Eiji Gotoh<sup>2</sup>, Masamitsu Wada<sup>3</sup>, Yoshihisa Oda<sup>1,4</sup>, Masato Nakai<sup>5</sup> (<sup>1</sup>Dept. Gene Func. Phen., NIG, <sup>2</sup>Fac. of Agr., Kyushu Univ., <sup>3</sup>Grad. Sch. Sci., Tokyo Metro. Univ., <sup>4</sup>Dept. Genet., SOKENDAI, <sup>5</sup>Inst. for Prot. Res., Osaka Univ.)
- PF-082 Phenotypic analyses of *Chlamydomonas reinhardtii* mutants that always show positive phototaxis  
Jun Morishita<sup>1,2</sup>, Ryutarou Tokutsu<sup>3,4</sup>, Jun Minagawa<sup>3,4</sup>, Toru Hisabori<sup>1,2</sup>, Ken-ichi Wakabayashi<sup>1,2</sup> (<sup>1</sup>LST., Tokyo Tech, <sup>2</sup>CLS., TokyoTech, <sup>3</sup>Division of Environmental Photobiology., NIBB, <sup>4</sup>Department of Basic Biology., SOKENDAI)
- PF-083 Improvement of the phycocyanobilin synthesis in *Escherichia coli* using a modular cloning approach  
Kento Masui, Toshihiko Eki, Yuu Hirose (ToyoHashi Univ. of Tech.)

## ■ Flowering/Clock

- PF-084 Investigation of Molecular Mechanism of The FT Transport  
Yusuke Murata, Mitsutomo Abe (Grad. Sch. Arts and Sci., Univ. Tokyo)
- PF-085 Relationship between meristem size and floral transition in *Arabidopsis*  
Shinji Watanabe, Takashi Okamoto, Atsuko Kinoshita (Dept. of Biol. Sci., Tokyo Metropolitan Univ.)
- PF-086 [Cancelled]
- PF-087 Regulation of seasonal sensing mechanism via circadian clocks  
Atsuhiko Hirohata<sup>1</sup>, Yuta Yamatsuta<sup>1</sup>, Kaori Ogawa<sup>2</sup>, Akane Kubota<sup>1</sup>, Takamasa Suzuki<sup>3</sup>, Motomu Endo<sup>1</sup> (<sup>1</sup>Grad. Sci. and Tech., NAIST, <sup>2</sup>Grad. Biostudies, Kyoto Univ., <sup>3</sup>Col. Biosci. and Biotech., Chubu Univ.)
- PF-088 Analysis of LUX function in root development in *A. thaliana*  
Yu Leng<sup>1</sup>, Koutarou Torii<sup>2</sup>, Taiga Uchikawa<sup>1</sup>, Akane Kubota<sup>1</sup>, Nozomu Takahashi<sup>1</sup>, Tatsuaki Goh<sup>1</sup>, Motomu Endo<sup>1</sup> (<sup>1</sup>Grad. Sci. and Tech., NAIST, <sup>2</sup>Wako Inst., Riken)
- PF-089 Functional Study of LOV-Histidine Kinases (LHKs) in the green alga *Chlamydomonas reinhardtii*  
Yuri Yamamoto<sup>1</sup>, Takuya Matsuo<sup>2</sup>, Tomoki Watanabe<sup>1</sup>, Yuki Nakano<sup>1</sup>, Ryuta Katayama<sup>3</sup>, Ko Tomida<sup>1</sup>, Tetsuhiro Otsuka<sup>1</sup>, Setsuyuki Aoki<sup>1</sup> (<sup>1</sup>Graduate School of Informatics, Nagoya University, <sup>2</sup>Center for Gene Research, Nagoya University, <sup>3</sup>School of Informatics, Nagoya University)
- PF-090 Homologs of *Pseudo-Response Regulator (PRR)* genes in the green alga *Chlamydomonas reinhardtii*  
Yuki Nakano<sup>1</sup>, Takuya Matsuo<sup>2</sup>, Tomoki Watanabe<sup>1</sup>, Yuri Yamamoto<sup>1</sup>, Ryuta Katayama<sup>3</sup>, Setsuyuki Aoki<sup>1</sup> (<sup>1</sup>Graduate School of Informatics, Nagoya University, <sup>2</sup>Center for Gene Research, Nagoya University, <sup>3</sup>School of Informatics, Nagoya University)

## ■ Environmental responses A

- PF-091 Regulation of ascorbate metabolism under nitrogen deficiency  
Takumi Iwagami, Takahisa Ogawa, Takahiro Ishikawa, Takanori Maruta (Grad. Sch. Nat. Sci. Technol., Shimane Univ.)
- PF-092 Molecular mechanism underlying glutathione-dependent ascorbate recycling system  
Akane Hamada<sup>1</sup>, Yusuke Terai<sup>1</sup>, Takahisa Ogawa<sup>1</sup>, Atsuko Miyagi<sup>2</sup>, Maki Kawai-Yamada<sup>2</sup>, Takahiro Ishikawa<sup>1</sup>, Takanori Maruta<sup>1</sup> (<sup>1</sup>Fac. Life Environ. Sci., Shimane Univ., <sup>2</sup>Grad. Sch. Sci. Eng., Saitama Univ.)
- PF-093 Regulatory mechanisms of the ROS-producing enzymes, Rboh, by Ca<sup>2+</sup> binding and phosphorylation and their molecular and functional diversification in *Marchantia polymorpha*  
Takafumi Hashimoto<sup>1</sup>, Kenji Hashimoto<sup>1</sup>, Takuya Miyakawa<sup>2</sup>, Masaru Tanokura<sup>2</sup>, Kazuyuki Kuchitsu<sup>1</sup> (<sup>1</sup>Dept. Appl. Biol. Sci., Tokyo Univ. of Sci., <sup>2</sup>Dept. Appl. Biol. Chem., Univ. of Tokyo)



- PF-094 Spatiotemporal imaging analysis of stress-responsive rapid long-distance signaling in *Marchantia polymorpha*.  
Kenshiro Watanabe, Kota Hsegawa, Hiroki Shindo, Kenji Hashimoto, Kazuyuki Kuchitsu (Dept. Appl. Biol. Sci., Tokyo Univ. of Sci.)
- PF-095 Functional analysis of chloroplast-localized NAD kinase in Arabidopsis  
Chaomurilege Bai<sup>1</sup>, Shin-nosuke Hashida<sup>2</sup>, Atsuko Miyagi<sup>1</sup>, Toshiki Ishikawa<sup>1</sup>, Masatoshi Yamaguchi<sup>1</sup>, Maki Kawai-Yamada<sup>1</sup> (<sup>1</sup>Grad. Sch. Science and Engineering, Saitama university, <sup>2</sup>Environmental Science Research Laboratory, Central Research, Institute of Electric Power Industry)
- PF-096 Mammalian-type Thioredoxin Reductase Contributes to Resistance Against High-light Stress in *Chlamydomonas reinhardtii*  
Yuma Asahina<sup>1,2</sup>, Kazuma Sakamoto<sup>1,2</sup>, Toru Hisabori<sup>1,2</sup>, Ken-ichi Wakabayashi<sup>1,2</sup> (<sup>1</sup>Tokyo Institute of Technology, School of Life Science and Technology, <sup>2</sup>Tokyo Institute of Technology, Laboratory for Chemistry and Life Science, Institute of Innovative Research)

## ■ Environmental responses B

- PF-097 Functional Analyses of an Arabidopsis bZIP Transcription Factor Involved in Drought Tolerance  
Yoshimi Nakano, Keiko Kigoshi, Sumire Fujiwara (Bioprod. Res. Inst., AIST)
- PF-098 An AREB-like bZIP transcription factor in *Klebsormidium nitens* is a global transcriptional regulator of water stress  
Koichi Hori, Noriaki Tounosu, Kanami Sesoko, Mie Shimojima, Hiroyuki Ohta (School of Life Science and Technology, Tokyo Institute of Technology)
- PF-099 Analysis of ABA-hypersensitive mutants in *Physcomitrium patens*  
Ryotaro Oya<sup>1</sup>, Yuri Morikawa<sup>1</sup>, Teruaki Taji<sup>1</sup>, Daisuke Takezawa<sup>2</sup>, Yoichi Sakata<sup>1</sup>, Izumi Yotsui<sup>1</sup> (<sup>1</sup>Dept. Biosci., Tokyo Agric. Univ., <sup>2</sup>Dept. Sci., Saitama Univ.)
- PF-100 Responses of fructose-1,6-bisphosphate aldolases to salt stress in a halotolerant cyanobacterium  
Siripat Ngoennet<sup>1</sup>, Masaki Honda<sup>2</sup>, Tanutch Patipong<sup>1,3</sup>, Takashi Hibino<sup>2,3</sup>, Rungaroon Waditee-Sirisattha<sup>1</sup>, Hakuto Kageyama<sup>2,3</sup> (<sup>1</sup>Fac. Sci., Chulalongkorn Univ., <sup>2</sup>Fac. Sci. Tech., Meijo Univ., <sup>3</sup>Grad. Hum. Environ. Sci., Meijo Univ.)
- PF-101 HTD0011 enhances salinity stress tolerance via vacuolar H<sup>+</sup>-ATPase in *Arabidopsis thaliana*  
Kaori Sako<sup>1,2</sup>, Hiroyuki Hirano<sup>2</sup>, Sheena C Li<sup>2</sup>, Yoko Yashiroda<sup>2</sup>, Charles Boone<sup>2</sup>, Hiroyuki Osada<sup>2</sup>, Motoaki Seki<sup>2</sup> (<sup>1</sup>Dep. Adv. Biosci., <sup>2</sup>CSRS, RIKEN)
- PF-102 Effect of NaCl on cellulase activity in *Amaranthaceae* plants; Salicornia, beet and spinach, which have different salt tolerance  
Keiichi Ishikura<sup>1</sup>, Mariko Oka<sup>2</sup> (<sup>1</sup>Grad. Sch. Agric., Tottori Univ., <sup>2</sup>Fac. Agric., Tottori Univ.)
- PF-103 Analysis of the mechanisms for changing leaf morphology under mild salt stress condition  
Mika Fujii<sup>1</sup>, Taishi Tamaki<sup>2</sup>, Mai Satoh<sup>1</sup>, Hironori Takasaki<sup>1</sup>, Masaru Ohme-Takagi<sup>1,3</sup>, Mikihisa Umehara<sup>2</sup>, Nobutaka Mitsuda<sup>3</sup>, Miho Ikeda<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci. Eng., Univ Saitama, <sup>2</sup>Grad. Sch. Life Sci., Toyo Univ., <sup>3</sup>Bioprod. Res. Inst., AIST)

## ■ Environmental responses C

- PF-104 Analysis of Protein Kinases Involved in the Post-translational Regulation of the Stress-Responsive Transcription Factor DREB2A  
Junya Mizoi<sup>1</sup>, Ryosuke Takahashi<sup>1</sup>, So Sugimoto<sup>1</sup>, Touko Nakazawa<sup>1</sup>, Haruho Funamori<sup>1</sup>, Fuminori Takahashi<sup>2</sup>, Norihito Nakamichi<sup>3,4</sup>, Toshinori Kinoshita<sup>3,4</sup>, Kazuo Shinozaki<sup>2</sup>, Kazuko Yamaguchi-Shinozaki<sup>1,5</sup> (<sup>1</sup>Grad. Sch. Agr. Life Sci., Univ. Tokyo, <sup>2</sup>Center for Sustainable Resource Science, RIKEN, <sup>3</sup>ITbM, Nagoya Univ., <sup>4</sup>Grad. Sch. Sci. Nagoya Univ., <sup>5</sup>Res. Inst. Agr. Life Sci., Tokyo Univ. Agr.)
- PF-105 High Temperature Response In Arabidopsis Is Regulated By Isovariant Specific Actin  
Sumaya Parveen<sup>1</sup>, Abidur Rahman<sup>1,2,3</sup> (<sup>1</sup>United Graduate School of Agricultural Sciences, Iwate University, <sup>2</sup>Agri-Innovation Center, Faculty of Agriculture, Iwate University, Japan, <sup>3</sup>Dept. of Plant Bio Sciences, Faculty of Agriculture, Iwate University, Japan)
- PF-106 Statistical Regression Model for Prediction of Cold Damage on *Eucalyptus* Leaves on Field from Meteorological Observed Data  
Tomoaki Chubachi<sup>1</sup>, Kazuki Morita<sup>1</sup>, Nanami Hayashi<sup>1</sup>, Atsuko Shishido<sup>1</sup>, Akira Kikuchi<sup>1,2</sup>, Kazuo N. Watanabe<sup>1,2</sup>, Taichi Oguchi<sup>1,2</sup> (<sup>1</sup>Life & Env. Sci., Univ. Tsukuba, <sup>2</sup>T-PIRC, Univ. Tsukuba)
- PF-107 Pleiotropic changes of Arabinogalactan proteins during cold acclimation treatment  
Daisuke Takahashi<sup>1</sup>, Yuta Numao<sup>2</sup>, Yukino Shibasaki<sup>2</sup>, Toshihisa Kotake<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci. Eng., Saitama Univ., <sup>2</sup>Dept. Biochem. Mol. Biol., Fac. Sci., Saitama Univ.)

- PF-108 Carbon- and energy-supply for TG accumulation in arsenate-stressed *Chlorella kessleri* cells  
Yukari Iijima, Yutaro Ohisi, Shoko Fujiwara, Norihiro Sato (Grad. Sch. Sci., Univ. Toyaku)
- PF-109 Analysis of ClpXP protease involved in the generation of giant cells under acidic stress in cyanobacterium *Synechocystis* sp. PCC6803  
Hidetaka Kohga<sup>1</sup>, Yoshikazu Saito<sup>1</sup>, Yuka Kakegawa<sup>1</sup>, Junji Uchiyama<sup>1,2</sup>, Hisataka Ohta<sup>1,2</sup> (<sup>1</sup>Grad. Sch. of Sci., Tokyo Univ. of Sci., <sup>2</sup>Fac. of Sci., Tokyo Univ. of Sci.)
- PF-110 Characterization of *slr2006-2009* Region Involved in Proton Regulation of *Synechocystis* sp. PCC6803  
Yukino Sakai<sup>1</sup>, Yoshikazu Saito<sup>1</sup>, Masanori Sato<sup>1</sup>, Junji Uchiyama<sup>1,2</sup>, Hisataka Ohta<sup>1,2</sup> (<sup>1</sup>Dept. of Math. and Sci. Edu., Grad. Sch. of Sci., Tokyo Univ. of Sci., <sup>2</sup>Dept. of Bio., Fac. of Sci., Tokyo Univ. of Sci.)
- PF-111 The expression of MsbA, which transports lipid A in *E. coli*, overcome the acid sensitivity due to *slr2019* mutant in *Synechocystis* sp. PCC6803  
Sato Kashiwagi<sup>1</sup>, Ayumi Matsushashi<sup>2</sup>, Kengo Matsushima<sup>3</sup>, Junji Uchiyama<sup>1,2,4</sup>, Hisataka Ohta<sup>1,2,4</sup> (<sup>1</sup>Tokyo Univ. of Sci., Grad. Sch. of Sci., Dep. of Math. and Sci. Edu., <sup>2</sup>Tokyo Univ. of Sci., Grad. Sch. of Math. And Sci. Edu., Dep. of Math. And Sci. Edu., <sup>3</sup>Tokyo Univ. of Sci., Fac of Sci., Dep. of Chem., <sup>4</sup>Tokyo Univ of Sci., Fac. of Sci., Dep. of Lib. Arts)
- PF-112 Analysis of lipid remodeling regulators under phosphorus starvation in *Chlamydomonas reinhardtii*  
Nozomi Miura, Koichi Hori, Mie Shimojima, Hiroyuki Ohta (School of Life Science and Technology, Tokyo Institute of Technology)

## ■ Plant-organism interaction B

- PF-113 Application of single cell RNAseq to dissect the onset of root nodule development in *Lotus japonicus*  
Kai Battenberg<sup>1,2</sup>, S. Thomas Kelly<sup>2</sup>, A. Nicola Hetherington<sup>2</sup>, Aki Minoda<sup>2</sup>, Makoto Hayashi<sup>1</sup> (<sup>1</sup>RIKEN Center for Sustainable Resource Science, <sup>2</sup>RIKEN Center for Integrative Medical Sciences)
- PF-114 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)
- PF-115 Maturation of the gall-inducing peptide CAP by the processing enzyme CP  
Megumi Matsuzawa<sup>1</sup>, Tomoko Hirano<sup>2</sup>, Masa H Sato<sup>2</sup> (<sup>1</sup>Life and Environmental Sci., Kyoto Pre. Univ., <sup>2</sup>Grad. Sch. Life and Environmental Sci., Kyoto Pre. Univ.)
- PF-116 Soil nutrient- and developmental stage-dependent regulation of root microbiome in rice  
Yusa Aritoshi<sup>1</sup>, Shunsuke Imai<sup>1</sup>, Sumire Kirita<sup>1</sup>, Yukiko Shimizu<sup>1</sup>, Yuniar Devi Utami<sup>1</sup>, Takumi Murakami<sup>2</sup>, Masako Fuji<sup>1</sup>, Yusuke Saijo<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci. and Tech., NAIST, <sup>2</sup>NIG)
- PF-117 Multi-omics analysis in the field reveals a close association between microbiome and mineral in the soybean rhizosphere  
Shinichi Yamazaki<sup>1</sup>, Yuichi Aoki<sup>1</sup>, Hossein Mardani-Korran<sup>2</sup>, Rumi Kaida<sup>2</sup>, Yoshiharu Fujii<sup>2</sup>, Masaru Kobayashi<sup>3</sup>, Akifumi Sugiyama<sup>4</sup> (<sup>1</sup>ToMMo, Univ. Tohoku, <sup>2</sup>Tokyo Univ. Agri. Tech., <sup>3</sup>Grad. Sch. Agri., Univ. Kyoto, <sup>4</sup>RISH, Univ. Kyoto)

■ Photosynthesis

- PL-001 Search and Comparison of C-terminal Processing Protease for the D1 Protein from a Wide Range of Algae Genome Sequences  
Noritoshi Inagaki<sup>1</sup>, Akio Murakami<sup>2</sup> (<sup>1</sup>Advanced Analysis Center, NARO, <sup>2</sup>RCIS, Kobe Univ.)
- PL-002 Mechanism of novel amino acid conversion of a Mn-cluster ligand in photosystem II  
Yuichiro Shimada<sup>1</sup>, Takehiro Suzuki<sup>2</sup>, Tomomi Kitajima-Ihara<sup>1</sup>, Ryo Nagao<sup>1,3</sup>, Naoshi Dohmae<sup>2</sup>, Takumi Noguchi<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Nagoya Univ., <sup>2</sup>CSRS, RIKEN, <sup>3</sup>RIIS, Okayama Univ.)
- PL-003 Purification of the Rieske/cytb complex under anaerobic conditions and interaction analysis with c-type cytochromes in green sulfur bacteria  
Hiraku Kishimoto<sup>1</sup>, Takahiro Nagaoka<sup>1</sup>, Chihiro Azai<sup>2</sup>, Risa Mutoh<sup>3</sup>, Hideaki Tanaka<sup>4</sup>, Yohei Miyanoiri<sup>4</sup>, Genji Kurisu<sup>4</sup>, Hirozo Ohoka<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Osaka Univ., <sup>2</sup>Col. Life. Sci., Ritsumeikan Univ., <sup>3</sup>Fac. Sci., Fukuoka Univ., <sup>4</sup>Inst. Protein Res., Osaka Univ.)
- PL-004 Effects of site-directed mutations at D1-R140 or D2-T231 interacting with one phosphatidylglycerol molecule (PG714) on light intensity-dependence of photosynthesis  
Yuto Sugawara<sup>1</sup>, Toshiyuki Shinoda<sup>2</sup>, Kaichiro Endo<sup>3</sup>, Tatsuya Tomo<sup>4</sup>, Kenjin Shin<sup>5</sup>, Haruhiko Jimbo<sup>3</sup>, Hajime Wada<sup>3</sup>, Naoki Mizusawa<sup>1,2,6</sup> (<sup>1</sup>Grad. Sch. Sci. Eng., Hosei Univ., <sup>2</sup>Fac. Biosci. Appl. Chem., Hosei Univ., <sup>3</sup>Grad. Sch. Arts Sci., Univ. Tokyo, <sup>4</sup>Fac. Sci., Tokyo Univ. Sci., <sup>5</sup>RIIS, Okayama Univ., <sup>6</sup>Res. Micro-Nano Tech., Hosei Univ.)
- PL-005 Effects of site-directed mutations at D1-R140 or D2-T231 interacting with one phosphatidylglycerol molecule (PG714) on electron transport reactions in PSII  
Toshiyuki Shinoda<sup>1</sup>, Yuto Sugawara<sup>2</sup>, Kaichiro Endo<sup>3</sup>, Tatsuya Tomo<sup>4</sup>, Jian-Ren Shen<sup>5</sup>, Haruhiko Jimbo<sup>3</sup>, Hajime Wada<sup>3</sup>, Naoki Mizusawa<sup>1,2,6</sup> (<sup>1</sup>Fac. Biosci. Appl. Chem., Hosei Univ., <sup>2</sup>Grad. Sch. Sci. Eng., Hosei Univ., <sup>3</sup>Grad. Sch. Arts Sci., Univ. Tokyo, <sup>4</sup>Fac. Sci., Tokyo Univ. Sci., <sup>5</sup>RIIS, Okayama Univ., <sup>6</sup>Res. Micro-Nano Tech., Hosei Univ.)
- PL-006 Effects of overproduction of chloroplast glyceraldehyde-3-phosphate dehydrogenase on photosynthesis and plant growth in rice  
Yuji Suzuki<sup>1</sup>, Keiki Ishiyama<sup>2</sup>, Misaki Sugawara<sup>1</sup>, Yuka Suzuki<sup>1</sup>, Eri Kondo<sup>2</sup>, Yuki Takegahara-Tamakawa<sup>1</sup>, Dong-Kyung Yoon<sup>2</sup>, Mao Suganami<sup>2</sup>, Shinya Wada<sup>3</sup>, Chikahiro Miyake<sup>3</sup>, Amane Makino<sup>2</sup> (<sup>1</sup>Fac. Agr., Iwate Univ., <sup>2</sup>Grad. Sch. Agr. Sci., Tohoku Univ., <sup>3</sup>Grad. Sch. Agr. Sci., Kobe Univ.)
- PL-007 Increased Cuticle Permeability Caused by a New Allele of *ACETYL-COA CARBOXYLASE1* Enhances CO<sub>2</sub> Uptake in *Arabidopsis*  
Keina Monda<sup>1</sup>, Atsushi Mabuchi<sup>1</sup>, Sho Takahashi<sup>1</sup>, Juntaro Negi<sup>1</sup>, Ryoma Tohmori<sup>1</sup>, Ichiro Terashima<sup>2</sup>, Wataru Yamori<sup>3</sup>, Koh Iba<sup>1</sup> (<sup>1</sup>Dept. Biol., Fac. Sci., Univ. Kyushu, <sup>2</sup>Dept. Biol., Sch. Sci., Univ. Tokyo, <sup>3</sup>Grad. Sch. Agri. and Life Sci., Univ. Tokyo)
- PL-008 The physiological function of the chloroplast-localized dynamin-like protein FZL in *Arabidopsis thaliana*.  
Yu Ogawa<sup>1</sup>, Mari Takusagawa<sup>1</sup>, Megumi Iwano<sup>2</sup>, Lianwei Peng<sup>3</sup>, Fumiyoushi Myouga<sup>4</sup>, Toshiharu Shikanai<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Univ. Kyoto, <sup>2</sup>Grad. Sch. Bio., Univ. Kyoto, <sup>3</sup>Grad. Sch. Life Sci., Univ. Shanghai Normal, <sup>4</sup>Wako Inst., Riken)
- PL-009 Analyses of the role of PIP aquaporins in the regulation of leaf CO<sub>2</sub>/H<sub>2</sub>O flux  
Yusuke Mizokami, Hidemitsu Yoshino, Ko Noguchi (Tokyo Univ. Pharm. Life Sci.)
- PL-010 NAD(P)H dehydrogenase deletion enhances accumulation of polyhydroxybutyrate in *Synechocystis* sp. PCC 6803  
Masakazu Yajima, Masakazu Toyoshima, Yoshihiro Toya, Hiroshi Shimizu (Grad. Sch. IST., Univ Osaka)
- PL-011 Phylogenetic analysis of mitochondrial pyruvate carrier genes in Poaceae species  
Shin Kore-eda<sup>1</sup>, Shogo Yamamoto<sup>2</sup>, Moe Imazeki<sup>2</sup>, Susumu Mitsuyama<sup>3</sup> (<sup>1</sup>Grad. Sch. Sci. and Eng., Saitama Univ., <sup>2</sup>Dept. Biochem. Mol. Biol., Saitama Univ., <sup>3</sup>Grad. Sch. Agric. Life Sci., Univ. Tokyo)

■ Environmental responses of photosynthesis

- PL-012 Detection of nutrition deficiency using Delayed luminescence in *Arabidopsis*  
So Yahagi<sup>1</sup>, Chikako Fukasawa<sup>1</sup>, Masakazu Katsumata<sup>2</sup>, Reiko Motohashi<sup>1</sup> (<sup>1</sup>Agri., Shizuoka Univ., <sup>2</sup>Hamamatsu Photonics Co., Ltd.)
- PL-013 Mechanism of the Quick Response-type Redox Regulation in Chloroplast  
Yuka Fukushi<sup>1,2</sup>, Yuichi Yokochi<sup>1,2</sup>, Keisuke Yoshida<sup>1,2</sup>, Ken-ichi Wakabayashi<sup>1,2</sup>, Toru Hisabori<sup>1,2</sup> (<sup>1</sup>Laboratory for Chemistry and Life Science, Institute of Innovative Research, Tokyo Institute of Technology, <sup>2</sup>School of Life Science and Technology, Tokyo Institute of Technology)

- PL-014 Analysis of a photosynthetic megacomplex found in Fe-deficiency stressed barley leaves  
Akihiro Saito, Shuhei Sumiki, Shoichiro Akita, Takuji Ohyama, Kyoko Higuchi (Dept. Agri. Chem., Tokyo Univ. of Agri.)
- PL-015 Elucidation of light-dependent regulation mechanism of ascorbate biosynthesis mediated by VTC3  
Yasuhiro Tanaka<sup>1</sup>, Takanori Maruta<sup>1</sup>, Takahisa Ogawa<sup>1</sup>, Masaru Mori<sup>2,3</sup>, Takahiro Ishikawa<sup>1</sup> (<sup>1</sup>Grad. Sch. Nat. Sci. Technol., Shimane Univ., <sup>2</sup>Instit. Adv. Biosci., Keio Univ., <sup>3</sup>SFC Grad. Sch. Media Govern., Keio Univ.)
- PL-016 Evaluation of CBSX proteins as regulators of thioredoxin system  
Ryota Murai, Yuki Okegawa, Nozomi Sato, Ken Motohashi (Faculty of Life Sciences, Kyoto Sangyo University)
- PL-017 Transcriptome analysis for understanding of HCO<sub>3</sub><sup>-</sup> use mechanism under submerged condition in amphibious plant *Hygrophila difformis*  
Genki Horiguchi, Naoki Hirotsu (Grad. Sch. Life Sci., Toyo Univ.)
- PL-018 Effects of green light supplementation to a mixture of red and blue light on growth and photosynthesis in leaf lettuce  
Keiko Ohashi, Yuya Isaki (Tamagawa Univ.)
- PL-019 Manganese toxicity affects carbon assimilation by disturbing stomatal function and development in rice leaves  
Daisuke Takagi, Tomokazu Ushijima, Michio Kawasaki (Faculty of Agriculture, Setsunan University)

### ■ Primary metabolism

- PL-020 Subcellular localization and characterization of enzymes involved in TAG biosynthesis in *Coccomyxa* sp. strain Obi  
Haruka Nagata<sup>1</sup>, Yurika Fuseya<sup>2</sup>, Mizuki Maie<sup>2</sup>, Tomohiro Uemura<sup>1,2</sup>, Yuki Kasai<sup>3</sup>, Shigeaki Harayama<sup>3</sup>, Misako Kato<sup>1,2</sup> (<sup>1</sup>Grad. Life Sci., Ochanomizu Univ., <sup>2</sup>Dept. Biol., Fac. Sci., Ochanomizu Univ., <sup>3</sup>Res. Dev. Init., Chuo Univ.)
- PL-021 Metabolism of α-Glucan in the *Synechococcus* Transformants Expressing Genes for Amylopectin Biosynthesis of Rice  
Eiji Suzuki, Hitoshi Yoshimura, Naoyuki Osada, Ryuichiro Suzuki (Fac Bioresour Sci, Akita Pref Univ)
- PL-022 Plastid-specific acidic lipids are required for the development of non-photosynthetic organs in Arabidopsis  
Akiko Yoshihara<sup>1</sup>, Hajime Wada<sup>2</sup>, Koichi Kobayashi<sup>3</sup> (<sup>1</sup>Sch. Sci., Osaka Pref. Univ, <sup>2</sup>Grad. Sch. Arts Sci., Univ. Tokyo, <sup>3</sup>Fac. Lib. Arts Sci., Osaka Pref. Univ)
- PL-023 Involvement of Pathogenic Responses that Occurs under Low-Ca Condition without Pathogen in Low-Ca Tolerance in *Arabidopsis thaliana*  
Shuichi Hashimoto, Yusuke Shikanai, Takehiro Kamiya, Toru Fujiwara (Grad. Sch. Agri. Life Sci., UTokyo)

### ■ Secondary (specialized) metabolism

- PL-024 Metabolomics and mass spectrometry imaging of metabolites on *Nopalea cochenillifera* having high environmental adaptability  
Ryosuke Sato<sup>1,2</sup>, Muneo Sato<sup>3</sup>, Yuji Sawada<sup>3</sup>, Masami Yokota Hirai<sup>3</sup>, Hirofumi Enomoto<sup>1,4</sup>, Masashi Asahina<sup>1,4</sup>, Takanori Horibe<sup>2</sup>, Takashi Tsuge<sup>2</sup>, Masayoshi Maeshima<sup>2</sup> (<sup>1</sup>Teikyo Univ., Dept. Biosci., <sup>2</sup>Chubu Univ., Dept. Biosci. Biotech, <sup>3</sup>RIKEN CSRS, <sup>4</sup>Teikyo Univ., Adv. Instr. Anal. Center)
- PL-025 Gene expression analysis of ABC transporter *ABCD1* in tobacco and petunia  
Yasuyuki Yamada<sup>1</sup>, Shiori Nishitani<sup>2</sup>, Yoko Nakahara<sup>1</sup>, Takao Koeduka<sup>2</sup>, Nobukazu Shitan<sup>1</sup> (<sup>1</sup>Kobe Pharm. Univ., <sup>2</sup>Grad. Sch. Sci. Tech. Innov., Yamaguchi Univ.)
- PL-026 A metabolomic approach for the functional analysis of taxane compound transporters from yew  
Hiroaki Kusano<sup>1</sup>, Hiroshi Minami<sup>2</sup>, Yoshihiro Kato<sup>2</sup>, Kaori Kanazawa<sup>1</sup>, Akifumi Sugiyama<sup>1</sup>, Homare Tabata<sup>2</sup>, Kazufumi Yazaki<sup>1</sup> (<sup>1</sup>RISH, Kyoto Univ., <sup>2</sup>Hokkaido Mitusi Chemicals Inc.)
- PL-027 Functional analysis of a novel transporter potentially involved in glucosinolate uptake into vacuole in Arabidopsis  
Kaichiro Endo<sup>1</sup>, Akiko Nakazaki<sup>2</sup>, Tomoo Shimada<sup>2</sup>, Ikuko Nishimura<sup>3</sup>, Kenji Yamada<sup>1</sup> (<sup>1</sup>Malopolska Centre of Biotechnology, Jagiellonian Univ., <sup>2</sup>Graduate School of Science, Kyoto Univ., <sup>3</sup>Faculty of Science and Engineering, Konan Univ.)

### ■ Organelles/Cytoskeleton

- PL-028 Anchoring of nucleoids to the thylakoid membrane is essential for distribution of plastid DNA during chloroplast development  
Sho Fujii, Toshiharu Shikanai, Yoshiki Nishimura (Grad. Sch. Sci., Kyoto Univ.)
- PL-029 Finely-balanced expression of *STR4a* is essential for the proper function in chloroplasts  
Kota Ishibashi, Naoto Doi, Mari Takusagawa, Toshiharu Shikanai (Grad. Sch. Sci., Kyoto Univ.)
- PL-030 Bases around target cytidine affect deaminase activity of DYW domain  
Ayako Maeda, Sachi Takenaka, Mizuki Takenaka (Grad. Sch. Sci., Kyoto Univ.)

- PL-031 Analysis of *Arabidopsis* vegetative actin isoforms' mutants  
Saku Kijima<sup>1</sup>, Nobutaka Mitsuda<sup>2</sup>, Yoshihisa Oda<sup>1,3</sup> (<sup>1</sup>Dept. Gene Funct. Phenomics, NIG, <sup>2</sup>Bioproduction Res. Inst., AIST, <sup>3</sup>Dep. Genetics, SOKENDAI)
- PL-032 Examination of the biological significance of the complicated cell shape in leaf epidermal cells using *bpp* mutants  
Shoichiro Mitsui, Takehide Kato, Takashi Hashimoto (Div. of Biol. Sci., Grad. Sch. of Sci. and Tech., NAIST)
- PL-033 Screening of mutants which show reduced tubulin phosphorylation upon hyperosmotic stress  
Chie Maeda, Toshiki Minamiyama, Kohei Fukuda, Shinichiro Komaki, Takehide Kato, Takashi Hashimoto (Div. of Biol. Sci., Grad. Sch. of Sci. and Tech., NAIST)

## ■ Vegetative growth

- PL-034 Spatio-temporal analyses revealed that the effects of excess pyrophosphate on leaf development are cell-autonomous  
Shizuka Gunji<sup>1</sup>, Kensuke Kawade<sup>2,3</sup>, Hiromitsu Tabeta<sup>1,4,5</sup>, Gorou Horiguchi<sup>6,7</sup>, Mariko Asaoka<sup>1,8</sup>, Akira Oikawa<sup>5,9</sup>, Masami Yokota Hirai<sup>5</sup>, Hirokazu Tsukaya<sup>10</sup>, Ali Ferjani<sup>1</sup> (<sup>1</sup>Dept. Biol., Tokyo Gakugei Univ., <sup>2</sup>NIBB, <sup>3</sup>SOKENDAI, <sup>4</sup>Grad. Sch. Art Sci., Univ. Tokyo, <sup>5</sup>RIKEN CSRS, <sup>6</sup>Dept. Life Sci., Rikkyo Univ., <sup>7</sup>Res. Ctr. Life Sci., Rikkyo Univ., <sup>8</sup>ENS de Lyon, <sup>9</sup>Fac. Agr., Yamagata Univ., <sup>10</sup>Grad. Sch. Sci., Univ. Tokyo)
- PL-035 RNA-seq Analysis of GFP-positive Hydathode Microsamples in *Arabidopsis*  
Hiroki Yagi<sup>1</sup>, Atsushi J. Nagano<sup>2</sup>, Jaewook Kim<sup>1</sup>, Kentaro Tamura<sup>3</sup>, Nobuyoshi Mochizuki<sup>1</sup>, Akira Nagatani<sup>1</sup>, Tomonao Matsushita<sup>1</sup>, Tomoo Shimada<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., Kyoto Univ., <sup>2</sup>Fac. Agr., Ryukoku Univ., <sup>3</sup>Dep. Env. Life Sci., Univ. Shizuoka)
- PL-036 Impact of ribosomal protein-expression levels on plant growth revealed by inducible expression method  
Kei Kondo<sup>1</sup>, Seidai Takamatsu<sup>2</sup>, Hitoshi Onouchi<sup>1</sup>, Satoshi Naito<sup>1,2</sup>, Yui Yamashita<sup>1</sup> (<sup>1</sup>Grad. Schl. Agr., Hokkaido Univ., <sup>2</sup>Grad. Schl. Life Sci., Hokkaido Univ.)
- PL-037 RNA-seq transcriptome analysis identifies key regulatory genes in growth cessation and dormancy induced by short-day photoperiod in *Lemna turionifera*  
Shogo Ito, Tokitaka Oyama (Dept. Bot., Div. Biol. Sci., Grad. Sch. Sci., Kyoto Univ.)
- PL-038 *Sdr4-like (SFL)* genes of *Arabidopsis* promote seed germination and early seedling growth by suppressing embryogenesis and dormancy regulator genes  
Lipeng Zheng<sup>1</sup>, Masahiko Otani<sup>1</sup>, Kazuhiko Sugimoto<sup>2</sup>, Naoto Kawakami<sup>1</sup> (<sup>1</sup>Grad. Sch. Agri., Univ. Meiji, <sup>2</sup>NICS)
- PL-039 An emerging role of INDOLE-3-BUTYRIC ACID RESPONSE 10 in seed storage oil mobilization and etiolated seedling growth  
Hiromitsu Tabeta<sup>1,2,3</sup>, Masami Yokota Hirai<sup>2</sup>, Ali Ferjani<sup>3</sup> (<sup>1</sup>Grad. Sch. Arts & Sci., Univ. Tokyo., <sup>2</sup>RIKEN CSRS, <sup>3</sup>Dept. Biol., Tokyo Gakugei Univ.)
- PL-040 A putative *AGAMOUS* ortholog is a candidate for the gene determining pericarp phenotype in Tartary buckwheat  
Yuka Fukuie<sup>1</sup>, Hana Shimoyama<sup>2</sup>, Toshikazu Morishita<sup>3</sup>, Daisuke Tsugama<sup>4</sup>, Kaiken Fujino<sup>1</sup> (<sup>1</sup>Grad. Sch. Agri., Hokkaido Univ., <sup>2</sup>ASAFAS., Univ. Kyoto, <sup>3</sup>Inst. Crop. Sci., NARO, <sup>4</sup>ANESC., Univ. Tokyo)
- PL-041 Effect of germination temperature on phytic acid and zinc bioavailability in brown rice  
Ayaka Fukushima<sup>1</sup>, Gun Uchino<sup>2</sup>, Tatsuki Akabane<sup>1</sup>, Ayaka Aiseki<sup>2</sup>, Ishara Perera<sup>3</sup>, Naoki Hirotsu<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Life Sci., Toyo Univ., <sup>2</sup>Fac. Life Sci., Toyo Univ., <sup>3</sup>Grain Legumes and Oil Crops Research and Development Centre)
- PL-042 Construction and analysis of a mathematical model of root twisting  
Takaaki Yonekura, Tatsuaki Goh, Keiji Nakajima (Grad. Sch. Sci. Tech., NAIST)
- PL-043 Functional analyses of CLAVATA 1/BARELY ANY MERISTEM class receptor kinases in the regulation of root meristem development  
Takashi Ishida<sup>1</sup>, Shinichiro Sawa<sup>2</sup> (<sup>1</sup>Kumamoto University, IROAST, <sup>2</sup>Kumamoto University, FAST)
- PL-044 Isolation and analysis of lateral root pre-patterning mutants using the luminescence reporter gene  
Ayaka Ozasa<sup>1</sup>, Chieko Goto<sup>1</sup>, Tatsuaki Goh<sup>2</sup>, Yuki Kondo<sup>1</sup>, Kimitsune Ishizaki<sup>1</sup>, Tetsuro Mimura<sup>1</sup>, Hidehiro Fukaki<sup>1</sup> (<sup>1</sup>Grad. Sch. of Sci., Kobe Univ., <sup>2</sup>Grad. Sch. of Sci. and Tech., NAIST)

## ■ Plant hormones/Signaling molecules

- PL-045 The role of gibberellin 3-oxidase 1 and 2 in rice flower organ  
Hiroto Suzuki, Sayaka Takehara, Kyosuke Kawai, Akihiko Sugihara, Minami Morii, Masako Hattori, Hisako Yoshimura, Miyako Ueguchi-Tanaka (Biosci. and Biotech. Cen., Nagoya Univ.)

- PL-046 Life-course phytohormone profiling of field barley for seasons reveals unique fluctuations along with environmental responses and developmental progress under the field conditions  
Takashi Hirayama<sup>1</sup>, Daisuke Saisho<sup>1</sup>, Takakazu Matsuura<sup>1</sup>, Jun Ito<sup>2</sup>, Satoshi Okada<sup>1</sup>, Asaka Kanatani<sup>3</sup>, Hiroyuki Tsuji<sup>2</sup>, Keiichi Mochida<sup>1,2,3</sup> (<sup>1</sup>IPSR Okayama Univ., <sup>2</sup>KIBR YCU, <sup>3</sup>CSRS RIKEN)
- PL-047 Functional analysis of SnRK2 substrate 1 as a regulator of flowering time  
Sotaro Katagiri, Yoshiaki Kamiyama, Risa Suzuki, Taishi Umezawa (BASE, Tokyo Univ, Agric, Thech)
- PL-048 Expression Analysis of The Promoter for Plant Growth Compound PPG Responsive Genes  
Keiya Kaga<sup>1,7</sup>, Shun Takeno<sup>2,3</sup>, Shota Tanaka<sup>2,3</sup>, Ayumi Yamagami<sup>1</sup>, Setsuko Shimada<sup>2</sup>, Minami Matsui<sup>2</sup>, Yusuke Kakei<sup>4</sup>, Yukihisa Shimada<sup>4</sup>, Shoji Segami<sup>5</sup>, Yasumitsu Kondo<sup>2</sup>, Naoshi Dohmae<sup>2</sup>, Tetsuo Kushiro<sup>3</sup>, Masayoshi Maeshima<sup>5</sup>, Tadao Asami<sup>6</sup>, Hiroyuki Osada<sup>2</sup>, Kazuo Shinozaki<sup>2</sup>, Masaru Ohme-Takagi<sup>7</sup>, Takeshi Nakano<sup>1</sup> (<sup>1</sup>Grad. Sch. Biostudies., Kyoto Univ., <sup>2</sup>RIKEN • CSRS, <sup>3</sup>Grad. Agri. Chem., Meiji Univ., <sup>4</sup>Yokohama City Univ., <sup>5</sup>Grad. Sch. Biol. Agri., Nagoya Univ., <sup>6</sup>Grad. Sch. Agri. Life Sci., Univ. of Tokyo, <sup>7</sup>Grad. Sch. Sci. Eng., Saitama Univ.)
- PL-049 *BRASSINOSTEROID RELATED HOMEODOMAIN 1 (BHB1)* regulates Brassinosteroid biosynthesis under environmental stress condition  
Reika Hasegawa<sup>1</sup>, Hironori Takasaki<sup>1</sup>, Miho Ikeda<sup>1</sup>, Ayumi Yamagami<sup>2</sup>, Nobutaka Mitsuda<sup>3</sup>, Takeshi Nakano<sup>2</sup>, Masaru Ohme-Takagi<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci. Eng., Saitama Univ., <sup>2</sup>Grad. Sch. Bio., Kyoto Univ., <sup>3</sup>Bioproduction Res. Inst. AIST)
- PL-050 Crystallization of Recombinant TGW6, which Limits Grain Size in Rice  
Tatsuki Akabane<sup>1</sup>, Wataru Tsuchiya<sup>2</sup>, Nobuhiro Suzuki<sup>2</sup>, Etsuko Katoh<sup>2</sup>, Naoki Hirotsu<sup>1</sup> (<sup>1</sup>Graduate School of Life Sciences, Toyo Univ., <sup>2</sup>Advanced Analysis Center, NARO)
- PL-051 Physiological importance of Ca<sup>2+</sup>-dependent ppGpp synthesis in Arabidopsis chloroplasts  
Sae Suzuki (Masuda Lab., TokyoTech)
- PL-052 Nutrient-mediated organ-organ coupling contributes to the stabilization of circadian clock  
Kyohei Uemoto<sup>1,2</sup>, Yumi Kunimoto<sup>2</sup>, Fumito Mori<sup>3</sup>, Hiroshi Ito<sup>3</sup>, Akane Kubota<sup>2</sup>, Haruki Egashira<sup>2</sup>, Toshinori Kinoshita<sup>4</sup>, Takashi Araki<sup>1</sup>, Motomu Endo<sup>2</sup> (<sup>1</sup>Grad. Sch. Biostudies., Univ. Kyoto, <sup>2</sup>Grad. Sch. Science and Technology., Nara Institute of Science and Technology, <sup>3</sup>Grad. Sch. Design., Univ. Kyushu, <sup>4</sup>Grad. Sch. Sci., Univ. Nagoya)
- PL-053 Molecular Mechanisms for the ROS-Ca<sup>2+</sup> Signaling Network in *Marchantia polymorpha*  
Shoko Tsuboyama, Junnosuke Yamagishi, Yuki Kamiya, Yuka Yoshizawa, Kenji Hashimoto, Kazuyuki Kuchitsu (Dept. Appl. Biol. Sci., Tokyo Univ. of Sci.)
- PL-054 Large-scale analysis of ABA dependent TSS changes  
Yusuke Ohori<sup>1</sup>, Akihiro Ezoe<sup>2</sup>, Kousuke Hanada<sup>2</sup>, Yutaka Suzuki<sup>3</sup>, Tomonao Matsuhita<sup>4</sup>, Taishi Umezawa<sup>1</sup> (<sup>1</sup>BASE, Tokyo Univ. Agric. Tech., <sup>2</sup>Dep. Bioscience Bioinformatics, KIT, <sup>3</sup>Grad. Sch. FS., Univ. Tokyo, <sup>4</sup>Grad. sch. Agric., Kyushu Univ.)

## ■ Environmental responses A

- PL-055 Chloroplastic glutamine synthetase is required for photorespiratory H<sub>2</sub>O<sub>2</sub>-induced cell death  
Kana Ishibashi<sup>1</sup>, Takanori Maruta<sup>1</sup>, Amna Mhamdi<sup>2</sup>, Frank Van Breusegem<sup>2</sup> (<sup>1</sup>Fac. Life Environ. Sci., Shimane Univ., <sup>2</sup>Plant Systems Biol., VIB-Ghent Univ.)
- PL-056 Enhancement Of Ozone Tolerance By Overexpression Of A Gene Encoding A Phycocyanin In Arabidopsis  
 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>, Tomomi Inoue<sup>1</sup>, Mitsuko Aono<sup>1</sup> (<sup>1</sup>Natl. Inst. Environ. Studies, <sup>2</sup>GRC, T-PIRC, Univ. Tsukuba)
- PL-057 Effects of increased activity of GFAT, the rate-limiting enzyme in hexosamine pathway, on the phenotype of *Arabidopsis thaliana*  
Yousuke Matoba<sup>1</sup>, Kaede Adachi<sup>2</sup>, Yasushi Sato<sup>1</sup> (<sup>1</sup>Grad Sch Sci & Eng, Ehime univ, <sup>2</sup>Sci, Ehime univ)
- PL-058 A Candidate of the “Factor X” for the Japan’s Low Death Rate under Covid-19 Pandemic: An Idea Obtained from Our Studies with Engineered Formaldehyde (FA)-Assimilating Plants  
Katsura Izui<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Biostudies., Kyoto Univ., <sup>2</sup>Grad. Sch. Biol.-Oriented Sci and Tech, Kindai Univ.)
- PL-059 Effects of 10 G hypergravity environment on growth and content of secondary metabolites in medicinal plants, *Cassia nomame* Honda  
 Koshiro Tanihata<sup>1</sup>, Daisuke Tamaoki<sup>2</sup>, Hiroyuki Kamachi<sup>2</sup>, Yasumasa Takao<sup>3</sup>, Futoshi Taura<sup>4</sup>, Takumi Nishiuchi<sup>5</sup>, Ichirou Karahara<sup>2</sup> (<sup>1</sup>Grad. Sch. Sci. Eng., Univ. Toyama, <sup>2</sup>Fac. Sci., Acad. Assemb., Univ. Toyama, <sup>3</sup>Experimental Station for Medicinal Plant Research, Univ. Toyama, <sup>4</sup>Fac. Pharm. Pharmaceut. Sci., Univ. Toyama, <sup>5</sup>ASRC, Kanazawa Univ.)

- PL-060 Altered localization of ZmPIN1a proteins in plasma membranes responsible for enhanced-polar auxin transport in etiolated maize seedlings under microgravity conditions: Relevance to the International Space Station experiment “Auxin Transport”  
Mariko Oka<sup>1</sup>, Motoshi Kamada<sup>2</sup>, Riko Inoue<sup>1</sup>, Kensuke Miyamoto<sup>3</sup>, Eiji Uheda<sup>4</sup>, Chiaki Yamazaki<sup>5</sup>, Toru Shimazu<sup>6</sup>, Hiromi Sano<sup>7</sup>, Haruo Kasahara<sup>7</sup>, Tomomi Suzuki<sup>8</sup>, Akira Higashibata<sup>8</sup>, Junichi Ueda<sup>4</sup> (<sup>1</sup>Fac. Agric., Tottori Univ., <sup>2</sup>A. E. S. Co., Ltd., <sup>3</sup>Fac. Liberal Arts and Sci., Osaka Pref. Univ., <sup>4</sup>Grad. Sch. Sci., Osaka Pref. Univ., <sup>5</sup>JEM Mission Operations & Integration center, JAXA, <sup>6</sup>Japan Space Forum, <sup>7</sup>JAMSS, <sup>8</sup>Kibo Utilization Center, JAXA)

## ■ Environmental responses B

- PL-061 The ROP-dependent receptor-like cytoplasmic kinase is involved in correct localization of lignin deposition at the Casparian strip domain  
Qi Wu, Toru Fujiwara, Takehiro Kamiya (The University of Tokyo)
- PL-062 Pattern-triggered immunity signaling leads to salt stress tolerance in *Arabidopsis thaliana*  
Shota Kido<sup>1</sup>, Yuri Tajima<sup>1</sup>, Eliza Poiian Loo<sup>1</sup>, Kohji Yamada<sup>2,3</sup>, Taishi Hirase<sup>1</sup>, Hirotaka Ariga<sup>4</sup>, Tadashi Fujiwara<sup>1</sup>, Keisuke Tanaka<sup>4</sup>, Teruaki Taji<sup>4</sup>, Imre E. Somssich<sup>3</sup>, Jane E. Parker<sup>3</sup>, Yusuke Saijo<sup>1,3</sup> (<sup>1</sup>NAIST, <sup>2</sup>Tokushima Univ., <sup>3</sup>MPIPZ, <sup>4</sup>Tokyo Univ. of Agriculture)
- PL-063 Effects of Salicylic Acid and Heavy Metal Ions on Growth of Rice Seedlings under Sterile Conditions  
Yutaroh Daidoh, Masahiro Inoue, Yoh Sakuma (Biology, Grad. Sch. Sci. & Eng., Ehime Univ.)
- PL-064 Absorptions of Lithium and Sodium Ions and the Metal Tolerance Mechanisms in Protonema Cells of *Trematodon longicollis*  
Ryosuke Nakanishi, Yoh Sakuma, Masahiro Inoue (Biology, Grad. Sch. Sci. & Eng., Ehime Univ.)
- PL-065 Establishment of a genetically encoded magnesium sensor in *Arabidopsis thaliana*  
Danhan Peng, Zhihang Feng, Takehiro Kamiya, Toru Fujiwara (Graduate School of Agricultural and Life Sciences, The University of Tokyo)
- PL-066 A novel *MATE* family gene involved in cadmium mobilization in rice  
Hua Xiao<sup>1</sup>, Nobuhiro Takana<sup>1,2</sup>, Zhihang Feng<sup>1</sup>, Kiyoshi Yamazaki<sup>1</sup>, Takehiro Kamiya<sup>1</sup>, Toru Fujiwara<sup>1</sup> (<sup>1</sup>The University of Tokyo, <sup>2</sup>National agricultural and food research organization)
- PL-067 Heavy metal tolerance and accumulation properties in proanthocyanidin deficient mutants of the fern *Athyrium yokoscense* gametophytes  
Hiroyuki Kamachi<sup>1</sup>, Kazunori Morishita<sup>2</sup>, Manami Hatta<sup>3</sup>, Ayaka Okamoto<sup>2</sup>, Kazuma Fujii<sup>2</sup>, Naoki Imai<sup>2</sup>, Akihiro Sakatoku<sup>1</sup>, Tamihisa Ohta<sup>1</sup>, Mana Aoki<sup>3</sup>, Sakurako Hiyama<sup>3</sup> (<sup>1</sup>Fac. Sci., Univ. Toyama, <sup>2</sup>Grad. Sch. Sci., Univ. Toyama, <sup>3</sup>Fac. Sci., Univ. Toyama)

## ■ Environmental responses C

- PL-068 Regulatory metabolic carbon flow and photosynthesis in *Chlorella* for combinatory-stress induced triacylglycerol accumulation  
Mimari Kondo, Yukari Iijima, Rie Otaki, Shoko Fujiwara, Norihiro Sato (Sci., Univ. Toyaku)
- PL-069 The roles of PG in *Synechocystis* cells acclimating to phosphorus-starved conditions  
Tatsunori Hiyoshi, Norihiro Sato (Sch. Life Sci., Tokyo Univ. Pharm. Life Sci.)
- PL-070 The relationship between cell growth and Phycobilisome degradation under nitrogen starvation in *Synechocystis* sp. PCC 6803  
Akiko Yoshihara<sup>1</sup>, Koichi Kobayashi<sup>2</sup> (<sup>1</sup>Sch. Sci., Osaka Pre. Univ., <sup>2</sup>Fac. Lib. Art. Sci., Osaka Pre. Univ.)
- PL-071 Analysis of the Two-component System DivJK and PleC in *Synechocystis* sp. PCC6803  
Yoshikazu Saito<sup>1</sup>, Hisataka Kohga<sup>1</sup>, Yukino Sakai<sup>1</sup>, Masanori Sato<sup>1</sup>, Junji Uchiyama<sup>1,2</sup>, Hisataka Ohta<sup>1,2</sup> (<sup>1</sup>Dept. of Math. & Sci. Edu., Grad. Sch. of Sci., Tokyo Univ. of Sci., <sup>2</sup>Dept. of Bio., Fac of Sci., Tokyo Univ. of Sci.)
- PL-072 Heterocyst Differentiation and Gene Expression of *Anabaena* sp. PCC7120 under Acidic Stress Condition  
Masanori Sato<sup>1</sup>, Yoshikazu Saito<sup>1</sup>, Yukino Sakai<sup>1</sup>, Junji Uchiyama<sup>1,2</sup>, Hisataka Ohta<sup>1,2</sup> (<sup>1</sup>Dept. Sci. Edu., Grad. Sch. of Sci., Tokyo Univ. of Sci., <sup>2</sup>Dept. of Bio., Fac. of Sci., Tokyo Univ. of Sci.)
- PL-073 Deep Learning-based Field Transcriptome Model of Rice and Transfer Learning to Other Species  
Taro Maeda<sup>1</sup>, Satoshi Ohkubo<sup>2</sup>, Makoto Kahima<sup>3</sup>, Daisuke Kyogoku<sup>4</sup>, Yoichi Hashida<sup>5</sup>, Suguru Tanaka<sup>1</sup>, Naoya Mori<sup>6</sup>, Hiroyuki Watanabe<sup>6</sup>, Sunsuke Adachi<sup>7</sup>, Atsushi J. Nagano<sup>1,8</sup> (<sup>1</sup>Fac. Agr., Ryukoku Univ., <sup>2</sup>Grad. Agr., TUAT, <sup>3</sup>Coll. Sci&Eng., AGU, <sup>4</sup>Grp. Ecol., Hitohaku, <sup>5</sup>Fac. Agr., Takasaki Univ. of H&W, <sup>6</sup>Fac. Agr., Tamagawa Univ., <sup>7</sup>Fac. Agr., Ibaraki Univ., <sup>8</sup>IAB, Keio Univ.)
- PL-074 Effects of increasing CO<sub>2</sub> levels and temperature on rice yield and Nutrient Use Efficiency  
Nene Furukawa<sup>1</sup>, Marouane Baslam<sup>2</sup>, Murat Aycan<sup>2</sup>, Toshihiro Nagamori<sup>1</sup>, Priesack Eckart<sup>3</sup>, Gakière Bertrand<sup>4</sup>, José Luis Araus<sup>5</sup>, Iker Aranjuelo<sup>6</sup>, Toshiaki Mitsui<sup>1,2</sup> (<sup>1</sup>Dept. of Life and Food Sciences, Grad. Sch. Sci. Tech, Univ. Niigata, <sup>2</sup>Laboratory of

Biochemistry, Faculty of Agriculture, Niigata University, <sup>3</sup>Helmholtz Center-Munich, Munich, Germany, <sup>4</sup>Institute of Plant Sciences Paris-Saclay (IPSS), CNRS Université Paris-Saclay, Orsay, France, <sup>5</sup>University of Barcelona, Barcelona, Spain, <sup>6</sup>Instituto de Agrobiotecnología (CSIC/UPNA/Gobierno de Navarra). Mutilva, Navarra, Spain)

PL-075 Metacaspase suppress the dark-induced senescence of *Arabidopsis thaliana* leaves

Hiroshi Hayashi<sup>1</sup>, Rika Shimamoto, Miku Chiba (Fac. Biosci. Biotec., Fukui Pref. Univ.)

PL-076 Functional Study of PAS-histidine kinases in the moss *Physcomitrella patens*

Ryo Suzuki<sup>1</sup>, Takafumi Yamashino<sup>2</sup>, Syu Anami<sup>1</sup>, Masashi Ryo<sup>1</sup>, Kota Nakai<sup>1</sup>, Bowen Wu<sup>1</sup>, Haruki Kikuchi<sup>1</sup>, Mamoru Sugita<sup>1</sup>, Setsuyuki Aoki<sup>1</sup> (<sup>1</sup>Grad. Sch. Info., Univ. Nagoya, <sup>2</sup>Grad. Sch. Bio., Univ. Nagoya)

## ■ Plant-organism interaction A

PL-077 Role of the subtilases in the haustorial formation in the parasitic plant *Phtheirospermum japonicum*

Satoshi Ogawa<sup>1</sup>, Takanori Wakatake<sup>1,2</sup>, Thomas Spallek<sup>1,3</sup>, Juliane K. Ishida<sup>1,2</sup>, Ryosuke Sano<sup>4</sup>, Tetsuya Kurata<sup>4</sup>, Taku Demura<sup>4</sup>, Satoko Yoshida<sup>1,4,5</sup>, Yasunori Ichihashi<sup>1,5,6</sup>, Andreas Schaller<sup>3</sup>, Ken Shirasu<sup>1,2</sup> (<sup>1</sup>CSRS, RIKEN, <sup>2</sup>Grad. Sch. of Sci., Univ. of Tokyo, <sup>3</sup>Dept. of Plant Physiol. and Biochem., Univ. of Hohenheim, <sup>4</sup>Grad. Sch. of Sci. Tech., NAIST, <sup>5</sup>JST, PRESTO, <sup>6</sup>BRC, RIKEN)

PL-078 Toward identification of virulence factors required for the necrotrophic phase of a phytopathogenic fungus, *Colletotrichum orbiculare*

Katsuma Yonehara, Naoyoshi Kumakura, Gan Pamela, Ken Shirasu (Yokohama inst., Riken (Grad. Sci., Univ. Tokyo))

PL-079 Secretome Study at Plant-Pathogen Interface

Yasir Sidiq<sup>1</sup>, Takumi Nishiuchi<sup>1,2</sup> (<sup>1</sup>Graduate School of Natural Science and Technology, Kanazawa University, <sup>2</sup>Institute for Gene Research, Advanced Science Research Center, Kanazawa University)

PL-080 Rice growth promotion by damage-associated OsPep peptides is dependent on root microbiota

Masako Fujii<sup>1</sup>, Yuniar Devi Utami<sup>1,2</sup>, Shigetaka Yasuda<sup>1</sup>, Rena Tani<sup>1</sup>, Yuichi Hongoh<sup>2</sup>, Yutaka Sato<sup>3</sup>, Yusuke Saijo<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci. Tech., NAIST, <sup>2</sup>Grad. Sch. Biosci. Biotech., Tokyo Inst. Tech., <sup>3</sup>NIG)

PL-081 Comparison of local and systemic defense responses against herbivory in rice leaf

Taiga Kuwabara, Yuko Hojo, Tomonori Shinya, Ivan Galis (Inst. Plant Sci. & Res., Okayama Univ.)

PL-082 The role of salicylic acid in defense response of tomato to *Clavibacter michiganensis* subsp. *michiganensis*.

Naoki Yokotani<sup>1</sup>, Yoshinori Hasegawa<sup>1</sup>, Masaru Sato<sup>1</sup>, Hideki Hirakawa<sup>1</sup>, Yusuke Kouzai<sup>2</sup>, Yoko Nishizawa<sup>3</sup>, Eiji Yamamoto<sup>1</sup>, Yoshiki Naito<sup>1</sup>, Sachiko Isobe<sup>1</sup> (<sup>1</sup>Kazusa DNA Res., <sup>2</sup>RIKEN, <sup>3</sup>NARO)

PL-083 Development of *Arabidopsis* cell culture for comparable physiological and genetic studies

Shingo Maruyama<sup>1</sup>, Yuto Takahashi<sup>1</sup>, Akihiro Ogawa<sup>1</sup>, Naoto Shibuya<sup>1</sup>, Hanae Kaku<sup>1</sup>, Yoshitake Desaki<sup>1,2</sup> (<sup>1</sup>Dept. Life Sciences, Sch. Agriculture, Meiji University, <sup>2</sup>Dept. Biological Science and Technology, Fac. Industrial Science and Technology, Tokyo University of Science)

## ■ Plant-organism interaction B

PL-084 Control of root nodule symbiosis by nitrate and the implication of carbon utilization in the process

Masahiro Watanabe<sup>1</sup>, Hanna Nishida<sup>2</sup>, Momoyo Ito<sup>2</sup>, Takuya Suzuki<sup>1,2</sup> (<sup>1</sup>Grad. Sch. Bio., Univ. Tsukuba, <sup>2</sup>T-PIRC, Univ. Tsukuba)

PL-085 Microbiome regulation by phosphorus starvation response regulators in *Arabidopsis thaliana*

Ryo Chigusa<sup>1</sup>, Kentaro Okada<sup>1</sup>, Ayato Hirano<sup>1</sup>, Yuniar Devi Utami<sup>1</sup>, Kazuo Shinozaki<sup>2</sup>, Saya Kikuchi<sup>2</sup>, Miki Fujita<sup>2</sup>, Kei Hiruma<sup>1,3</sup>, Yusuke Saijo<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci. Tech., NAIST, <sup>2</sup>CSRS., Riken, <sup>3</sup>Grad. Sch. Arts. Sci., Tokyo Univ)

PL-086 Creation of *ENOD40* knockout plants in *Lotus japonicus*

Teruaki Iwamoto<sup>1</sup>, Takuya Suzuki<sup>2,3</sup> (<sup>1</sup>Col. Biol. Sci., Univ. Tsukuba, <sup>2</sup>Grad. Sch. Bio., Univ. Tsukuba, <sup>3</sup>T-PIRC, Univ. Tsukuba)

PL-087 Classification of Lysin motif receptor like kinases (LysM-RLKs) in seed plants

Hafijur Ruman<sup>1</sup>, Masanori Saito<sup>2</sup>, Yasuyuki Kawaharada<sup>1,2</sup> (<sup>1</sup>United Graduate School of Agricultural Sciences, Iwate University, Japan., <sup>2</sup>Department of Plant Bio-Sciences, Faculty of Agriculture, Iwate University, Japan.)

PL-088 Host specificity in the nodule symbiosis between *Lotus* spp. and *Rhizobium* sp.

Yuhei Chiba<sup>1</sup>, Sachiko Masuda<sup>2</sup>, Arisa Shibata<sup>2</sup>, Ken Shirasu<sup>2</sup>, Yasuyuki Kawaharada<sup>3</sup> (<sup>1</sup>Graduate School of Arts and Sciences, Iwate University, <sup>2</sup>Center for Sustainable Resource Science, RIKEN, <sup>3</sup>Department of Plant-Biosciences, Faculty of Agriculture, Iwate University)



- PL-089 Gene expression analysis during haustorium formation in the parasitic plant *Striga hermonthica*  
Syogo Wada<sup>1</sup>, Shungo Kobori<sup>2</sup>, Kie Kumaishi<sup>2</sup>, Songkui Cui<sup>1</sup>, Yasunori Ichihashi<sup>2</sup>, Satoko Yoshida<sup>1</sup> (<sup>1</sup>Grad. Sch. Sci., NAIST, <sup>2</sup>BRC., Riken)

## ■ Epigenetic regulation

- PL-090 Functional Analysis of RNA Polymerase IV, V in *Marchantia polymorpha*  
Hikari Ikeda, Masayuki Tsuzuki, Yuichiro Watanabe (Grad. Sch. Arts Sci., Univ. Tokyo)
- PL-091 Functional analyses of histone modification enzymes, SDG7 and SDG8 during Arabidopsis root growth  
Yicong Wang (Plant Stem Cell Regulation and Floral Patterning Laboratory Graduate School of Biological Sciences Nara Institute of Science and Technology)
- PL-092 Functional analysis of rice CHROMOMETHYLASEs involved in non-CG methylation  
Hanna Nishida<sup>1</sup>, Asuka Higo<sup>2</sup>, Hiroyuki Tsuji<sup>2</sup>, Taiji Kawakatsu<sup>1</sup> (<sup>1</sup>NIAS, <sup>2</sup>KIBR)
- PL-093 DNA double-strand break repair in the nucleosome-free region impacts proximal promoter chromatin  
Kohei Kawaguchi<sup>1</sup>, Mei Kazama<sup>1</sup>, Takayuki Hata<sup>1,2</sup>, Naoto Takada<sup>1</sup>, Chihiro Hayakawa<sup>1</sup>, Kazuki Mukae<sup>1</sup>, Mitsuhiro Matsuo<sup>2</sup>, Junichi Obokata<sup>2</sup>, Soichirou Satoh<sup>1</sup> (<sup>1</sup>Grad. Sch. Life Env. Sci., Kyoto Pref. Univ., <sup>2</sup>Fac. Agri., Setsunan Univ)
- PL-094 *Arabidopsis* nuclear pore complex regulates centromere arrangement  
Nanami Ito<sup>1</sup>, Takuya Sakamoto<sup>1</sup>, Yuki Sakamoto<sup>2</sup>, Sachihiko Matsunaga<sup>3</sup> (<sup>1</sup>Dept. Appl. Biol. Sci., Grad. Sch. 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)

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

- PL-095 Functional characterization of a novel transcription factor involved in flavin metabolism regulation in plants  
Miho Harada<sup>1</sup>, Junya Namba<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.)
- PL-096 Identification of a regulatory factor for the alternative splicing event of chloroplastic ascorbate peroxidase  
Masato Yamada<sup>1</sup>, Tomoya Arata<sup>1</sup>, Kanako Suzuki<sup>1</sup>, Natsuko Furihata<sup>1</sup>, Noriaki Tanabe<sup>2</sup>, Takamasa Suzuki<sup>3</sup>, Ayako Nishizawa-Yokoi<sup>4,5</sup>, Shigeru Shigeoka<sup>6</sup>, Kazuya Yoshimura<sup>1</sup> (<sup>1</sup>Dept. Food Nutr. Sci., Coll. Biosci. Biotech., Chubu Univ., <sup>2</sup>Dept. Adv. Biosci., Fac. Agr., Kindai Univ., <sup>3</sup>Dept. Biol. Chem., Coll. Biosci. Biotech., Chubu Univ., <sup>4</sup>NIAS, NARO, <sup>5</sup>JST, PRESTO, <sup>6</sup>Exp. Farm, Kindai Univ.)
- PL-097 Global view of translation and mRNA levels in the Arabidopsis deadenylase mutants  
Taku Tokunaka<sup>1</sup>, Toshihiro Arae<sup>1,2</sup>, Seidai Takamatsu<sup>1</sup>, Atsushi Toyoda<sup>3</sup>, Yukako Chiba<sup>1,4</sup> (<sup>1</sup>Grad. Sch. Life Sci., Hokkaido Univ., <sup>2</sup>Grad. Sch. Front. Sci., Univ. of Tokyo, <sup>3</sup>NIG, <sup>4</sup>Fac. Sci. Hokkaido Univ.)
- PL-098 Induction Of Transcriptional And Post-transcriptional Gene Silencing By Agrobacterium Infection  
Emi Iida<sup>1</sup>, Hikaru Sawano<sup>1</sup>, Kazunori Kuriyama<sup>1</sup>, Midori Tabara<sup>1</sup>, Atsushi Takeda<sup>2</sup>, Hiromitsu Moriyama<sup>1</sup>, Toshiyuki Fukuhara<sup>1</sup> (<sup>1</sup>Grad. Sch. Agri., Tokyo. Univ. Agri. Tech, <sup>2</sup>Dept. Biotech., Ritsumeikan. Univ.)
- PL-099 Structural analysis of boron-dependent ribosome stalling on the AUGUAA sequence  
Mayuki Tanaka<sup>1</sup>, Takeshi Yokoyama<sup>2,3</sup>, Madoka Nishimoto<sup>2</sup>, Kengo Tsuda<sup>2</sup>, Naoyuki Sotta<sup>1</sup>, Hideki Shigematsu<sup>2,4</sup>, Mikako Shirouzu<sup>2</sup>, Takuhiro Ito<sup>2</sup>, Toru Fujiwara<sup>1</sup> (<sup>1</sup>Grad. Sch. of Agri. Life Sci., Univ of Tokyo, <sup>2</sup>RIKEN BDR, <sup>3</sup>Grad. Sch. of Life Sci., Tohoku Univ., <sup>4</sup>RIKEN RSC)
- PL-100 Crosstalk of N-terminal methionine excision and methionine homeostasis in plants  
Kazuki Oda<sup>1</sup>, Shiori Muraoka<sup>2</sup>, Hitoshi Onouchi<sup>1</sup>, Satoshi Naito<sup>1,3</sup>, Yui Yamashita<sup>1</sup> (<sup>1</sup>Grad. Schl. Agr., Hokkaido Univ., <sup>2</sup>Schl. Agr., Hokkaido Univ., <sup>3</sup>Grad. Schl. Life Sci., Hokkaido Univ.)

## ■ Systems biology

- PL-101 Supporting genome analysis of diatom: genome assembly of *Nitzschia* sp. PL1-4  
Takako Mochizuki<sup>1</sup>, Mika Sakamoto<sup>1</sup>, Yasuhiro Tanizawa<sup>1</sup>, Masaru Yagura<sup>1</sup>, Takuro Nakayama<sup>2</sup>, Goro Tanifuji<sup>3</sup>, Ryoma Kamikawa<sup>4</sup>, Yasukazu Nakamura<sup>1</sup> (<sup>1</sup>Genome Informatics Lab., NIG, <sup>2</sup>Graduate School of Life Sciences, Tohoku University, <sup>3</sup>Department of Zoology, National Museum of Nature and Science, <sup>4</sup>Graduate School of Agriculture, Kyoto Univ.)

- PL-102 Genome and transcriptome analysis of the parasitic plant *Phtheirospermum japonicum*  
Yuki Tanaka<sup>1,2</sup>, Mitsutaka Kadota<sup>3</sup>, Osamu Nishimura<sup>3</sup>, Shigehiro Kuraku<sup>3</sup>, Satoko Yoshida<sup>4</sup>, Ken Shirasu<sup>1,2</sup> (<sup>1</sup>RIKEN CSRS, <sup>2</sup>Grad. Sch. Sci., Univ. Tokyo, <sup>3</sup>RIKEN BDR, <sup>4</sup>Div. Bio. Sci., NAIST)
- PL-103 Unravelling the molecular mechanism of bud dormancy transition and predicting flowering time in *Somei-yoshino* by multi-site field transcriptomics  
Masaaki Shimizu<sup>1</sup>, Keiko Kitamura<sup>2</sup>, Han Qingmin<sup>2</sup>, Satake Akiko<sup>3</sup> (<sup>1</sup>Grad. Sch. Sys. Life Sci. Univ. Kyushu, <sup>2</sup>Forest and Forestry Products Research Inst., <sup>3</sup>Grad. Sch. Sci. Univ. Kyushu)
- PL-104 Development of a novel modeling method to predict metabolic regulation systems  
Ryoichi Sato, Masami Yokota Hirai (RIKEN CSRS)
- PL-105 Marpolbase: development of the genome and expression database for the liverwort *Marchantia polymorpha*  
Yasuhiro Tanizawa<sup>1</sup>, Shogo Kawamura<sup>2</sup>, Masaru Yagura<sup>1</sup>, Takako Mochizuki<sup>1</sup>, Mika Sakamoto<sup>1</sup>, Shohei Yamaoka<sup>2</sup>, Ryuichi Nishihama<sup>2</sup>, Katsuyuki Yamato<sup>3</sup>, Takayuki Kohchi<sup>2</sup>, Chang Liu<sup>4</sup>, Frédéric Berger<sup>5</sup>, Yasukazu Nakamura<sup>1</sup> (<sup>1</sup>NIG, <sup>2</sup>Grad. Sch. of Biostudies, Kyoto Univ., <sup>3</sup>B.O.S.T., Univ. Kindai, <sup>4</sup>Univ. Hohenheim, <sup>5</sup>GMI)
- PL-106 Comparing of Annual Pattern of Gene Expression between *Arabidopsis thaliana* and *A. halleri*  
Yasuyuki Nomura<sup>1</sup>, Atsushi J. Nagano<sup>2,3</sup> (<sup>1</sup>Research Institute for Food and Agriculture, Ryukoku University, <sup>2</sup>Faculty of Agriculture, Ryukoku University, <sup>3</sup>Institute for Advanced Biosciences, Keio University)

## ■ New technology

- PL-107 Production of Transgene-Free Genome-Edited Plants (Null Segregants) in Japanese Cultivated Gentians  
Masahiro Nishihara<sup>1</sup>, Aiko Watanabe<sup>1</sup>, Fumina Goto<sup>1</sup>, Chiharu Yoshida<sup>1</sup>, Shigekazu Takahashi<sup>1</sup>, Keiichiro Nemoto<sup>1</sup>, Akira Abe<sup>1</sup>, Masashi Odashima<sup>2</sup>, Shinobu Sasaki<sup>2</sup>, Suguru Ozawa<sup>2</sup>, Zenbi Naito<sup>2</sup> (<sup>1</sup>Iwate Biotechnology Research Center, <sup>2</sup>Iwate Agricultural Research Center)
- PL-108 A truncation of the CaMBD in the C terminal region of *OsGAD4* resulted in higher GABA production in rice plants  
Nadia Akter, Kazuhito Akama (Department of Life Sciences, Shimane University)
- PL-109 Effect of Heat Treatment on The Mutation Efficiency Induced by SpCas9 in *Arabidopsis*  
Shuta Kurokawa, Naoshi Yamanaka, Kappei Kobayashi, Hidetaka Kaya (Dept. Food Prod. Sci., Fac. Agr., Ehime University)
- PL-110 CRISPR/Cas9-mediated gene targeting using all-in-one vector in plants  
Ayako Nishizawa-Yokoi<sup>1,2</sup>, Masafumi Mikami<sup>1</sup>, Seiichi Toki<sup>1,3</sup> (<sup>1</sup>NIAS, NARO, <sup>2</sup>PRESTO, JST, <sup>3</sup>Kihara Inst. Biol. Res.)
- PL-111 Establishment of the local gene induction method with IR-LEGO in *Physcomitrium patens*  
Suguru Ohe<sup>1</sup>, Takumi Tomoi<sup>2</sup>, Joe Sakamoto<sup>2</sup>, Yasuhiro Kamei<sup>2,3,4</sup>, Yosuke Tamada<sup>1,5,6</sup> (<sup>1</sup>Sch. Eng., Utsunomiya Univ., <sup>2</sup>Lab. Biothermol., NIBB, <sup>3</sup>Spectrograph. Bioimag. Facil., NIBB, <sup>4</sup>Sch. Life Sci., SOKENDAI, <sup>5</sup>CORE, Utsunomiya Univ., <sup>6</sup>REAL, Utsunomiya Univ.)
- PL-112 Development of a live-cell transcriptome system to elucidate the acquisition mechanism of totipotency in zygotes  
Koutarou Torii, Hirofumi Shintaku (Wako Inst., Riken)
- PL-113 Identification of cis-regulatory elements that confers high expression  
Takatoshi Kiba<sup>1,3</sup>, Toru Kudo<sup>2</sup>, Kentaro Yano<sup>2</sup>, Norio Kato<sup>3,4</sup> (<sup>1</sup>Grad. Sch. Bioagri. Sci., Nagoya Univ., <sup>2</sup>Sch. Agr., Meiji Univ., <sup>3</sup>Plant Breeding Innovation Lab., RIKEN, <sup>4</sup>Plant Innovation Center, Japan Tobacco Inc.)

## ■ Others

- PL-114 Collection and Maintenance of Plant Cell Lines at RIKEN BRC in FY2021  
Toshihiro Kobayashi, Masatomo Kobayashi (RIKEN BRC)
- PL-115 Application of plant metabolome metadata to RDF and reanalysis of the raw data  
Hideki Nagasaki<sup>1</sup>, Takeshi Ara<sup>2</sup>, Atsushi Fukushima<sup>1</sup>, Sachiko Ohsawa<sup>3</sup>, Mikiko Takahashi<sup>1</sup>, Norio Kobayashi<sup>4</sup>, Takatomo Fujisawa<sup>5</sup>, Nozomu Sakurai<sup>5</sup>, Hideki Hirakawa<sup>3</sup>, Masanori Arita<sup>1,5</sup> (<sup>1</sup>RIKEN CSRS, <sup>2</sup>RISH, Kyoto Univ., <sup>3</sup>Facility for Genome Informatics, KDRI, <sup>4</sup>RIKEN ISC, <sup>5</sup>DDBJ, NIG)

- PL-116 Current status of the resources related to *Lotus japonicus* and their applications  
Shusei Sato<sup>1</sup>, Yusdar Mustamin<sup>1</sup>, Madihah Manggabarani<sup>1</sup>, Masaru Bamba<sup>1</sup>, Turgut Akyol<sup>2</sup>, Stig Andersen<sup>2</sup>, Nadia Kamal<sup>3</sup>, Klaus F. X. Mayer<sup>3</sup>, Masatsugu Hashiguchi<sup>4</sup>, Hidenori Tanaka<sup>4</sup>, Ryo Akashi<sup>4</sup> (<sup>1</sup>Grad. Sch. Life Sci., Tohoku Univ., <sup>2</sup>Aarhus Univ., <sup>3</sup>Helmholtz Zentrum München, <sup>4</sup>Fac. Agri., Univ. Miyazaki)
- PL-117 Cultivation test of *Brachypodium* using different LEDs and resource development such as natural accessions  
Hiroshi Abe<sup>1</sup>, Kanako Ishiyama<sup>1</sup>, Rumi Amano<sup>2</sup>, Takumi Sato<sup>2</sup>, Megumi Narukawa<sup>2</sup>, Yasunori Ichihashi<sup>2</sup>, Masatomo Kobayashi<sup>1</sup>  
(<sup>1</sup>Experimental Plant Division, RIKEN BRC, <sup>2</sup>Plant-Microbe Symbiosis Research and Development Team, RIKEN BRC)
- PL-118 Establishment of the effective distance learning of research ethics education program  
Emiko Harada (The Univ. of Shiga Pref.)