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).

Poster [PF] 2022. 3. 24 13:00-14:30

■ Photosynthesis

PF-001 Biochemical characterization of PSI-PBS supercomplexes from *Anabaena* sp. PCC 7120 grown under an iron-deficient condition

Shota Shimizu[1], Koji Kato[2], Takehiro Suzuki[3], Naoshi Dohmae[3], Jian-Ren Shen[1,2], Ryo Nagao[2] ([1]Grad. Sch. Sci. Tech., Okayama Univ., [2]RIIS, Okayama Univ., [3]RIKEN)

PF-002 Control of light-harvesting functions during non-photochemical quenching in a green alga *Chlorella variabilis* grown under different fluctuating light conditions

Yoshifumi Ueno[1], Shimpei Aikawa[2], Seiji Akimoto[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]JIRCAS)

PF-003 The Physiological Insight In The FZL Protein In The Membrane Remodeling At The Grana Margin In *Arabidopsis* Chloroplasts

Yu Ogawa[1], Mari Takusagawa[2], Megumi Iwano[3], Lianwei Peng[4], Fumiyoshi Myouga[5], Toshiharu Shikanai[2], Wataru Sakamoto[1] ([1]IPSR, Univ. Okayama, [2]Grad. Sch. Sci., Univ. Kyoto, [3]Grad. Sch. Bio., Univ. Kyoto, [4]Univ. Shanghai Normal, [5]Wako Inst., Riken)

PF-004 Effects of detergents on S-state transition and crystal quality of photosystem II

Yoshiki Nakajima, Michihiro Suga, Jian-Ren Shen (Res. Inst. Interdiscip. Sci., Univ. Okayama)

PF-005 Functional analysis of an essential gene in cyanobacteria that is conserved among oxygen-evolving photosynthetic organisms

Yoshiki Shirotori[1], Kimie Atsuzawa[2], Egi Apdila Tritya[3], Yasuko Kaneko[2], Koichiro Awai[3], Shigeki Ehira[1] ([1]Grad. Sch. Sci., Tokyo Metropolitan Univ., [2]Grad. Sch. Sci and Eng, Saitama Univ., [3]Dept. Bio. Sci. Fac. Sci., Shizuoka Univ.)

PF-006 Robust estimates of cuticular conductance to water on a stomatous leaf surface

Jun Tominaga[1,2], Joseph Stinziano[1], David Hanson[1] ([1]UNM, [2]Grad. Sch. Int. Sci. Life., Hiroshima Univ.)

PF-007 Identification of novel functional domains and motifs of CCM1 regulating CO_2-concentrating mechanism in the green alga *Chlamydomonas reinhardtii*

Miho Ogaki, Daisuke Shimamura, Takashi Yamano, Hideya Fukuzawa (Grad. Sch. Sci., Kyoto Univ)

PF-008 Effects of photosynthesis and cell growth on phycobilisome degradation during nitrogen starvation in *Synechocystis* sp. PCC 6803

Akiko Yoshihara, Koichi Kobayashi (Grad. Sch. Sci., Osaka Pref. Univ.)

PF-009 Functions of C8-vinyl-bacteriochlorophyll *e* and -chlorophyll *a* synthesized in the brown-colored green sulfur bacteria cells under red-light illumination

Jiro Harada[1], Yusuke Kinoshita[2], Tadashi Mizoguchi[2], Ken Yamamoto[1], Hitoshi Tamiaki[2] ([1]Dept. Med. Biochem., Kurume Univ. Sch. Med., [2]Grad. Sch. Life Sci., Ritsumeikan Univ.)

■ Environmental responses of photosynthesis

PF-010 Differences in responses of two strains of *Arcaryochloris marina* to light qualities

Zhe Wang[1], Yoshifumi Ueno[1], Makio Yokono[2], Jian-Ren Shen[3], Ryo Nagao[3], Reona Toyofuku[4], Tatsuya Tomo[4], Seiji Akimoto[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]NIBB, [3]RIIS, Okayama Univ., [4]Grad. Sch. Sci., Tokyo Univ. Sci.)

PF-011 Effect of Fatty Acid Composition on Photoinhibition of Photosystem II in Cyanobacteria

Kazuki Kurima[1], Haruhiko Jimbo[2], Natsumi Hosoya[1], Hajime Wada[2] ([1]Fac. Soc. Inf. Stu., Otsuma Women's Univ., [2]Grad. Sch. Arts and Sci., Univ. Tokyo)

PF-012 Characterization of distribution patterns of iron and protein on thylakoid membranes of barley cultivar 'Sarab1' with higher iron-use efficiency

Kyoko Higuchi, Kimika Hoshi, Takumi Togashi, Akihiro Saito, Takuji Ohyama (Tokyo Univ. Agr.)

PF-013 Photosynthetic Iron-Use Efficiency "PIUE" is a new quantitative trait for assessing the adaptation of photosystems to iron deficiency in barley

Akihiro Saito[1], Mayuko Furuhata[1], Hiroshi Hisano[2], Takuji Ohyama[1], Kyoko Higuchi[1] ([1]Agric. Chem., Tokyo Univ. Agric., [2]IPSR, Okayama Univ.)

■ Primary metabolism

PF-014 Functional analysis of the ACT domain of ACTPK1, the negative regulator for ammonium uptake into rice roots

Mako Uchino[1], Marcel Pascal Beier[2], Jin Ishizawa[1], Toshihiko Hayakawa[1] ([1]Grad. Sch. Agri. Sci., Tohoku Univ., [2]Grad. Sch. Sci., Hokkaido Univ.)

PF-015 Phenotypic and transcriptomic characterization of rice introgression lines in response to nitrogen stress

Bright Adu[1,2], Argete Aizelle[1], Yoshihiro Ohmori[1], Toru Fujiwara[1] ([1]Lab of Plant Nutrition, Univ. Tokyo, [2]Intl Prog. in Agric. Devt Studies (IPADS))

PF-016 Analysis of intracellular localization of phosphatidic acid phosphohydrolases during phosphate starvation in Arabidopsis

Hiroyasu Ito, Yuta Ihara, Hiroyuki Ohta, Mie Shimojima (School of Life Science and Technology, Tokyo Institute of Technology)

PF-017 Organic acids synthesis of *Synechocystis* sp. PCC 6803 under different spectral lights

Masakazu Toyoshima[1,2], Yoshihiro Toya[2], Hiroshi Shimizu[2] ([1]Grad. Sch. Eng., Kobe Univ., [2]IST, Osaka Univ.)

PF-018 Cross-species comparison of sulfur deficiency responsive genes in plants

Mutsumi Watanabe, Aiko Yamagiwa, Ryo Tsukada, Takayuki Tohge (NAIST)

PF-019 Analysis of sugar alcohol components in immature male strobili of Japanese cedar

Tomohiro Igasaki[1], Shojiro Hishiyama[2], Koh Hashida[2], Koichi Kakegawa[2] ([1]Dept For Mol Genet Biotech, FFPRI, [2]Dept For Res Chem, FFPRI)

■ Secondary (specialized) metabolism

PF-020 Search for γ-oryzanol biosynthetic gene from rice

Tamami Kumagai[1], Miyu Asari[1], Ange Yan[1], Karin Uruma[1], Wakako Tsuzuki[2], Kentaro Yano[1], Tetsuo Kushiro[1] ([1]Grad. Sch. Agri., Meiji Univ., [2]Home Econ., Tokyo Kasei Univ.)

PF-021 Analysis of chemical diversity of methoxylated-flavonoids and the genes encoding flavonoid-*O*-methyltransferases

Yuting Liu, Takayuki Tohge (Grad. Sch. Sci., Tech., NAIST)

PF-022 Estimation of Optimal UV Light Intensity and wavelength for Production of the Pharmaceutical Drug Components, Vinblastine, Contained in *Catharanthus roseus* (L.) G. Don

Tatsuki Hanyu, Keiko Ohashi (Kaneko) (Grad. Sch. Agr., Univ. tamagawa)

PF-023 Genetic transformation of *Eucalyptus camaldulensis* to suppress hydrolyzable tannin biosynthesis

Ko Tahara, Mitsuru Nishiguchi (Forestry and Forest Products Research Institute)

PF-024 Initiation process of Monoterpneoid indole alkaloid biosynthesis during seed germination in *Catharanthus roseus*

Mai Uzaki[1,2], Kotaro Yamamoto[3,4], Amit Rai[2], Akio Murakami[5], Miwa Ohnishi[6], Chizuko Shichijo[5], Kimitsune Ishizaki[5], Hidehiro Fukaki[5], Sarah O'Connor[4], Tetsuro Mimura[7,8], Masami Yokota Hirai[1,2] ([1]Grad. Sch. Bioagric. Sci., Nagoya Univ., [2]RIKEN CSRS, [3]Grad. Sch. Pharm. Sci., Chiba Univ., [4]Dept. Nat. Prod. Bio., MPI, [5]Grad. Sch. Sci., Kobe Univ., [6]Grad. Sch. Sci., Kyoto Univ., [7]Col. Biosci. Biotech., National Cheng Kung Univ., [8]Grad. Sch. Agricul. Life Sci., UTokyo)

■ Biomembrane/Ion and solute transport

PF-025 Enzymatic characteristics and tissue distribution of cactus vacuolar membrane H^+-pyrophosphatase

Ryosuke Sato[1,2], Takumi Ando[1], Yuichiro Yoshida[1], Takamasa Suzuki[1], Kaoru Sanda[1], Takanori Horibe[1], Takashi Tsuge[1], Natsuki Takada-Tanaka[3], Masayoshi Maeshima[1] ([1]Col. Biosci. Biotech., Chubu Univ., [2]Forest BioRes. Cent., [3]Grad. Sch. Bioagr., Nagoya Univ.)

PF-026 Cell Type-Specific Functional Analysis of Sodium Ion Transporter SOS1 in Roots

Takaaki Ogura[1], Mio Nagoya[1], Ryohei Sugita[2], Natsuko I. Kobayashi[1], Tomoko M. Nakanishi[1,3], Keitaro Tanoi[1] ([1]Grad. Sch. Agr. Life Sci., Univ. Tokyo, [2]Radioisotope Res. Cent., Nagoya Univ., [3]Hoshi Univ.)

PF-027 Mutagenesis Analysis of Arabidopsis Magnesium Ion Transporter AtMRS2-1

Xiaoyu Yang[1], Natsuko I. Kobayashi[1], Yoshiki Hayashi[2], Koichi Ito[2], Motoyuki Hattori[3], Yoshitaka Moriwaki[1], Keitaro Tanoi[1] ([1]Grad. Sch. Agr. Life Sci., Utokyo, [2]Grad. Sch. Front. Sci., Utokyo, [3]Sch. Life Sci., Fudan Univ.)

PF-028 The possibility that the arrangement of vascular bundle at the site of adventitious root emergence in common reed contributes to prevention of Na translocation

Kyoko Higuchi, Mikiya Obara, Akihiro Saito, Takuji Ohyama (Tokyo Univ. Agr.)

PF-029 SIET4 is required for cell-specific deposition of Si in rice

Namiki Mitani-Ueno[1], Naoki Yamaji[1], Yuuma Yoshioka[2], Takaaki Miyaji[2,3], Jian Feng Ma[1] ([1]IPSR, Okayama Univ., [2]Grad. Sch. Med., Dent. & Pharm. Sci., Okayama Univ., [3]Adv. Sci. Res. Ctr., Okayama Univ.)

PF-030 Controls of the water transport activities of *Arabidopsis* tonoplast intrinsic proteins 3, AtTIP3s

Shigeko Utsugi, Maki Katsuhara (IPSR, Okayama Univ.)

■ Membrane trafficking

PF-031 Analysis of intracellular localization of *Arabidopsis thaliana* VAMP714

Tomoko Eguchi[1], Sae Endo[1], Emi Ito[2], Akihiko Nakano[3], Tomohiro Uemura[1] ([1]Graduate School of Humanities and Sciences, Ochanomizu Univ, [2]Institute for Human Life Innovation, Ochanomizu Univ., [3]Live Cell Super-Resolution Imaging Research Team, RIKEN Center for Advanced Photonics.)

PF-032 Analysis of functions and subcellular localization of novel *Arabidopsis thaliana* TGN-localized protein family

Natalia Julia Rzepecka, Emi Ito, Yoko Ito, Tomohiro Uemura (Graduate School of Humanities and Sciences Ochanomizu University)

■ Organelles/Cytoskeleton

PF-033 Defects in Organelle DNA degradation suppress early senescence phenotype in *atg* mutant

Tsuneaki Takami, Islam Md. Faridul, Wataru Sakamoto (Inst. Plant Sci. Res., Okayama Univ.)

PF-034 The search for chloroplast proteins involved in new pest and pathogen resistance

Yohei Matsunaga, Hiromi Kozen, Atsushi Kasai, Hisae Hirata, Reiko Motohashi (Grad. Sch. Inte. Sci. and Tech., Shizuoka Univ.)

PF-035 [Cancelled]

PF-036 Diversity and similarity of light-dependent nuclear positioning in land plants

Kosei Iwabuchi[1], Hiroki Yagi[2], Kenta Moriya[3], Nanaka Oki[2], Reina Yokohata[2], Asami Nakata[2], Saya Hiromoto[2], Aino Komatsu[4], Yuuki Sakai[5], Tomoo Shimada[3], Shingo Takagi[6], Ryuichi Nishihama[7], Takayuki Kohchi[8], Yo-hei Watanabe[2], Haruko Ueda[2], Ikuko Hara-Nishimura[2] ([1]Fac. Med., Osaka Med. Pharm. Univ., [2]Fac. Sci. Eng., Konan Univ., [3]Grad. Sch. Sci, Kyoto Univ., [4]Grad. Sch. Life Sci., Tohoku Univ., [5]Grad. Sch. Sci., Kobe Univ., [6]Grad. Sch. Sci., Osaka Univ., [7]Fac. Sci. Technol., Tokyo Univ. Sci., [8]Grad. Sch. Biostudies, Kyoto Univ.)

PF-037 Asymmetric division in the spore of *Marchantia polymorpha*

Yuuki Sakai, Yuki Kondo, Hidehiro Fukaki, Kimitsune Ishizaki (Grad. Sch. Sci., Kobe Univ.)

PF-038 Equal tranmission of cp nucleoids based on the phase transition

Yoshiki Nishimura[1], Takashi Hamaji[2], Yusuke Kobayashi[3], Mari Takusagawa[1], Toshiharu Shikanai[1] ([1]Lab of Plant Mol Genet., Dep of Bot, Kyoto Univ., [2]Res. & Dev. Initiative, Chuo Univ., [3]Grad. Sch. of Sci. & Eng., Ibaraki Univ.)

■ Cell wall

PF-039 Possible involvement of the ROS-producing enzyme Rbohs in the cell wall integrity and cross-linking of cell wall glycoproteins, classical extensins, in *Marchantia polymorpha*

Kenji Hashimoto, Mariko Higashijima, Yuto Yamashita, Naoaki Abe, Sachi Shirato, Kazuyuki Kuchitsu (Dept. Appl. Biol. Sci., Tokyo Univ. of Science)

PF-040 Involvement of auxin in ROS production during tissue reunion of *Arabidopsis* incised stem

Tatsuya Yamazaki[1], Jiuyi Li[2], Masashi Asahina[3,4], Kazuyuki Kuchitsu[5], Shinobu Satoh[6] ([1]Grad. Sch. Life and Earth Sci., Univ. Tsukuba, [2]Grad. Sch. Life and Environmental Sci., Univ. Tsukuba, [3]Dep. of Biosci., Teikyo Univ., [4]Advanced Instrumental Analysis center, Teikyo Univ., [5]Dep. Applied Biological Sci., Tokyo Univ. Sci., [6]Faculty of Life and Environmental Sci., Univ. Tsukuba)

PF-041 Effects of suppression of KDO biosynthesis in Arabidopsis

Shun Suzuki, Toshiro Shimizu, Kentaro Ifuku, Toru Matoh, Masaru Kobayashi (Graduate School of Agriculture, Kyoto University)

■ Cell cycle/Cell division

PF-042 Effect of chromosome polytenization on root growth in autopolyploid series of *Arabidopsis thaliana*

Suzuka Kikuchi[1], Takuya Sakamoto[2], Sachihiro Matsunaga[3], Munetaka Sugiyama[4], Akitoshi Iwamoto[1,5] ([1]Grad. Sch. Sci., Kanagawa Univ., [2]Fac. Sci. and Tech., Tokyo Univ. Sci., [3]Grad. Sch. Frontier Sci., Univ. Tokyo, [4]Grad. Sch. Sci., Univ. Tokyo, [5]Fac. Sci., Kanagawa Univ.)

PF-043 Analysis of SOG1 mutant responses to DNA-damaging reagents by QuBAREY (quantitative PCR-based Arabidopsis root DNA-damage assay)

Shimpei Uraguchi, Maho Suzuki, Natsuho Tamaru, Risa Todoroki, Masakazu Sato, Yuka Ohshiro, Ryosuke Nakamura, Yasukazu Takanezawa, Masako Kiyono (Sch. Pharm., Kitasato Univ.)

PF-044 Identification of novel inner nuclear membrane protein

Yoshiki Akiyama[1], Mio Shibuta[2], Yuki Sakamoto[3], Yayoi Inui[1], Takuya Sakamoto[4], Sachihiro Matsunaga[1] ([1]Dept. of Integr. Biosci., Grad. Sch. of Front. Sci., Univ. of Tokyo, [2]Fac. Sci., Univ. Yamagata, [3]Dept. of Biosci., Grad. Sch. of Sci., Univ. of Osaka, [4]Dept. of Appl. Biol. Sci., Fac. of Sci. and Tech., Tokyo Univ. of Sci.)

■ Vegetative growth

PF-045 Cloning and functional analyses of *SET* gene whose loss-of-function suppresses *det3-1* flowering stem dwarfism

Shizuka Gunji[1], Ryosuke Kizu[1,2], Hiromu Kimura[1], Reina Hashimoto[1], Natsuko Ishizuki[1], Mao Ichikawa[1], Tamae Motoike[1], Hiroyuki Koga[3], Kenya Hanai[1], Tomonari Hirano[4], Yusuke Kazama[5], Tomoko Abe[6], Nobutaka Mitsuda[7], Gorou Horiguchi[8,9], Shinichiro Sawa[10], Hirokazu Tsukaya[3], Ali Ferjani[1] ([1]Dept. Biol., Tokyo Gakugei Univ., [2]Grad. Sch. Art Sci., Univ. Tokyo, [3]Grad. Sch. Sci., Univ. Tokyo, [4]Fac. Agr., Miyazaki Univ., [5]Fac. Biosci. Biotech. Fukui Prefec. Univ., [6]RIKEN Nishina Center, [7]AIST, [8]Dept. Life Sci., Rikkyo Univ., [9]Res. Ctr. Life Sci., Rikkyo Univ., [10]Fac. Adv. Sci. Technol., Kumamoto Univ.)

PF-046 Analysis of the vegetative reproduction in the hornwort *Anthoceros angustus*

Hidemasa Suzuki, Junko Kyozuka (Laboratory of Plant Development, Graduate School of Life Sciences, Tohoku University)

PF-047 Roles of cell layer-specific autophagy in Arabidopsis root cap detachment

Tatsuaki Goh[1], Kaoru Sakamoto[1], Pengfei Wang[2], Byung-Ho Kang[2], Keiji Nakajima[1] ([1]Div. Biol. Sci., NAIST, [2]SKL, SLS, The Chinese University of Hong Kong)

PF-048 Analysis of a Novel Arabidopsis Mutant Showing Abnormalities in Root and Shoot Development

Ryoko Muraoka, Yuki Kondo, Kimitsune Ishizaki, Hidehiro Fukaki (Grad. Sch. Sci., Kobe Univ.)

PF-049 Analysis of the Arabidopsis Mutants Showing Altered Response to the TOLS2 Peptide, an Inhibitor of Lateral Root Formation

Nanako Maehara[1], Akihito Mamiya[1], Chieko Goto[1], Tatsuaki Goh[2], Yuki Kondo[1], Kimitsune Ishizaki[1], Tetsuro Mimura[1,3,4], Hidehiro Fukaki[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]Div. Biol. Sci., NAIST, [3]Grad. Sch. Agri. Life Sci., Univ. Tokyo, [4]Col. Biosci. Biotech., National Cheng Kung Univ.)

PF-050 Analysis of the Regulatory Mechanisms of Root Growth and Development via the K^+ Efflux Channel GORK

Daisuke Ide[1], Riku Nishimaru[1], Yuka Aoki[1], Koichi Toyokura[1,2], Tatsuaki Goh[1,3], Tetsuro Mimura[1,4,5], Yuki Kondo[1], Kimitsune Ishizaki[1], Hidehiro Fukaki[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]Grand Green Co., Ltd., [3]Div. Biol. Sci., NAIST, [4]Grad. Sch. Agric. Life Sci., Univ. Tokyo, [5]Col. Biosci. Biotech., National Cheng Kung Univ.)

PF-051 Functional analysis of the gene responsible for the *ghost white* mutant which has white fruit at the immature (green color) stage

Katsuyuki Nakamura[1], Yuji Kinjo[1], Chikako Fukasawa[1], Xiaonan Xie[2], Reiko Motohashi[1] ([1]Grad. Sch. Inte. Sci. and Tech., Univ. Shizuoka, [2]Cent. for Bio. Res. and Edu., Unv. Utsunomiya)

PF-052 Analysis of Natural Allelic Variation Loci that Control the Capacity of *Arabidopsis thaliana* Seeds to Germinate at High Temperatures

Kaho Nagata, Naoto Kawakami (Grad. Sch. Agri., Meiji Univ.)

PF-053 Screening and analysis of germination-promoting compounds using *htl* loss-of-function mutant seeds in *Arabidopsis thaliana*

Nanami Aoki[1], Yuka Furuna[1], Toshinori Kinoshita[2,3], Ayumu Kondo[1], Shigeo Toh[1] ([1]Agri., Meijo Univ., [2]Grad. Sch. Sci., Nagoya Univ., [3]WPI-ITbM, Nagoya Univ.)

PF-054 The developmental analysis of *Cuscuta* root: how to be a vestigial structure?

Momoko Tobinai, Mariko Asaoka, Toshiya Yokoyama, Kazuhiko Nishitani (Kanagawa Uni., Dept. of Biol. Sci.)

PF-055 Abscisic acid suppresses PD formation in the moss *Physcomitrium patens*

Chiyo Jinno[1], Tomomichi Fujita[2] ([1]Grad. Sch. Life Sci., Univ. Hokkaido, [2]Fac. Sci., Univ. Hokkaido)

PF-056 Mathematical model analysis of costoid phyllotaxis and examination of the model validity

Takaaki Yonekura, Munetaka Sugiyama (Grad. Sch. Sci., Univ. Tokyo)

■ Reproductive growth

PF-057 Functional analysis of MpBZR3 on the regulation of gametangia development in *Marchantia polymorpha*

Tomoyuki Furuya[1], Shohei Yamaoka[2], Kimitsune Ishizaki[1], Ryuichi Nishihama[2,3], Takashi Araki[2], Takayuki Kohchi[2], Hiroo Fukuda[4], Yuki Kondo[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]Grad. Sch. Biostudies, Kyoto Univ., [3]Fac. Sci. Tech., Dept. Appl. Biol. Sci., Tokyo Univ., [4]Fac. Bioenv. Sci., KUAS)

PF-058 Analysis of unknown inflorescence structure "double ridge" in by 3D imaging and laser microdissection-RNA-seq

Nao Sato[1], Jun Ito[1], Yuko Nomura[1], Midori Sugimura[1], Noriko Takeda-Kamiya[2], Kiminori Toyooka[2], Hiroyuki Tsuji[1] ([1]KIBR, Yokohama City Univ., [2]CSRS, RIKEN)

PF-059 Analysis of RopGEFs in Arabidopsis pollen tube growth and guidance

Nozomi Naiki[1], Tetsuya Higashiyama[1,2,3], Hidenori Takeuchi[2,4] ([1]Grad. Sch. Sci., Nagoya Univ., [2]ITbM, Nagoya Univ., [3]Grad. Sch. Sci., Univ. Tokyo, [4]Inst. Adv. Res., Nagoya Univ.)

PF-060 Functional analysis of a gene encoding EF-hand protein, Mp*CAPS*, in the sperm chemotaxis in *Marchantia polymorpha*

Mizuki Morita, Katsuyuki Yamato (BOST, Kindai Univ.)

PF-061 *Oryza sativa* ELONGATION OF SILIQUES WITHOUT POLLINATION 1 and 2 play the roles in regulation of ovary enlargement and the accumulation of nutrient in rice

Kaori Nagawa-Miyawaki[1], Saku Kijima[1], Riho Shirahama[1,3], Shingo Sakamoto[1], Miho Ikeda[2], Hironori Takasaki[2], Masaru Ohme-Takagi[2], Nobutaka Mitsuda[1], Yoshimi Oshima[1] ([1]Bioprod. Res. Inst., AIST, [2]Grad. Sch. of Sci. and Eng., Saitama Univ., [3]Dep. BioEng., Nagaoka Univ. Tech)

■ Plant hormones/Signaling molecules

PF-062 Identification and characterization of a gene for cell wall-localized cytokinin activating enzyme in *Oryza sativa*

Mikiko Kojima[1,2], Nobue Makita[1], Alicia Surjana[2], Tokunori Hobo[3], Toru Kudo[1], Tsuyu Ando[4,5], Ayahiko Shoumura[4,5], Toshio Yamamoto[5,6], Hitoshi Sakakibara[2] ([1]CSRS., RIKEN, [2]Grad. Sch. Bioagri. Sci., Nagoya Univ, [3]Biosci. Biotec. Ctr., Nagoya Univ., [4]STAFF Inst, [5]NARO, [6]IPSR., Okayama Univ)

PF-063 Analysis of ABA/osmostress-dependent SnRK2 activation through B-RAF in *Physcomitrium patens*

Naoya Kohara[1], Tsukasa Toriyama[1], Izumi Yotsui[1], Teruaki Taji[1], Daisuke Takezawa[2], Yoichi Sakata[1] ([1]Dept Bioscience, Tokyo Univ. Agric., [2]Grad. Sch. Sci and Eng., Univ. Saitama)

PF-064 What is wounding stress? Relationship between regeneration and pattern recognition receptors in *Arabidopsis*

Yosuke Sasai[1,2], Akira Iwase[2,3], Keiko Sugimoto[1,2] ([1]Univ. Tokyo, Dep. Biol. Sci., [2]RIKEN, CSRS, [3]JST, PRESTO)

PF-065 Chemical and physiological analyses in the Arabidopsis mutant for key enzyme genes in abscisic acid biosynthesis

Minami Nakano[1], Naoto Kawakami[2], Masanori Okamoto[1] ([1]Utsunomiya Univ., [2]Meiji Univ.)

PF-066 *BSH2* is a novel gene involved in brassinosteroid signaling to promote plant growth and drought stress resistance

Rina Su[1], Ayumi Yamagami[1], Tomoko Miyaji[2], Masaaki Sakuta[3], Tadao Asami[4], Kazuo Shinozaki[2], Takeshi Nakano[1] ([1]Grad. Bios., Univ. Kyoto, [2]RIKEN·CSRS, [3]Grad., Univ. Ochanomizu, [4]Dept. Appl. Biol. Chem., Univ. Tokyo)

■ Photoreceptors/Photoresponses

PF-067 Analyses of N-terminal intrinsically disordered region of phytochrome B in Arabidopsis

Tomoya Miura[1], Takahito Takei[1,2], Nobuyuki Shiina[3], Akira Nagatani[4], Takahiro Hamada[1,5] ([1]Grad. Sch. Sci., Okayama Univ. Sci., [2]Grad. Sch. Sci., Univ. Tokyo, [3]NIBB, [4]Grad. Sch. Sci., Kyoto Univ., [5]JST PRESTO)

PF-068 Screening for novel factors involved in phototropin responses by using an artificial microRNA-based approach

Rio Matsumoto, Ryoko Hujii, Arisa Mifuji, Atsushi Takemiya (Grad. Sch. Sci. Tech. Innov., Yamaguchi Univ.)

PF-069 The phosphorylation status of NONPHOTOTROPIC HYPOCOTYL3 affects hypocotyl phototropism in Arabidopsis

Tatsuya Sakai[1], Tarou Kimura[1], Ken Haga[2] ([1]Grad. Sch. Sci. & Tech., Niigata Univ., [2]Fund. Eng., Nippon Inst. Tech.)

■ Flowering/Clock

PF-070 Functional analysis of *cis*-elements involved in the regulation of gene expression in *Arabidopsis FT* genes using a novel SpCas9-NGv1

Mayuka Yamamoto[1], Akito Yoshida[1], Katsuya Negishi[2], Natsumi Ono[1], Mitsutomo Abe[3], Seiichi Toki[2,4], Kappei Kobayashi[1], Hidetaka Kaya[1] ([1]Fac. Agri., Ehime Univ, [2]Inst. Agrobiol. Sci., NARO, [3]Grad. Sch. Arts Sci., Univ. Tokyo, [4]Dept. Plant Life Sci., Fac. Agri., Ryukoku Univ)

PF-071 Analysis of the genetic loci with G x E interaction effects on flowering time in *Lotus japonicus*

Ayumu Waku[1], Tomomi Wakabayashi[2], Shusei Sato[1] ([1]Grad. Sch. Lif. Sci., Univ. Tohoku, [2]Grad. Sch. Sci. Tech., NAIST)

PF-072 Elucidation Of Tissue-Specific Functions Of Circadian Clock Components

Shunichiro Ohata, Nozomu Takahashi, Akane Kubota, Motomu Endo (Div of Bioscience, NAIST)

PF-073 Circadian clocks in fast dividing cyanobacteria

Keiko Imai[1], Hikari Kunihiro[2], Sunao Tominaga[2], Hiroshi Ito[2] ([1]Cell Biology Kansai Med. Univ., [2]Labolatory for Biological Rhythms, Kyushu University)

PF-074 Phenological analysis of transgenic Japanese cedar over-expressing clock genes

Mine Nose[1], Ken-ichi Konagaya[2], Manabu Kurita[1], Yuko Yasuda[1] ([1]Forest Tree Breeding Center, FFPRI, [2]Forest Bio-Research Center, FFPRI)

■ Environmental responses A

PF-075 Molecular regulatory mechanism of the Rboh-mediated ROS production by Ca^{2+} binding and phosphorylation, and its physiological significance and evolution in land plants

Takafumi Hashimoto[1], Kenji Hashimoto[1], Takuya Miyakawa[2], Masaru Tanokura[2], Kazuyuki Kuchitsu[1] ([1]Dept. Appl. Biol. Sci., Tokyo Univ. of Sci., [2]Dept. Appl. Biol. Chem., Univ. of Tokyo)

PF-076 Physiological significance of pyridine nucleotides metabolism by Nudix hydrolases in Arabidopsis

Momoko Ueki[1], Takanori Maruta[1], Takahiro Ishikawa[1], Kazuya Yoshimura[2], Shigeru Shigeoka[3], Takahisa Ogawa[1] ([1]Dept. Life Sci. Biotechnol., Fac. Life Environ. Sci., Shimane Univ, [2]Dept. Food Nutr. Sci., Coll. Biosci. Biotech., Chubu Univ, [3]Exp. Farm, Kindai Univ.)

PF-077 Measurement ROS activity by luminol-based assay in *Nicotiana benthamiana*, Arabidopsis and turnip

Lalita Jantean[2], Kentaro Okada[1], Ken-ichi Kurotani[1], Michitaka Notaguchi[1,2,3] ([1]Bioscience and Biotechnology Center, Univ. Nagoya, [2]Graduate School of Bioagricultural Sciences, Univ. Nagoya, [3]Institute of Transformative Bio-Molecules, Univ. Nagoya)

PF-078 Localization of LZY3 on the plasma membrane is crucial for the gravity signal transduction in roots

Hiromasa Shikata, Miyo T. Morita (National Institute for Basic Biology)

PF-079 Stress-responsive rapid long-distance signaling involving Ca^{2+}, ROS and electrical signals in *Marchantia polymorpha*

Kenshiro Watanabe, Kota Hasegaea, Yuki Kamiya, Hiroki Shindo, Kenji Hashimoto, Kazuyuki Kuchitsu (Dept. Appl. Biol. Sci., Tokyo Univ. of Sci.)

PF-080 A new method mimicking hard soil to apply mechanical stimulation on Arabidopsis roots

Takashi Okamoto, Hiroyasu Motose, Taku Takahashi (Grad. Sch. Nat. Sci and Tech, Okayama Univ.)

■ Environmental responses B

PF-081 Comprehensive analysis of gene expression and metabolite changes in response to drought stress in wheat

Yuanjie Weng[1], June-Sik Kim[2], Ryosuke Mega[3], Hisashi Tsujimoto[4], Masanori Okamoto[1] ([1]Utsunomiya Univ., [2]RIKEN·CSRS, [3]Yamaguchi Univ., [4]Tottori Univ.)

PF-082 Functional analysis of MBD10 in the abscisic acid response of Arabidopsis thaliana

Yangdan Li, Fuko Minegishi, Yuki Tamura, Mizuki Saigusa, Kota Yamasita, Sotaro Katagiri, Yoshiaki Kamiyama, Taishi Umezawa (BASE, Tokyo Univ. Agric. Tech.)

PF-083 Comparative phosphoproteomic analysis using *abi1-1* mutants of Arabidopsis thaliana in ABA response

Kota Yamashita, Mizuki Saigusa, Taishi Umezawa (BASE, Tokyo Univ. Agric. Tech.)

PF-084 Subcellular localization analysis of ARK encoding a B-RAF essential for ABA/osmostress responses of *Physcomitrium patens*

Yuko Ikeda[1], Tsukasa Toriyama[1], Daisuke Takezawa[2], Izumi Yotsui[1], Teruaki Taji[1], Yoichi Sakata[1] ([1]Dept. of Bioscience, Tokyo Univ. Agric., [2]Grad. Sch. Sci and Eng., Univ. Saitama)

PF-085 Screening Of Marine Red Macroalga, *Pyropia Yezoensis*, Genes Involved In Potassium And Sodium Homeostasis

Ayako Miya[1], Eri Adams[2], Ryoung Shin[1] ([1]RIKEN CSRS Environmental Response Research Unit, [2]Galdieria, Co., Ltd.)

PF-086 A role of a receptor kinase FERONIA in responses to low boron in *Arabidopsis thaliana*

Miko Yamazawa, Kyoko Miwa (Grad. Sch. of Environ. Sci., Hokkaido Univ.)

PF-087 Diversity of FEP/IMA Genes across Higher Plants

Aleksandr Sorokin[1,2], Takashi Hirayama[1,2] ([1]Graduate School of Environmental and Life Science, Okayama Univ., [2]Institute of Plant Science and Resources, Okayama Univ.)

PF-088 The expression of barley *CISP* genes is induced in the excessive heavy metal stress condition

Shin-ichiro Kidou[1,2], Mengchao Ying[1,3] ([1]Grad. Sch. of Sci., Nagoya City Univ., [2]Research Center for Biological Diversity, Nagoya City Univ., [3]Chinease Center for Disease Control and Prevention)

PF-089 Role of mitochondrial RNA editing in heavy metal tolerance in *Arabidopsis thaliana*

Fumiaki Asahi, Koki Misawa, Riho Sawai, Izumi Yotsui, Teruaki Taji, Yoichi Sakata (Dept. of Bioscience Tokyo Univ. of Agriculture)

■ Environmental responses C

PF-090 Relationships between heat shock proteins and translational regulation under heat stress condition

Mei Ichikawa[1], Yukiko Yamamoto[1], Hiroko Iwanaga[1], Akie Miura[1], Takahito Takei[1,2], Yuichiro Watanabe[3], Takahiro Hamada[1,4] ([1]Fac. Sci., Okayama Univ. Sci., [2]Grad. Sch. Sci., Univ. Tokyo, [3]Grad. Sch. Arts and Sci., Univ. Tokyo, [4]JST PRESTO)

PF-091 A novel prolonged-cold responsive promoter regulates gene expression via H3K27me3

Hanako Shimizu[1], Haruki Nishio[2], Hiroshi Kudoh[1] ([1]CER, Kyoto Univ., [2]DS Center, Shiga Univ.)

PF-092 Cytosolic pH homeostasis protects guard cells from SO_2-induced cell death

Lia Ooi[1,2], Sophie Filleur[3], Izumi C. Mori[1] ([1]Institute of Plant Science and Resources, Okayama University, [2]Hayashibara Co., Ltd. / NAGASE Group, [3]Institute of Integrative Biology of the Cell (I2BC), CNRS, Gif sur Yvette – France)

PF-093 Structural comparison of MsbA homologs of *Synechocystis* sp. PCC6803

Sato Kashiwagi[1], Ayumi Matsuhashi[2], Kengo Matsushima[3], Junji Uchiyama[1,2,4], Hisataka Ohta[1,2,4] ([1]Tokyo Univ. of Sci., Grad. Sch. of Sci., Dep. of Math. and Sci. Edu., [2]Tokyo Univ. of Sci., Grad. Sch. of Math. And Sci. Edu., Dep. of Math. And Sci. Edu., [3]Tokyo Univ. of Sci., Fac of Sci., Dep. of Chem., [4]Tokyo Univ of Sci., Inst. of Arts and Sci.)

PF-094 Possible involvement of Arabidopsis *WAK* (wall-associated kinase) in low-calcium response

Shuichi Hashimoto, Yusuke Shikanai, Takehiro Kamiya, Toru Fujiwara (Grad. Sch. Agri. Life Sci., UTokyo)

PF-095 Reduction of carotenoid accumulation suppressed cell growth of *Euglena gracilis* under the dark condition as well as under the light condition

Yuki Koshitsuka[1], Shun Tamaki[2], Takeyuki Maruyama[3], Tomonori Utsuka[3], Hyota Kikuchi[3], Koji Miyamoto[1,3], Kengo Suzuki[2,4], Keiichi Mochida[2,5], Tomoko Shinomura[1,3] ([1]Grad. Sci. Eng., Teikyo Univ., [2]RIKEN BZP, [3]Sch. Sci. Eng., Teikyo Univ., [4]euglena Co., Ltd., [5]RIKEN CSRS)

PF-096 AraR is involved in the mechanism of reactive oxygen species (ROS) scavenging in *Synechocystis* sp. PCC6803

Yuka Kakegawa[1], Ayami Nakahara[1], Junji Uchiyama[1,2], Hisataka Ohta[1,2] ([1]Dept. of Math. and Sci. Edu., Grad. Sch. of Sci., Tokyo Univ. of Sci., [2]Dept. of liberal arts Edu., Tokyo Univ. of Sci.)

PF-097 Atmospheric NO_2 suppresses the transcriptional activity of PIF4 to suppress hypocotyl elongation in Arabidopsis

Misa Takahashi, Atsushi Sakamoto, Hiromichi Morikawa (Grad. Sch. of Int. Sci. for Life, Hiroshima Univ.)

PF-098 Functional analysis of rice SOG1 and SOG1-like transcription factors involved in DNA damage response

Ayako Nishizawa-Yokoi[1], Ritsuko Motoyama[1], Tsuyoshi Tanaka[2], Akiko Mori[1], Keiko Iida[1], Seiichi Toki[1,3,4] ([1]NIAS, NARO, [2]NAAC, NARO, [3]Grad. Sch. Nanobioscience, Yokohama City Univ., [4]Fac. Agric., Ryukoku Univ.)

■ Plant-organism interaction A

PF-099 Single-cell RNA sequencing of inner tissues of Arabidopsis identifies the rare cell types myrosin and glucosinolate-producing cells

Taro Maeda[1], Shigeo Sugano[2], Makoto Shirakawa[3], Satoshi Kondo[4], Atsushi J. Nagano[1,5] ([1]IAB, Keio Univ., [2]Life Sci. and Biotech., AIST, [3]Grad. Sch. of Sci. and Tech., NAIST, [4]Agri. and Biotech. Biz. Div., Toyota Motor Co., [5]Fac. of Agri, Ryukoku Univ.)

PF-100 Characterization of honeydew-associated microbes of brown planthoppers and their role in rice defense

David Wari, Yuko Hojo, Akio Tani, Tomonori Shinya, Ivan Galis (Inst. Plant Sci. & Res., Okayama Univ.)

PF-101 Identification of novel transcription factors affecting plant growth negatively during the defense responses

KwiMi Chung, Masaru Ohme-Takagi, Nobutaka Mitsuda (Bioprod. Res. Inst., AIST)

PF-102 Analysis of a protein kinase mediating sugar responsive modulation of immunity in *Arabidopsis thaliana*

Linnan Jie[1], Miho Sanagi[1], Kohji Yamada[2], Shigetaka Yasuda[3], Yusuke Saijo[3], Junji Yamaguchi[4], Junpei Takagi[4], Takeo Sato[4] ([1]Grad. Sch. Life Sci., Hokkaido Univ., [2]Grad. Sch. Tech. Ind. Sco. Sci., Tokushima Univ., [3]Grad. Sch. Sci. Tech., NAIST, [4]Fac. Sci., Hokkaido Univ.)

PF-103 Function of novel effector RHIF from plant pathogenic bacteria, *Acidovorax avenae*, in the host or non-host plants

Minami Nakamura[1], Machiko Kondo[2], Honoka Omori[1], Hinata Tokuda[2], Fang-Sik Che[1,2,3] ([1]Grad. Sch. of Biosci., Nagahama Inst. of Bio-sci and Tech., [2]Dept. of Bio-sci., Nagahama Inst. of Bio-sci and Tech., [3]GERI, Nagahama Inst. of Bio-sci and Tech.)

■ Plant-organism interaction B

PF-104 Hyphal Branching Activity of Monoterpene Glycosides Produced in Gibberellin-Treated *Eustoma grandiflorum* Roots for *Rhizophagus irregularis*

Takaya Tominaga[1], Kotomi Ueno[2], Katsushi Yamaguchi[3], Shuji Shigenobu[3], Hironori Kaminaka[2] ([1]United Grad. Sch. Agr., Tottori Univ., [2]Fac. Agr., Tottori Univ., [3]NIBB)

PF-105 Identification and functional analyses of growth-promoting bacteria in rice under nutrient deficiency

Shota Kido[1], Masako Fuji[1], Yusa Aritoshi[1], Shunsuke Imai[1], Yuniar Devi Utami[1], Taiyo Toriba[2], Junko Kyozuka[2], Kiwamu Minamisawa[2], Yusuke Saijo[1] ([1]Grad. Sch. Sci. and Tech., NAIST, [2]Grad. Sch. Life Sci., Univ. Tohoku)

PF-106 A study on the relationship between rhizosphere environment and plant growth using synthetic microbial community (SynCom)

Shinichi Yamazaki[1], Masaru Nakayasu[2], Yuichi Aoki[1], Akifumi Sugiyama[2] ([1]ToMMo, Univ. Tohoku, [2]RISH, Univ. Kyoto)

PF-107 Quantitative Analysis of Sodium, Potassium, and Cesium Contents in the Creeping Wood Sorrel in Fukushima: A Study on the Ecological Effects of Radioactive Contamination

Ko Sakauchi[1], Wataru Taira[2], Joji Otaki[3] ([1]Grad. Sch. Sci. Eng., Univ. Ryukyus, [2]Research Planning office, Univ. Ryukyus, [3]Fac. Sci., Univ. Ryukyus)

■ Epigenetic regulation

PF-108 Development of DNA Methylation Editing Technology Using CRISPR/Cas9 System in *Arabidopsis thaliana*

Shunya Hirata[1], Yuna Okawa[1], Yoko Ikeda[2], Hiro Takahashi[4], Taisuke Nishimura[3], Chiyoko Machida[5], Kappei Kobayashi[1], Hidetaka Kaya[1] ([1]Faculty of Agriculture, Ehime University, [2]IPSR, Okayama University, [3]Department of Bioengineering, Nagaoka University of Technology, [4]Faculty of Pharmaceutical Health, Kanazawa University, [5]Faculty of Applied Biology, Chubu University)

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

PF-109 Light Regulated Transcription Start Sites of *Heme Oxygenase 1* in *Arabidopsis thaliana*

Yingxi Chen[1], Kohji Nishimura[2], Yoshiharu Y Yamamoto[3], Takayuki Shimizu[1], Tatsuru Masuda[1] ([1]Grad. Sch. Arts Sci., Univ. Tokyo, [2]Fac. Life Envi. Sci., Univ. Shimane, [3]U. Grad. Sch. Agr., Univ. Gifu)

PF-110 Sucrose-induced post-transcriptional control of S_1 *bZIP* family genes in *Arabidopsis thaliana*

Yugo Honda[1], Shugo Sugawara[1], Hitoshi Onouchi[1], Satoshi Naito[1,2], Yui Yamashita[1] ([1]Grad. Sch. Agr., Univ. Hokkaido, [2]Grad. Sch. Life Sci., Univ. Hokkaido)

PF-111 Involvement of minor-type splicing in the nutrient-dependent regulation of plant growth

Kodai Ishibashi[1], Toshihiro Arae[1], Takeshi Yoshizumi[2], Yukio Kurihara[2], Takashi Kuromori[2], Minami Matsui[2], Misato Ohtani[1,2,3] ([1]Grad. Sch. Front. Sci., Univ. Tokyo, [2]RIKEN, CSRS, [3]Div. Biol. Sci., Grad. Sch. Sci. Tech., NAIST)

PF-112 Arabidopsis deadenylase AtCCR4 and RNA binding protein APUM5 are involved in the negative regulation of environmental stress-responsive genes

Hayato Iwamura[1], Kotone Morita[2], Toshihiro Arae[3], Yukako Chiba[2,4] ([1]Schl. Science, Hokkaido Univ., [2]Grad. Schl. Life Sci. Hokkaido Univ., [3]Grad. Schl. Front. Sci., Univ. Tokyo, [4]Fac. Sci., Hokkaido Univ.)

PF-113 Translational regulatory mechanism of an Arabidopsis nuclear-encoded transcript coding for two functional proteins

Kodai Nakao[1], Toshiya Kakiuchi[1], Masaki Ito[2], Yuji Nomoto[2], Hiro Takahashi[3], Yui Yamashita[1], Satoshi Naito[1], Hitoshi Onouchi[1] ([1]Grad. Sch. Agric., Hokkaido Univ., [2]Sch. Biol. Sci. Tech., Kanazawa Univ., [3]Sch. Med. Sci., Kanazawa Univ.)

PF-114 Translational regulation of an Arabidopsis polyamine synthase gene via a non-AUG-initiated uORF

Yuta Hiragori[1], Miharu Yasumuro[2], Noriya Hayashi[1], Shun Sasaki[1], Yui Yamashita[1], Satoshi Naito[1], Hitoshi Onouchi[1] ([1]Grad. Sch. Agr., Hokkaido Univ., [2]Sch. Agr., Hokkaido Univ.)

PF-115 Transcriptomics Of Wheat NAM Population And Its Parental Line

Yasuyuki Nomura[1], Shuhei Nasuda[2], Kentaro Shimizu[3,4], Atsushi J. Nagano[5,6] ([1]Res. Inst. Food Agri., Ryukoku University, [2]Grad. Sch Agri., Kyoto Univ., [3]Dept. Evol. Biol. Envir. Studies, Univ. Zurich, [4]Kihara Biol. Inst. Res., Yokohama City Univ., [5]Fac. Agri., Ryukoku Univ., [6]IAB, Keio Univ.)

PF-116 A model study for genome-wide *cis*-decoding with explainable deep learning in kiwifruit ripening responses

Eriko Kuwada[1], Koki Takeshita[2], Naoko Fujita[1], Seiichi Uchiha[2], Takashi Akagi[1,3] ([1]Grad. Sch. Environ. & Life Sci., Okayama Univ., [2]Dept. Adv. Info. Tech., Kyushu Univ., [3]JST-PRESTO)

■ New technology

PF-117 Development of a Vector System Capable of Expressing Two Genes in the Same Amount by Agroinfiltration

Yuya Yamada, Shoya Yokoyama, Takushi Hachiya, Tsuyoshi Nakagawa (Dep. Mol. Func. Genomics, Shimane Univ.)

PF-118 Observation of internal structure of Arabidopsis stem using micro X-ray CT and calculation of the second moment of inertia

Miyuki Nakata[1,2], Mao Nakao[1], Ryosuke Sano[1], Taku Demura[1,2] ([1]NAIST·BS, [2]NAIST·CDG)

PF-119 Development of cryopreservation protocol for a variety of duckweed meristems by V-cryo-plate method

Shogo Ito[1], Daisuke Tanaka[2], Tokitaka Oyama[1] ([1]Dept. Bot., Div. Biol. Sci., Grad. Sch. Sci., Kyoto Univ., [2]Research Center of Genetic Resources, NARO)

PF-120 Speed-up of plant genotyping using simple DNA extraction and cyclodextrin PCR

Yoichi Nakanishi[1], Terumi Kawashima[1], Mayuko Naganawa[1], Masayoshi Maeshima[1,2], Sumie Ishiguro[1] ([1]Gad. Sch. Bioagr. Sci., Nagoya Univ., [2]Grad. Sch. Biosci. Biotech., Chubu Univ.)

PF-121 Examination of conditions for plant regeneration from immature embryo tissues of Japanese beech tree *Fagus crenata*

Yasunori Ohmiya[1], Yoshihisa Hosoi[2] ([1]Forest Tree Breeding Center, FFPRI, Forest Research and Management Organization, [2]FFPRI, Forest Research and Management Organization)

■ Others

PF-122 RIKEN BRC provides the information of FOX lines through Exp-Plant Catalog

Satoshi Iuchi, Masatomo Kobayashi (RIKEN BRC)

PF-123 Transcriptome analysis of quick growth Mongolian plant *Chloris virgata*

Shintaro Kawabata[1], Bolortuya Byambajav[2], Ayumi Yamagami[1], Davaapurev Bekh-Ochir[2], Fuminori Takahashi[3], Komaki Inoue[3], Asaka Kanatani[3], Keiichi Mochida[3], Minoru Kumazawa[1], Kentaro Ifuku[1], Kazuo Shinozaki[3], Tadao Asami[4], Batkhuu Javzan[2], Takeshi Nakano[1] ([1]Grad. Sch. Sci., Univ. Kyoto, [2]National Univ. of Mongolia, [3]CSRS, Riken, [4]Grad. Sch. Sci., Univ. Tokyo)

Poster [PL]　2022. 3. 24　14:30-16:00

■ Photosynthesis

PL-001 Rapid and easy isolation of Chl *d*

Seiya Sakai[1], Yasuho Takashima[1], Kotaro Kobayashi[2], Iwane Suzuki[2], Masataka Nakazato[3], Hideaki Miyashita[4], Masami Kobayashi[1] ([1]Department of Materials Science, Univ. Tsukuba, [2]Faculty of Life and Environmental Sciences, Univ. Tsukuba, [3]Chlorophyll Laboratory, [4]Graduate School of Human and Environment Studies, Kyoto University)

PL-002 Development of a high-throughput photosynthesis measurement system

Nagisa Iwasaka[1], Jun Tominaga[2], Shunichi Takahashi[3], Ayato Sato[4], Toshinori Kinoshita[4], Atsushi Sakamoto[2], Hiroshi Shimada[2] ([1]Sch. Sci., Hiroshima Univ., [2]Grad. Sch. Life, Hiroshima Univ., [3]Tropical Center, Univ. Ryukyu, [4]ITbM, Nagoya Univ.)

PL-003 Cryo-EM structure of photosystem II monomer provides insights into the importance of *β*-carotene, SQDG and PsbO for the dimer formation

Huaxin Yu[1,2], Tasuku Hamaguchi[3], Yoshiki Nakajima[1], Koji Kato[1], Keisuke Kawakami[3], Fusamichi Akita[1,4], Koji Yonekura[3,5,6], Jian-Ren Shen[1] ([1]Research Institute for Interdisciplinary Science and Graduate School of Natural Science and Technology, Okayama University, 3-1-1 Tsushima Naka, Okayama 700-8530, Japan, [2]Department of Picobiology, Graduate School of Life Science, University of Hyogo, Hyogo 678-1297, Japan, [3]Biostructural Mechanism Laboratory, RIKEN SPring-8 Center, 1-1-1 Kouto, Sayo-cho, Sayo-gun, Hyogo 679-5148, Japan, [4]Japan Science and Technology Agency, PRESTO, 4-1-8 Honcho, Kawaguchi, Saitama 332-0012, Japan, [5]Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, 2-1-1 Katahira, Aoba-ku, Sendai 980-8577, Japan, [6]Advanced Electron Microscope Development Unit, RIKEN-JEOL Collaboration Center, RIKEN Baton Zone Program, 1-1-1 Kouto, Sayo, Hyogo 679-5148, Japan)

PL-004 Site-directed mutations at D1-R140 or D2-T231 interacting with one phosphatidylglycerol molecule (PG714) affect both acceptor and donor sides of PSII

Toshiyuki Shinoda[1], Yoshiki Tanase[1], Yuto Sugawara[2], Kaichiro Endo[3], Tatsuya Tomo[4], Jian-Ren Shen[5], Haruhiko Jimbo[3], Hajime Wada[3], Naoki Mizusawa[1,2,6] ([1]Fac. Biosci. Appl. Chem., Hosei Univ., [2]Grad. Sch. Sci. Eng., Hosei Univ., [3]Grad. Sch. Arts Sci., Univ. Tokyo, [4]Grad. Sch. Sci., Tokyo Univ. Sci., [5]RIIS, Okayama Univ., [6]Res. Micro-Nano Tech., Hosei Univ.)

PL-005 Studies on structure-function relationships between the Rieske/cyt*b* complex and *c*-type cytochromes in anaerobic green sulfur bacteria

Hiraku Kishimoto[1], Chihiro Azai[2], Risa Mutoh[3], Hideaki Tanaka[4], Yohei Miyanoiri[4], Genji Kurisu[4], Hirozo Oh-oka[1] ([1]Grad. Sch. Sci., Osaka Univ., [2]Col. Life Sci., Ritsumeikan Univ., [3]Fac. Sci., Fukuoka Univ., [4]Inst. Protein Res., Osaka Univ.)

PL-006 Effects of suppression of chloroplast triosephosphate isomerase on photosynthesis in rice

Yuji Suzuki[1], Keiki Ishiyama[2], Dong-Kyung Yoon[2], Yuki Takegahara-Tamakawa[1], Eri Kondo[2], Mao Suganami[2], Shinya Wada[3], Chikahiro Miyake[3], Amane Makino[2] ([1]Fac. Agr. Iwate Univ., [2]Grad. Sch. Agr. Sci. Tohoku Univ., [3]Grad. Sch. Agr. Sci. Kobe Univ.)

PL-007 Localization of FlpA and Identification of Its Interaction Factors for Regulation of the Light-dependent H^+ extrusion/uptake in the Cyanobacterium Synechocystis sp. PCC6803

Akane Echigo, Shinji Masuda (Department of Life Science & Technology., Tokyo Institute of Technology)

PL-008 Uphill energy transfer mechanism for photosynthesis in the Antarctic alga

Makiko Kosugi[1], Masato Kawasaki[2], Yutaka Shibata[3], Kojiro Hara[4], Shinichi Takaichi[5], Toshio Moriya[2], Naruhiko Adachi[2], Yasuhiro Kamei[6], Yasuhiro Kashino[7], Sakae Kudoh[8], Hiroyuki Koike[9], Toshiya Senda[2] ([1]Astrobiology Center, [2]High Energy Accelerator Res. Org. (KEK), [3]Grad. Sch. Sci., Tohoku Univ., [4]Grad. Biol. Production, Akita Pref. Univ., [5]Grad. Sch. Life Sci., Tokyo Univ. Agriculture, [6]Nat. Inst. Basic Biol. (NIBB), [7]Grad. Sch. Sci., Univ. Hyogo, [8]Nat. Inst. Polar Res., [9]Fac. Sci. Engineering, Chuo Univ.)

PL-009 A theoretical model of the far-red light absorbing photosystem I reaction center of a cyanobacterium *Acaryochloris marina* using chlorophyll *d* and construction of chlorophyll-exchange models

Akihiro Kimura[1], Hirotaka Kito[2], Toshimichi Aota[1], Tasuku Hamaguchi[3], Koji Yonekura[3], Keisuke Kawakami[3], Kyoko Shinzawa-Itoh[4], Natsuko Inoue-Kashino[4], Kentaro Ifuku[5], Yasuhiro Kashino[4], Eiki Yamashita[6], Shigeru Itoh[1] ([1]Physics, Grad Sch Sci, Nagoya Univ, [2]System Informatics, Kobe Univ, [3]RIKEN SPring-8 Center, [4]Grad Sch Science, Univ. Hyogo, [5]Grad Sch Agriculture, Kyoto Univ, [6]Grad Sch Sci, Osaka Univ)

■ Environmental responses of photosynthesis

PL-010 Characterization of cyclic electron transport by Delayed luminescence in *Arabidopsis*

So Yahagi[1], Masakazu Katsumata[2], Reiko Motohashi[1] ([1]Grad. Sch. Inte. Sci. and Tech., Shizuoka Univ., [2]Hamamatsu Photonics Co., Ltd.)

PL-011 Modification of excitation energy-transfer processes in *Euglena gracilis* strain Z under different light qualities

Yuki Sorihashi[1], Yoshifumi Ueno[1], Runa Sakamoto[2], Jian-Ren Shen[2,3], Ryo Nagao[3], Seiji Akimoto[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]Fac. Sci., Okayama Univ., [3]RIIS, Okayama Univ.)

PL-012 Time–course transcriptomic analysis of photosynthetic acclimation to submerged condition in an amphibious plant *Hygrophila difformis*

Genki Horiguchi, Naoki Hirotsu (Grad. Sch. Life Sci., Toyo Univ.)

■ Primary metabolism

PL-013 Analysis of a transcription factor mediating metabolism and developmental transition during nitrogen deficiency in *Arabidopsis*

Miho Sanagi[1], Akio Kubo[1], Yasutake Sato[1], Filip Rolland[2], Takatoshi Kiba[3], Junpei Takagi[4], Takato Imaizumi[5], Junji Yamaguchi[4], Takeo Sato[4] ([1]Grad. Sch. Life Sci., Hokkaido Univ., [2]Dept. Biol., KU Leuven, [3]Grad. Sch. Bioagr. Sci., Nagoya Univ., [4]Fac. Sci., Hokkaido Univ., [5]Dept. Biol., Univ. Washington)

PL-014 Analysis of regulatory mechanism of SnRK1 kinase activity mediating nitrogen-responsive flowering in Arabidopsis

Akio Kubo[1], Miho Sanagi[1], Yasutake Sato[1], Filip Rolland[2], Junji Yamaguchi[3], Junpei Takagi[3], Takeo Sato[3] ([1]Grad. Sch. Life Sci., Hokkaido Univ., [2]Biology Department, KU Leuven, [3]Fac. Sci., Hokkaido Univ.)

PL-015 Function of *slr2103* encoding a homolog of type 2 diacylglycerol acyltransferase in the cyanobacterium, *Synechocystis* sp. PCC 6803

Kazuho Hirai[1], Motohide Aoki[1], Yoshitaka Nishiyama[2], Mikio Tsuzuki[1], Norihiro Sato[1] ([1]Tokyo University of Pharmacy and Life Sciences, [2]Saitama University)

PL-016 Enzymatic and physiological analysis of Arabidopsis phosphoacetylglucosamine mutase essential for UDP-GlcNAc synthesis

Yutaroh Sakuta[1], Yukiya Ono[2], Yasushi Sato[1] ([1]Grad. Sch. Sci. Eng., Ehime Univ., [2]Fac. Sci., Ehime Univ.)

PL-017 Effects of Methionine Overaccumulation on Growth of *Arabidopsis thaliana*

Kazuki Oda[1], Shiori Muraoka[1], Hitoshi Onouchi[1], Takamasa Suzuki[2], Satoshi Naito[1], Yui Yamashita[1] ([1]Grad. Schl. Agr., Hokkaido Univ., [2]Col. Biosci. Biotech., Chubu Univ.)

PL-018 Effect of Overexpression of Lutein Synthesis Enzyme Genes on Carotenoid Composition in Green Leaves

Kouki Mizuno[1], Kenji Miura[2], Satomi Takeda[1] ([1]Grad. Sch. Sci., Osaka Prefecture Univ., [2]Grad. Sch. Life and Earth Sci., Univ. of Tukuba)

PL-019 Function of NoPSL1 during phosphorus deficiency in the marine microalga *Nannochloropsis oceanica*

Yoshihiro Sato, Masako Iwai, Hiroyuki Ohta, Noriaki Tounosu, Mie Shimojima (Sch. Life Science and Technology., Univ. Tokyo Institute of Technology)

■ Secondary (specialized) metabolism

PL-020 A study on pathway reconstruction and intracellular dynamics of the related enzymes in indican biosynthesis

Shintaro Inoue[1,2], Rihito Morita[2], Yoshiko Minami[2] ([1]Bio-Innov. Res. Cent., Tokushima Univ., [2]Dept. of Biochem., Okayama Univ. of Sci.)

PL-021 Cross-species metabolomic analysis of indolic metabolites in Brassica plants

Nodoka Shinya, Takafumi Shimizu, Mutsumi Watanabe, Takayuki Tohge (Grad. Sch. of Sci. and Tech., NAIST)

PL-022 Analysis of a β-glucosidase involved in the regulation of isoflavone amounts in soybean root apoplast and rhizosphere

Hinako Matsuda[1], Yumi Yamazaki[1], Eiko Moriyoshi[1], Masaru Nakayasu[1], Shinichi Yamazaki[2], Yuichi Aoki[2], Hisabumi Takase[3], Shin Okazaki[4], Akito Kaga[5], Kazufumi Yazaki[1], Akifumi Sugiyama[1] ([1]Kyoto Univ., [2]Tohoku Univ., [3]KUAS, [4]Tokyo Univ. of Agri. and Tech., [5]NARO)

PL-023 Enzymatic analysis of methyl chloride synthesis activities in Dipterocarpaceae trees

Yuko Nakamura[1], Takuya Saito[2], Tatsuo Nakamura[1] ([1]Grad. Sch. Environ. Info. Sci., Yokohama Natl. Univ., [2]Earth System Div., Natl. Inst. Env. Studies)

■ Biomembrane/Ion and solute transport

PL-024 Osmotic responses in protoplasts of mutant cells lacking tonoplast intrinsic protein AtTIP2;2 in *Arabidopsis thaliana*

Hina Fujimoto[1], Yuka Motohiro[1], Tsuneo Kuwagata[2], Yuko T. Hanba[3], Kumi Sato-Nara[4] ([1]Graduate School of Humanities and Sciences, Nara Women's University, [2]NARO National Institute for Agro-Environmental Science, [3]Department of Applied Biology, Kyoto Institute of Technology, [4]Research Group of Biological Sciences, Division of Natural Sciences, Nara Women's University)

PL-025 Identification and characterization of flavin transporters in plants

Hikari Kuwata[1], Takuto Sugimoto[1], Ayaka Daifuku[2], Takanori Maruta[1,2], Takahiro Ishikawa[1,2], Kazuya Yoshimura[3], Shigeru Shigeoka[4], Takahisa Ogawa[1,2] ([1]Grad. Sch. Nat. Sci. Technol., Shimane Univ., [2]Dept. Life Sci. Biotechnol., Fac. Life Environ. Sci., Shimane Univ., [3]Dept. Food Nutr. Sci., Coll. Biosci. Biotech., Chubu Univ., [4]Exp. Farm, Kindai Univ.)

PL-026 Analysis of potassium ion transporters expressed in the shoot tissues

Taro Yamanashi[1], Taiki Higashi[1], Takeshi Uchiyama[1], Yumiko Shirakawa[1], Hayato Ikeda[2], Hidetoshi Kikunaga[2], Toshimi Suda[2], Mutumi Yamagami[3], Masaru Tuzii[1], Yasuhiro Ishimaru[1], Nobuyuki Uozumi[1] ([1]Department of Biomolecular Engineering Graduate School of Engineering Tohoku University, [2]Research center for electron photon science, Tohoku Univercity, [3]Institute for Environmental sciences)

PL-027 Physiological role of aquaporins in high environmental tolerance of cactus

Ryosuke Sato[1,2], Takanori Horibe[2], Takamasa Suzuki[2], Masashi Asahina[3,4], Takashi Tsuge[2], Maki Katsuhara[5], Masayoshi Maeshima[2] ([1]Forest Bio Res. Cent., [2]Col. Biotech., Chubu Univ., [3]Dep. Biosci., Teikyo Univ., [4]Adv. Instrum. Anal. Cent., Teikyo Univ., [5]IPSR, Okayama Univ.)

PL-028 Root-specific activation of plasma membrane H^+-ATPase increases nutrient contents and biomass in *Arabidopsis thaliana*

Kota Monden[1], Daisuke Sugiura[2], Takehiro Kamiya[3], Tsuyoshi Nakagawa[1], Takushi Hachiya[1] ([1]Dept. Mol. Genet., Int. Gent. Sci. Res., Shimane Univ., [2]Grad. Sch. Bio. Sci., Nagoya Univ., [3]Grad. Sch. Agr. Sci., Tokyo Univ.)

PL-029 Effects of light quality on the concentration of mineral elements in leafy vegetables grown under artificial lighting

Kazuki Serizawa, Keiko Ohashi (Kaneko) (Grad. Sch. Agr., Univ. Tamagawa)

PL-030 Identification of QTL regulating leaf magnesium concentration by natural accessions in *Arabidopsis thaliana*

Akane Kodaka[1], Natsuko I. Kobayashi[2], Toru Kudo[3], Misako Kato[1], Keitaro Tanoi[2] ([1]Grad. Sch. Life Sci., Ocha Univ., [2]Grad. Sch. Agr. Life Sci., Univ. Tokyo, [3]Ac-Planta Inc.)

■ Membrane trafficking

PL-031 *Arabidopsis* PLDζ1 and PLDζ2 localize to *trans*-Golgi network and post-Golgi membrane compartments in root tissue, respectively

Ryota Shimamura[1], Yohei Ohashi[2], Yukimi Yamamoto Taniguchi[1], Mariko Kato[1], Tomohiko Tsuge[1], Takashi Aoyama[1] ([1]ICR, Kyoto Univ., [2]MRC, Cambridge)

■ Organelles/Cytoskeleton

PL-032 Genetic and biochemical characterization of the plastidial sulfurtransferase of AtSTR14 in *Arabidopsis thaliana.*

Suheng Chen, Shinji Masuda (School of Life Science and Technology., Tokyo Tech)

PL-033 Establishment of a method for isolating intact guard cell chloroplasts and proteomic comparison between guard cell chloroplasts and mesophyll cell chloroplasts

Boseok Song, Sho Yamagaki, Sakura Nishimura, Jo Narimatsu, Koh Iba, Juntaro Negi (Grad. Sch. Sci., Kyushu Univ.)

PL-034 CreHBD1 protein works as a DNA clip to organize chloroplast nucleoids in *Chlamydomonas reinhardtii*

Mari Takusagawa[1], Yusuke Kobayashi[1,2], Yoichiro Fukao[3], Kumi Hidaka[1,4], Masayuki Endo[1,4], Hiroshi Sugiyama[1,4], Takashi Hamaji[1], Yoshinobu Kato[1,5], Isamu Miyakawa[6], Osami Misumi[6], Toshiharu Shikanai[1], Yoshiki Nishimura[1] ([1]Grad. Sch. Sci., Kyoto Univ., [2]Grad. Sch. Sci. Eng., Ibaraki Univ., [3]Grad. Sch. Life Sci., Ritsumeikan Univ., [4]iCeMS, Kyoto Univ., [5]Grad. Sch. Agric. Life Sci., Univ. Tokyo, [6]Grad. Sch. Sci. Tech., Yamaguchi Univ.)

PL-035 Chloroplast-to-nucleus retrograde signaling for light-dependent transcriptional regulation in *Cyanidioschyzon merolae*

Haruka Saito[1], Hikaru Ohara[1], Yuki Kobayashi[2], Kan Tanaka[2], Masayuki Igarashi[3], Ryutaro Utsumi[4], Toshihide Okajima[4], Mitsumasa Hanaoka[1,5] ([1]Grad. Sch. Horticul., Chiba Univ., [2]Lab. Chem. Life Sci., Tokyo Inst. Tech., [3]Inst. Microb. Chem., [4]SANKEN, Osaka Univ., [5]Plant Mol. Sch. Cent., Chiba Univ.)

PL-036 Imaging of microtubules in the shoot apical meristem of rice

Ryosuke Takata, Jun Ito, Hiroyuki Tsuji (KIBR., Yokohama City Univ.)

PL-037 GRAS Family Transcription Factor Is A New Regulator Of Asymmetric Cell Division And Polarity In Moss *Physcomitrium Patens*

Alisa Vyacheslavova[1], Teh Ooi-kock[2], Renqi Wang[1], Mitsuyasu Hasebe[3], Tomomichi Fujita[2] ([1]Hokkaido University, Graduate School of Life Science, [2]Hokkaido University, School of Science, [3]National Institute for Basic Biology, Division of Evolutionary Biology)

PL-038 Molecular mechanisms of microtubule nucleation in plant cells

Noriyoshi Yagi[1], Takehide Kato[2], Sachihiro Matsunaga[3], David Ehrhardt[4], Takashi Hashimoto[2], Masayoshi Nakamura[1] ([1]ITbM, Nagoya U., [2]Div. Bio. Sci., NAIST, [3]Grad. Sch. Front. Sci., U. Tokyo, [4]Dept. Plant Bio., Carnegie Inst. Sci.)

■ Cell wall

PL-039 Prior secondary cell wall formation is required for gelatinous layer deposition and posture control in gravi-stimulated aspen

Naoki Takata[1], Taku Tsuyama[2], Soichiro Nagano[3], Kei'ichi Baba[4], Yuko Yasuda[3], Shingo Sakamoto[5,6], Nobutaka Mitsuda[5,6], Toru Taniguchi[7] ([1]Forest Bio Res. Cent., For. Forest Prod. Res. Inst., [2]Fac. Agri., Miyazaki Univ., [3]Forest Tree Breeding Cent., For. Forest Prod. Res. Inst., [4]RISH, Kyoto Univ., [5]Bioprod. Res. Inst., AIST, [6]Global Zero Emission Res. Cent., AIST, [7]Tohoku Reg. Breeding Office, Forest Tree Breeding Cent., For. Forest Prod. Res. Inst.)

PL-040 Functional Analysis of a Novel Gene *Procambium Protein (PCP)1* Involved in the Secondary Cell Wall Formation in *Arabidopsis thaliana*

Tomoya Yokoi[1], Tomoko Hirano[2], Masa H. Sato[2] ([1]Sch. Life and Environmental Sciences, Univ. Kyoto Prefectural, [2]Grad. Sch. Life and Environmental Sciences, Univ. Kyoto Prefectural)

■ Cell cycle/Cell division

PL-041 Functional analyses of HPY2/AtNSE2/AtMMS21 and SMC5/6 complex in the regulation of plant cell cycle

Takashi Ishida[1], Mika Yoshimura[1], Keiko Sugimoto[2] ([1]Kumamoto University, Faculty of Advanced Science and Technology (FAST), [2]RIKEN Center for Sustainable Resource Science (CSRS))

PL-042 Meiotic observations in *Streptocarpus*

Michael Möller[1], Kanae Nishii[1,2] ([1]Royal Botanic Garden Edinburgh, [2]Kanagawa Uni.)

PL-043 Evolution of the SURVIVIN component of the CHROMOSOMAL PASSENGER COMPLEX is driven by molecular convergence

Shinichiro Komaki[1], Eelco C Tromer[2], Geert De Jaeger[3], Nancy De Winne[3], Maren Heese[4], Takashi Hashimoto[1], Arp Schnittger[4] ([1]Grad. Sch. Biol. Sci., NAIST, [2]Univ. Groningen, [3]Univ. Ghent, [4]Univ. Hamburg)

PL-044 Analyses on the regulation of the cell cycle responding to nucleolar stress in Arabidopsis

Iwai Ohbayashi[1,2], Akitoshi Iwamoto[3], Takaaki Yonekura[4], Munetaka Sugiyama[4] ([1]Dept. Life Sci., National Cheng Kung Univ., [2]Inst. Tropical Plant Sci., National Cheng Kung Univ., [3]Dept. Sci., Kanagawa Univ., [4]Grad. Sch. Sci., Univ. Tokyo)

■ Vegetative growth

PL-045 Characterization of cambium stem cells using nuclear RNA-seq analysis identifies stem cell-specific signatures

Dongbo Shi[1,2,3], Keiko Sugimoto[1], Thomas Greb[2] ([1]RIKEN CSRS, [2]COS Heidelberg, [3]JST PRESTO)

PL-046 Wounding periderm formation in Arabidopsis roots

Hiroyuki Iida, Jennifer López Ortiz, Jing Zhang, Ari Pekka Mähönen (HiLIFE, Univ of Helsinki)

PL-047 Functional analysis of H3K27me3 demethylase genes in the moss *Physcomitrium patens*

Yuuya Kumagai[1], Yosuke Tamada[1,2,3,4] ([1]Grad. Sch. Reg. Dev. Creat., Utsunomiya Univ., [2]Sch. Eng. Utsunomiya Univ., [3]CORE, Utsunomiya Univ., [4]REAL, Utsunomiya Univ.)

PL-048 An innovative rewiring of ethylene and light signal molecular network to adapt the aquatic environment in the amphibious plant *Rorippa aquatica*

Shuka Ikematsu[1,2,3], Tatsushi Umase[2], Mako Shiozaki[2], Sodai Nakayama[2], Fuko Noguchi[2], Tomoaki Sakamoto[2,3], Seisuke Kimura[2,3], Keiko Torii U.[1,4,5] ([1]ItBM, Nagoya Univ., [2]Life Sci., Kyoto Sangyo Univ., [3]Center for Plant Sci., Kyoto Sangyo Univ., [4]HHMI, [5]Molecular Biosci., Univ. of Texas)

PL-049 Functional Analysis of *WANDERING ROOT1* and *WAD2* Genes, Rice *DECUSSATE* Homologues, in *Arabidopsis* Root System Construction

Ikumi Azuma[1], Risa Kimura[1], Ken-Ichiro Hibara[2], Tatsuaki Goh[1,3], Akihito Mamiya[1], Tetsuro Mimura[1,4,5], Yuki Kondo[1], Kimitsune Ishizaki[1], Jun-Ichi Itoh[4], Hidehiro Fukaki[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]Fac. Agri., Kibi International Univ., [3]Div. Biol. Sci., NAIST, [4]Grad. Sch. Agric. Life Sci., Univ. Tokyo, [5]Col. Biosci. Biotech., National Cheng Kung Univ.)

PL-050 Molecular mechanism of plant callus formation accelerated by FPX and promoter of plant growth (PPG)

Kotomi Maekawa[1], Shota Tanaka[2,3], Shun Takeno[2,3], Ayumi Yamagami[1], Yusuke Kakei[4], Yukihisa Shimada[4], Yoshimitu Kondou[2], Naoshi Dohmae[2], Setsuko Shimada[2], Minami Matsui[2], Tetsuo Kushiro[3], Naoyuki Osada[2], Tadao Asami[5], Kazuo Shinozaki[2], Takeshi Nakano[1,2] ([1]Dept. Biostudies., Kyoto. Univ., [2]RIKEN·CSRS, [3]Dept. Agri. Chem., Meiji. Univ., [4]Yokohama City Univ., [5]Dept. Appl. Biol. Chem., Tokyo. Univ.)

PL-051 Effect of metacaspase on dark-induced senescence of leaves

Hiroshi Hayashi, Taisei Wakamatsu, Keita Fukutani, Rika Shimamoto, Miku Chiba (Fac. Biosci. Biotec., Fukui Pref. Univ.)

PL-052 *Sdr4 like1* (*SFL1*) of Arabidopsis regulates phase transition from seed dormancy to germination

Lipeng Zheng[1], Masahiko Otani[1], Kazuhiko Sugimoto[2], Naoto Kawakami[1] ([1]Grad. Sch. Agri., Univ. Meiji, [2]NICS)

PL-053 Roles of PPsPase1, VHP2;1 and VHP2;2 in early developmental stages and PPi homeostasis of *Arabidopsis thaliana*

Hiroshi Tojo[1,2], Hiromitsu Tabeta[1,2,3], Masami Yokota Hirai[3], Javot Hélène[4], Ali Ferjani[2] ([1]Grad. Sch. Art Sci., Univ. Tokyo, [2]Dept. Biol., Tokyo Gakugei Univ., [3]RIKEN CSRS, [4]CNRS, AIX Marseille Univ)

PL-054 Development of transformation and genome editing protocols in *Rorippa aquarica*

Rumi Amano[1], Tomoko Hirano[1], Tomoaki Sakamoto[2,3], Seisuke Kimura[2,3], Masa H. Sato[1] ([1]Grad. Sci. & Env., Kyoto Pref. Univ., [2]Facul. Life Sci., Kyoto Sangyo Univ., [3]Center for Ecological Evolutionary Developmental Biology, Kyoto Sangyo Univ.)

PL-055 A Simulation Research on Cell Division Patterns and Plant Organ Morphogenesis

Zining Wang[1], Xiaofeng Yin[1], Hiroyasu Inoue[2], Atsushi Mochizuki[3], Hirokazu Tsukaya[1] ([1]Grad. Sch. Sci., Univ. Tokyo, [2]Dept. Micro Eng., Kyoto Univ., [3]Inst. Front. Life Med. Sci., Kyoto Univ.)

■ Reproductive growth

PL-056 Dwarfism and photomorphogenic development in the dark of *det3-1* mutant of *Arabidopsis thaliana* are suppressed by *set* mutation

Ryosuke Kizu[1,2], Reina Hashimoto[2], Shizuka Gunji[2], Hiroyuki Koga[3], Nobutaka Mitsuda[4], Kenya Hanai[2], Gorou Horiguchi[5,6], Shinichiro Sawa[7], Hirokazu Tsukaya[3], Ali Ferjani[2] ([1]Grad. Sch. Art Sci., Univ. Tokyo, [2]Dept. Biol., Tokyo Gakugei Univ., [3]Grad. Sch. Sci., Univ. Tokyo, [4]AIST, [5]Dept. Life Sci., Rikkyo Univ., [6]Res. Ctr. Life Sci., Rikkyo Univ., [7]Fac. Adv. Sci. Technol., Kumamoto Univ.)

PL-057 Somatic embryogenesis in angiosperm is promoted by reactive oxygen species(ROS)

Kiryu Tsurukai[1], Shohei Soeda[2], Yoshiki Maeyama[2], Shuto Sugai[2], Kazuki Yamaguchi[2], Rinako Homma[2], Katsumi Higashi[1,2] ([1]Grad. Sch. Sci. Eng., Teikyo Univ. Sci., [2]Facu. Lif. Env. Sci., Teikyo Univ. Sci.)

PL-058 A novel “stylish” pre-zygotic inter-specific barrier in *Arabidopsis thaliana*

Hiroki Miura[1], Yuka Kimura[1], Yuko Wada[2], Seiji Takayama[1], Sota Fujii[1,3] ([1]Grad Sch Agric Lif Sci, The University of Tokyo, [2]Grad Sch Agric Bio Sci, Nara Institute of Science and Technology, [3]Suntory SunRiSE)

PL-059 Time-lapse observation of meiotic chromosomes of *Arabidopsis* pollen mother cells

Maho Kusano, Misato Fujita, Yoshitaka Azumi (Dept. Biol. Sci., Sch. Sci., Kanagawa Univ.)

PL-060 Isolation and characterization of genes involved in the function of female gametophyte and pollen tube attraction

Masahiro Kanaoka (Grad. Sch. Sci., Nagoya Univ.)

PL-061 Study of SPRI2 that may transcriptionally regulate interspecific incompatibility in Brassicaceae

Eri Yamamoto[1], Yuka Kimura[1], Yuko Shimosato[2], Tangpranomkorn Surachat[1], Shoko Furukawa[2], Yuko Wada[2], Seiji Takayama[1], Sota Fujii[1,3] ([1]Grad. Sch. Agricultural and Life Sciences, Tokyo Univ., [2]Nara Institute of Science and Technology, [3]Suntory Rising Stars Encouragement Program in life Sciences)

■ Plant hormones/Signaling molecules

PL-062 Functional Analysis Of A Novel Brassinosteroid Signaling Factor BMY2

Kenya Haratani[1], Kenjiro Fujita[3], Reika Hasegawa[4], Ayumi Yamagami[1], Miho Ikeda[4], Nobutaka Mitsuda[5], Satoshi Kidokoro[6], Kazuko Yamaguchi-Shinozaki[6], Kazuo Shinozaki[2], Masaru Ohme-Takagi[4,5], Tadao Asami[6], Takeshi Nakano[1] ([1]Grad. Sch.

Biostudies., Kyoto Univ., [2]CSRS, RIKEN., [3]Grad. Agric., Meiji Univ., [4]Grad. Sch. Sci. Eng., Saitama Univ., [5]AIST., [6]Grad. Sch. Agri. Life Sci., University of Tokyo.)

PL-063 Functional analysis of JAZs that specifically interact with JA receptor OsCOI2 in rice

Hideo Inagaki[1], Emi Yumoto[2], Kengo Hayashi[3], Takuya Kaji[3], Yousuke Takaoka[3], Masashi Asahina[1,2], Minoru Ueda[3,4], Koji Miyamoto[1] ([1]Grad. Sch. Sci. & Eng., Teikyo Univ., [2]Adv. Instrum. Anal. Cent., Teikyo Univ., [3]Grad. Sch. Sci., Tohoku Univ., [4]Grad. Sch. Life Sci., Tohoku Univ.)

PL-064 Functional analysis of aberrant protein phosphatase 2 C in parasitic weed *Striga*

Daisuke Fukuhara[1], Hijiri Fujioka[2], Yukihiro Sugimoto[2], Masanori Okamoto[1] ([1]Utsunomiya Univ., [2]Kobe Univ.)

PL-065 RNA-seq analysis for exploring the regulatory functions of two bHLH transcription factors BHHs involved in brassinosteroid signaling

Zhana Chagan[1], Yuichiro Tanaka[1,2], Reika Hasegawa[3], Ayumi Yamagami[1], Miho Ikeda[3], Nobutaka Mitsuda[4], Minoru Kumazawa[1], Kentaro Ifuku[6], Tetsuo Kushiro[2], Masaru Ohme-Takagi[3,4], Tadao Asami[5], Takeshi Nakano[1] ([1]Grad. Sch. Bios., Kyoto Univ., [2]Grad. Sch. Agri., Meiji Univ., [3]Grad. Sch. Sci. Eng., Saitama Univ., [4]AIST, [5]Grad. Sch. Agri. Life Sci., Univ. Tokyo, [6]Grad. Sch. Agri., Kyoto Univ.)

PL-066 The physiological role of *trans*-zeatin-type cytokinins in rice

Takatoshi Kiba[1], Kahori Mizutani[1], Yumiko Takebayashi[2], Mikiko Kojima[2], Tokunori Hobo[3], Hitoshi Sakakibara[1] ([1]Grad. Sch. Bioagri. Sci., Nagoya Univ., [2]RIKEN CSRS, [3]Biosci. Biotec. Ctr., Nagoya Univ.)

■ Photoreceptors/Photoresponses

PL-067 Clock gene *PRR7* regulates phototoropin-mediated light responses

Takahiro Morimoto[1], Carlo Feliciano Maliwat Gian[1], Hinako Kasuya[1], Akane Kubota[1], Nozomu Takahashi[1], Norihito Nakamichi[2], Motomu Endo[1] ([1]NAIST, [2]Nagoya Univ, School of Agricultural Sciences Graduate School of Bioagricultural Sciences)

PL-068 Importance of β-carotene in the eyespot formation and phototaxis in *Euglena gracilis*

Shun Tamaki[1], Koji Yamada[1,2], Marumi Ishikawa[1], Toshihisa Nomura[1,3], Kazunari Ozasa[4], Keiichi Mochida[1,3], Kengo Suzuki[1,2] ([1]RIKEN BZP, [2]euglena Co., Ltd., [3]RIKEN CSRS, [4]RIKEN RAP)

PL-069 Analyses of guard-cell plasma membrane H^+-ATPase in whole leaves under light-dark transition

Eigo Ando[1,4], Toshinori Kinoshita[2,3], Ichiro Ando[1] ([1]Dep. Biol. Sci., Grad. Sch. Sci., Univ. Tokyo, [2]Div. Biol. Sci., Grad. Sch. Sci., Nagoya Univ., [3]WPI-ITbM, Nagoya Univ., [4]JSPS Research Fellow)

■ Flowering/Clock

PL-070 Dissection of developmental state transition in the shoot apical meristem of barley grown under field conditions by single meristem RNA-seq

Jun Ito[1], Yuko Nomura[1], Kotaro Takahagi[2], Satoshi Okada[3], Nao Sato[1], Hiroki Matsumoto[1], Shunichi Arai[1], Midori Sugimura[1], Midori Seki[1], Koosuke Hattori[4], Taizo Umezaki[4], Daisuke Saisho[3], Keiichi Mochida[2], Takashi Hirayama[3], Hiroyuki Tsuji[1] ([1]KIBR, Yokohama City Univ., [2]CSRS, RIKEN, [3]IPSR, Okayama Univ., [4]Dept. of Technology, Chubu Univ.)

PL-071 Protomer exchange of dimeric clock protein, KaiA from cyanobacteria

Yasuhiro Onoue, Chisato Ohki, Kazuki Terauchi (College of Life Sci., Ritsumeikan Univ.)

PL-072 Nutrient-mediated organ-organ coupling contributes to the stabilization of circadian clock

Kyohei Uemoto[1,2], Yumi Kunimoto[2], Fumito Mori[3], Hiroshi Ito[3], Haruki Egashira[2], Akane Kubota[2], Toshinori Kinoshita[4], Takashi Araki[1], Motomu Endo[2] ([1]Grad. Sch. Biostudies., Kyoto Univ., [2]Div. Biological Science., NAIST, [3]Faculty of Design., Kyushu Univ., [4]Institute of Transformative Bio-Molecules., Nagoya Univ)

PL-073 Different Root Expression Patterns of circadian clock in *Arabidopsis thaliana*

Yu Leng[1], Akane Kubota[1], Nozomu Takahashi[1], Tatsuaki Goh[2], Motomu Endo[1] ([1]Plant Physiology., NAIST, [2]Plant Developmental Signaling., NAIST)

PL-074 Phase separation of florigen activation complex

Mayu Enomoto[1], Suai Anzawa[1], Yuka Koizumi[1], Ken-ichiro Taoka[2], Takashi Kodama[3], Toshimichi Fujiwara[3], Hiroyuki Tsuji[2], Chojiro Kojima[1] ([1]Grad. Sch. of Engr Sci., YNU, [2]Kihara Institute for Biological Research, YCU, [3]Institute for Protein Research, Univ. of Osaka)

■ Environmental responses A

PL-075 The development of quantification method in cyclic di-GMP and the rapid increase in *Synechococcus elongatus* PCC7942

Shinsuke Kutsuna[1], Marina Kameda[1], Setsuyuki Aoki[2], Robert Kanaly[1] ([1]Grad. Sch. Bio-Nano, [2]Grad. Sch. Info)

PL-076 Enhanced Ozone Tolerance In Arabidopsis Plants Provided By A Phytocyanin-encoding Gene

Shoko Saji[1], Hikaru Saji[1], Kimiyo Sage-Ono[2], Michiyuki Ono[2], Nobuyoshi Nakajima[1], Mitsuko Aono[1] ([1]Biodiversity Div., Natl. Inst. Environ. Studies, [2]GRC, T-PIRC, Univ. Tsukuba)

PL-077 Evaluation Of Light Regulation Of Ascorbate Biosynthesis In *Marchantia Polymorpha*

Tetsuya Ishida[1], Haruka Kaji[2], Yasuhiro Tanaka[3], Takahisa Ogawa[1,2,3], Takanori Maruta[1,2,3], Shigeru Shigeoka[4], Takahiro Ishikawa[1,2,3] ([1]Grad. Sci. Nat. Sci. Technol., Shimane Univ., [2]Facu. Life. Environ. Sci., Shimane Univ., [3]Uni. Grad. Sch. Agricul. Sci., Tottori Univ., [4]Exp. Farm, Kindai Univ.)

PL-078 Moss *Physcomitrium patens* Responds to Both Microgravity and Hypergravity and Changes Its Gene Expression

Yuki Yamashita[1], Maki Yokoi[1], Chiyo Jinno[1], Marcel Pascal Beier[2], Akihisa Shinozawa[3], Yoichi Sakata[3], Hiroyuki Kamachi[4], Yuko T. Hanba[5], Ichirou Karahara[4], Yuji Hiwatashi[6], Atsushi Kume[7], Tomomichi Fujita[8] ([1]Grad. Sch. Life Sci., Hokkaido Univ., [2]IAHE, Hokkaido Univ., [3]Dept. BioSci., Tokyo Univ. Agric., [4]Fac. Sci., Univ. Toyama, [5]Dept. Applied Biol., Kyoto Inst. Technol., [6]Sch. Food Ind. Sci., Miyagi Univ., [7]Fac. Agric., Kyushu Univ., [8]Fac. Sci., Hokkaido Univ.)

PL-079 Mechanical stimulation via one-axis clinostat enhances *Arabidopsis thaliana* shoot growth

Yunshu Wang[1], Marcel Pascal Beier[1,2], Toru Fujiwara[1] ([1]Grad. Sch. Agri., Univ. Tokyo, [2]Faculty of Sci., Hokkaido Univ.)

■ Environmental responses B

PL-080 Functional analysis of chloroplast-localized NAD kinase2 in plant water stress responses

Yuriko Osakabe[1], Ryosuke Hashimoto[2], Atsuko Miyagi[3,4], Muneo Sato[5], Kohji Yamada[2], Masami Yokota Hirai[5], Maki Kawai-Yamada[3], Keishi Osakabe[2] ([1]Sch. Life Sci. & Tech., Tokyo Tech., [2]Fac. Biosci. Bioindust., Tokushima Univ., [3]Grad. Sch. Sci. Eng., Saitama Univ., [4]Fac. Agri., Yamagata Univ, [5]RIKEN CSRS)

PL-081 Analysis of the transcription factor SGR5 that functions in the drought resistance mechanism

Moeca Arai[1,2], Keiko Kigoshi[1], Maki Kawai[1,2], Yoshimi Nakano[1], Nobutaka Mitsuda[1], Sumire Fujiwara[1,2] ([1]Bioprod. Res. Inst., AIST, [2]Grad. Biol. Sci., Univ. Tsukuba)

PL-082 Large-scale analysis of SnRK2-dependent ABA-responsive TSS changes in Arabidopsis

Yusuke Ohori[1], Akihiro Ezoe[2], Kousuke Hanada[2], Tomokazu Ushijima[3], Yutaka Suzuki[4], Tomonao Matsushita[5], Taishi Umezawa[1] ([1]Tokyo Univ. Agric. Tech., [2]Kyushu Inst. Tech, [3]Setsunan Univ., [4]Tokyo Univ., [5]Kyoto Univ.)

PL-083 Functional analysis of Arabidopsis B3-RAFs involved in activation of SnRK2

Tomoki Ohtani[1], Goro Masuda[1], Tsukasa Toriyama[1], Daisuke Takezawa[2], Izumi Yotsui[1], Teruaki Taji[1], Yoichi Sakata[1] ([1]Department of Bioscience, Tokyo University of Agriculture, [2]Department of science and Engineering, Saitama University)

PL-084 The serine protease HtrA is involved in abiotic stress tolerance and protein homeostasis in a halotolerant cyanobacterium

Tanutcha Patipong[1,2], Takashi Hibino[1,3], Hakuto Kageyama[1,3], Rungaroon Waditee-Sirisattha[2] ([1]Grad. Sch. Environ. Hum. Sci., Meijo Univ., [2]Fac. Sci., Chulalongkorn Univ., [3]Fac. Sci. Tech., Meijo Univ.)

PL-085 The role of MYCCB-SPX module in phosphate starvation of nonvascular plant *Marchantia polymorpha*

Hinatamaru Fukumura[1], Ginga Kitaura[1], Hirotaka Kato[1], Yuuki Sakai[1], Yuki Kondo[1], Hidehiro Fukaki[1], Tetsuro Mimura[1,2,3], Kimitsune Ishizaki[1] ([1]Grad. Sch. Sci., Kobe Univ, [2]Grad. Sch. Agri. Life Sci., Univ. Tokyo, [3]Col. Biosci. Biotech., National Cheng Kung Univ.)

PL-086 Time-dependent regulation of carbon and energy metabolism and related gene expression for triacylglycerol synthesis in *Chlorella* under As-stress conditions

Yukari Iijima, Yutaro Oishi, Shoko Fujiwara, Norihiro Sato (Grad. Sch. Sci., Univ. Toyaku)

PL-087 Differential effects of non-essential alkaline metal ions (Na, Li, Cs) on the plant's cell growth and uptakes of nutritional metal ions.

Yui Katsuta[1], Natsuko Kadowaki[1], Yoh Sakuma[2], Dharmendra K. Gupta[2,3], Masahiro Inouhe[2] ([1]Department of Biology, Facutly of Science, Ehime University, [2]Biology, Graduate School of Science and Technology, Ehime University, [3]Ministry of Environment, Forest & Climate Change, Government of India)

PL-088 Absorption and Cell wall binding of Lithium and Sodium Ions in Protonema Cells of *Tremadon longicollis*

Ryosuke Nakanishi, Yoh Sakuma, Masahiro Inouhe (Biology. Grad. Sch. Sci. & Eng., Ehime Univ.)

■ Environmental responses C

PL-089 Search for novel transcriptional regulators of heat-activated retrotransposons in Arabidopsis thaliana

Syouei Gyuu[1], Kanako Takehira[1], Atushi Kato[2], Hidetaka Ito[2] ([1]Life Sci, HOKKAIDO Univ., [2]Sci, HOKKAIDO Univ.)

PL-090 Extreme environmental stress tolerance of sporangium in the moss *Physcomitrium patens*

Changhyun Maeng[1], Hirono Kobari[2], Sayaka Takahashi[3], Atsushi Kume[4], Hajime Mita[3], Yuji Hiwatashi[2], Tomomichi Fujita[5] ([1]Grad. Sch. Life Sci. Hokkaido Univ., [2]Sch. Food Ind. Sci. Miyagi Univ., [3]Dept. Life. Environ. Appl. Chem. Fukuoka Inst. Technol., [4]Fac. Agric. Kyushu Univ., [5]Fac. Sci. Hokkaido Univ.)

PL-091 Isolation and characterization of an *Arabidopsis* ecotype with high CO_2 sensitivity

Tomoki Shuno, Satoko Nakae, Toku Higashibaba, Atsushi Mabuchi, Juntaro Negi, Koh Iba, Keina Monda (Dept. Biol., Fac. Sci., Univ. Kyushu)

PL-092 Isolation and analysis of *Arabidopsis* mutant with low-sensitivity to CO_2 but normal sensitivity to abscisic acid

Satoko Nakae, Tomoki Shuno, Toku Higashibaba, Atsushi Mabuchi, Juntaro Negi, Koh Iba, Keina Monda (Dept. Biol., Fac. Sci., Univ. Kyushu)

PL-093 An analysis of the relationship between stomatal conductance and leaf hydraulics in the dark in *Arabidopsis thaliana*

Nanae Takai, Ko Noguchi, Yusuke Mizokami (Life Sci., Univ. Tokyo Pharma and Life Sci)

PL-094 Functional analysis of SIGMA FACTOR-BINDING PROTEIN 1 in tomato

Rinna Adachi[1], Kazuaki Utsugi[1], Mari Narusaka[2], Yoshihiro Narusaka[2], Keishi Osakabe[1], Yuriko Osakabe[3] ([1]Fac. Biosci. Bioindust., Tokushima Univ, [2]RIBS, Okayama, [3]Sch. Life Sci. & Tech., Tokyo Tech)

PL-095 [Cancelled]

PL-096 Response of root systems to non-uniform boron availability

Naoyuki Sotta, Toru Fujiwara (Grad. Sch. Agri., Univ. Tokyo)

PL-097 A multi-target regressor framework to predict Nutrient content values in Tomato Leaves

Andres Aguilar Ariza, Takehiro Kamiya, Toru Fujiwara (Grad. Sch. Agri., Univ. Tokyo)

■ Plant-organism interaction A

PL-098 Exploration of virulence factors required for the necrotrophic phase of a phytopathogenic fungus, *Colletotrichum orbiculare*

Katsuma Yonehara[1,2], Naoyoshi Kumakura[1], Pamela Gan[1], Ken Shirasu[1,2] ([1]Yokohama inst., Riken, [2]Grad. Sci., Univ. Tokyo)

PL-099 Jasmonate-mediated systemic defense in rice leaf

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

PL-100 Different roles of tobacco Dof type transcription factor BBF3 in resistance against bacterium and virus

Mayu Fujita, Taiga Suzuki, Yasuhiko Matsushita, Nobumitsu Sasaki (Tokyo University of Agriculture and Technology)

PL-101 Functional analysis of *PINK4* gene of *Lotus japonicus* in symbiont selection after the establishment of endosymbiosis

Haruka Arashida[1], Tomomi Nakagawa[2], Hiroko Maita[3], Shohei Kusakabe[1], Shusei Sato[1] ([1]Grad. Lif. Sci., Univ. Tohoku, [2]Yokohama Science Frontier High School, [3]Kazusa DNA Research Institute)

PL-102 *PUB25* and *PUB26* positively regulate MAMP-responsive MEKK1 - MKK1/MKK2 - MPK4 pathway and disease resistance in *Arabidopsis*

Suzuna Nagai[1], Yuta Kubo[1], Junpei Hio[1], Takahiro Kobayashi[1], Tsuyoshi Mizoguchi[2], Fuminori Takahashi[3,4], Kazuo Shinozaki[4], Ken Shirasu[4], Kazuya Ichimura[1] ([1]Fac. Agri., Kagawa Univ., [2]ICU. Grad. Sch. Arts Sci., [3]Fac. Adv. Eng., Tokyo Univ Sci., [4]RIKEN CSRS)

■ Plant-organism interaction B

PL-103 Identification of the host range in *Bradyrhizobium ottawaense* SG09 strain

Yasuyuki Kawaharada (Fac. of Agri., Iwate Uni.)

PL-104 Regulation of symbiotic microflora through the symbiotic regulator *CCaMK* in rice

Sumire Kirita[1], Asahi Adachi[1], Shota Kido[1], Shunsuke Imai[1], Yusa Aritoshi[1], Masako Fuji[1], Toru Fujiwara[2], Takehiro Kamiya[2], Yusuke Saijo[1] ([1]Grad. Sch. Sci. and Tech., NAIST, [2]Grad. Sch. Agri. Life Sci., Univ. Tokyo)

PL-105 Study on the mutualistic relationship between cucumber mosaic virus and its natural host *Arabidopsis helleri*

Midori Tabara[1], Shimpei Uraguchi[2], Hideki Takahashi[3], Toshiyuki Fukuhara[4,5] ([1]R-GIRO, Ritsumeikan Univ., [2]Sch. Pharm., Kitasato Univ., [3]Dept. Agri., Tohoku Univ., [4]Dept. Agri., Tokyo Univ. Agri. Tech., [5]GIR, Tokyo Univ. Agri. Tech.)

PL-106 Integrated network with root transcriptome and microbiome in *Brachypodium distachyon* grown under variable soil phosphorus and nitrogen conditions

Tetsuto Sugai[1,2], Hayato Maruyama[2], Kohei Nagayama[2], Takumi Satou[3], Kie Kumaishi[3], Yasunori Ichihashi[3] ([1]FFPRI, [2]Grad. Sch. Agr., Hokkaido Univ., [3]RIKEN BRC)

PL-107 Exploration of genomic variation(s) among domestic rice cultivars that contributes to the enrichment of major diazotrophs in paddy soil

Zhihang Feng, Yoshihiro Ohmori, Yoko Masuda, Keishi Senoo, Toru Fujiwara (Graduate School of Agricultural and Life Sciences, The University of Tokyo)

■ Epigenetic regulation

PL-108 Analysis of the effect of LDL2 on shoot regeneration via callus formation

Ayaka Horie[1], Takuya Sakamoto[2], Mariana Diaz[3], Takamasa Suzuki[4], Sachihiro Matsunaga[1] ([1]Dept. of Integr. Biosci., Grad. Sch. of Front. Sci., Univ. of Tokyo, [2]Dept. of Appl. Biol. Sci., Fac. of Sci. and Tech., Tokyo Univ. of Sci, [3]IPMB, Univ. of Zurich, [4]Dept. of Appl. Biol. Chem., Fac. of Appl. Biol., Chubu Univ.)

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

PL-109 Profile Of Tissue-specific Promoters In *Glycine max*

Masato Araragi, Yasuyuki Kawaharada (Faculty of Agriculture, Iwate university)

PL-110 *ASI1* regulates the alternative splicing efficiency of the chloroplastic APX by binding specifically to its pre-mRNA

Masato Yamada[1], Ayano Sawada[2], Masaki Watanabe[2], Noriaki Tanabe[3], Takamasa Suzuki[4], Ayako Nishizawa-Yokoi[5,6], Shigeru Shigeoka[7], Kazuya Yoshimura[1,2] ([1]Biosci. Biotech. Grad. Sch. Chubu Univ., [2]Dept. Food Nutr. Sci., Coll. Biosci. Biotech., Chubu Univ., [3]Dept. Adv. Biosci., Fac. Agr., Kindai Univ., [4]Dept. Biol. Chem., Coll. Biosci. Biotech., Chubu Univ., [5]NIAS, NARO, [6]JST, PRESTO, [7]Exp. Farm, Kindai Univ.)

PL-111 Deadenylase AtCCR4a/b and the interacting RNA binding protein APUM2 are required for proper shoot regeneration

Kosuke Kawai[1], Sota Kurachi[2], Riko Imahori[2], Toshihiro Arae[3], Misato Ohtani[3], Yukako Chiba[2,4] ([1]Sch. Sci., Hokkaido Univ., [2]Grad. Sch. Life Sci., Hokkaido Univ., [3]Grad. Sch. Front Sci., Univ. Tokyo, [4]Fac. Sci., Hokkaido Univ.)

PL-112 AtCCR4-NOT, an mRNA decay machinery, is important for shoot regeneration ability

Toshihiro Arae[1], Riko Imahori[2], Yuya Suzuki[2], Yukako Chiba[2,3], Misato Ohtani[1] ([1]Grad. Sch. Frontier Sci., Univ. Tokyo, [2]Grad. Sch. Life Sci., Hokkaido Univ., [3]Fac. Sci., Hokkaido Univ.)

PL-113 Kingdom specificity of eukaryotic ribosome stalling unveiled by unfolded protein response

Tomoya Imamichi[1], Nao Kusumoto[2], Seidai Takamatsu[2], Yugo Honda[1], Shiori Muraoka[1], Hitoshi Onouchi[1], Satoshi Naito[1,2], Yui Yamashita[1] ([1]Graduate School of Agriculture, Hokkaido University, Japan, [2]Graduate School of Life Science, Hokkaido University, Japan)

PL-114 Phenotypic analysis of Arabidopsis mutants of genes encoding RPL13a, a ribosome protein

Dichao Ma, Hirofumi Fukuda, Toru Fujiwara (Grad. Sch. Agric. Life Sci., Univ. Tokyo)

PL-115 Involvement of cold shock protein in gene expression profile associated with growth promotion in *Breviolum minutum*

Shizue Yoshihara[1], Karin Fujimura[1], Yohei Minakuchi[2], Atsushi Toyoda[2], Hayato Tokumoto[1] ([1]Grad. Sch. Sci., Osaka Pref. Univ., [2]Comparative Genomics Lab., National Institute of Genetics)

■ New technology

PL-116 Construction of a CRISPR/Cas9-Induced One-Cell Bioluminescence Reporter System in Individual Plants

Ryohei Ueno, Shogo Ito, Tokitaka Oyama (Biological Sciences, Grad. Sci., Univ. Kyoto)

PL-117 Deep imaging of plant tissues using iTOMEI

Yuki Sakamoto[1], Yuuki Sakai[2], Moeko Sato[3], Hiroyuki Tsuji[3], Ryuichi Nishihama[4], Takayuki Kohchi[5], Sachihiro Matsunaga[6] ([1]Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ., [2]Dept. Biol., Grad Sch. Sci., Kobe Univ., [3]Kihara Institute for Biological Research, Yokohama City Univ., [4]Dept. App. Biol. Sci., Fac Sci Tech., Tokyo Univ. Sci., [5]Grad. Sch. Biostudies, Kyoto Univ., [6]Dept. Integr. Biosci., Grad. Sch. Front. Sci., Univ. Tokyo)

PL-118 Development of single-cell metabolomics in Arabidopsis root using live single-cell mass spectrometry coupled with nanoflow-liquid chromatography

Shunsuke Watanabe[1,2], Hiromi Suzuki[1], Yumiko Takebayashi[1], Mitsunori Seo[1] ([1]RIKEN CSRS, [2]BPMP, INRAE)

PL-119 Identification and analysis of 4-PBA analog causing plant growth promotion

Soshi Isahaya[1], Yuzuka Ikegame[2], Wakako Ibuka[2], Akito Kanei[2], Kie Takahashi[2], Tetsuya Sakurai[3], Hirokazu Iida[2], Youichi Kondou[2] ([1]Grad. Sch. Eng., Kanto-Gakuin Univ., [2]Kanto-Gakuin Univ. Coll. Sci. Eng., [3]Multi. Sci. Clu., Kochi Univ.)

PL-120 Development of a novel modeling method to integrate various life phenomena in one model

Ryoichi Sato, Masami Yokota Hirai (RIKEN CSRS)

PL-121 Enhancement of accumulation of phenolic compounds in leaf lettuce by prohydrojasmon treatment

Shinya Takahashi[1,2,3], Yui Namioka[3], Haidar Rafid Azis[2], Tomoharu Sano[4], Mitsuko Aono[5], Masami Koshiyama[6], Hiroshi Fujisawa[6], Hiroko Isoda[1,2,3] ([1]Facul. Life Environ. Sci., Univ. Tsukuba, [2]ARENA, Univ. Tsukuba, [3]T-LSI, Univ. Tsukuba, [4]Health and Environ. Risk Div., NIES, [5]Biodiv. Div., NIES, [6]Zeon Corp.)

■ Others

PL-122 Appropriate Information to Prevent Systematic Research Misconducts

Emiko Harada (The Univ. of Shiga Pref.)

PL-123 Analysis of centromeres distribution mechanism by the nuclear pore complex in *Arabidopsis thaliana*

Nanami Ito[1], Takuya Sakamoto[1], Yuki Sakamoto[2], Sachihiro Matsunaga[3] ([1]Dept. of Appl. Biol. Sci., Fac. of Sci. and Tech., Tokyo Univ. of Sci., [2]Dept. of Biol. Sci., Grad. Sch. of Sci., Osaka Univ., [3]Dept. of Integr. Biosci., Grad. Sch. of Front. Sci., Univ. of Tokyo)