General Presentations

Program of Poster Presentations

- On Day 2, those presenting on Day 1 should remove their posters at 9:00–10:00, and those presenting on Day 3 should mount their posters at 12:00–16:00.

The poster discussion times are as follows.

- For presentations in the first half: 17:00–19:00 on Day 1.
- For presentations in the second half: 14:00–16:00 on Day 3.
- On both Days 1 and 3, presenters of odd- and even-numbered posters should be in front of their boards during the first and second half of the poster discussion time, respectively

■ Photosynthesis

PF-001 Effects of chlorophyll degradation by Stay-Green on senescence in Arabidopsis
Ying Chen, Ayumi Tanaka, Hisashi Ito (Inst Low Temp Sci, Hokkaido Univ)

PF-002 Ethylene production and leaf abscission through chlorophyll degradation in poplar
Hisashi Ito[1], Keita Arakawa[2], Ayumi Tanaka[1] ([1]Inst Low Temp Sci, Hokkaido Univ, [2]Res Fac Agr, Hokkaido Univ)

PF-003 Reconstitution of the catalytic component (NB-protein) of dark-operative protochlorophyllide oxidoreductase with individual subunit proteins, BchN and BchB
Yoshiki Morimoto, Haruki Yamamoto, Hisanori Yamakawa, Yuichi Fujita (Grad. Sch. Bioagricultural. Sci., Univ. Nagoya)

PF-004 Four distinct trimeric forms of light-harvesting complex II isolated from the green alga Chlamydomonas reinhardtii
Keisuke Kawakami[1], Ryutaro Tokutsu[2], Eunchul Kim[2], Jun Minagawa[2] ([1]Osaka City University, [2]Division of Environmental Photobiology, National Institute for Basic Biology)

PF-005 Imaging of Intracellular Rearrangement of Photosynthetic Proteins upon State Transition by Using High Resolution Cryogenic Microscope
Yuki Fujita, Xianjun Zhang, Yutaka Shibata (Organic Physical Chemistry Lab., Department of Chemistry, Grad. Sch. of Sci., Tohoku Univ.)

PF-006 Long-term light adaptation of the glaucophyte *Cyanophora paradoxa*, probed by time-resolved fluorescence spectroscopy
Yoshifumi Ueno, Seiji Akimoto (Grad. Sch. Sci., Kobe Univ.)

PF-007 Screening of Arabidopsis Mutants with Disturbed Regulation of Proton Concentration Gradient across the Thylakoid Membrane
Nayu Otsuki[1], Mari Takusagawa[1], Fumiyoshi Myouga[2], Toshiharu Shikanai[1] ([1]Grad. Sch. Sci., Kyoto Univ., [2]RIKEN CSRS)

PF-008 Selective photoinhibition of photosystem I induced by the detachment of leaves
Yuki Sato[1], Kintake Sonoike[2] ([1]Integrative Bioscience and Biomedical Engineering, [2]Faculty of Education and Integrated Arts and Sciences, Waseda University, Japan)

PF-009 Infrared microspectroscopic analysis of the water oxidation reaction in a single photosystem II microcrystal
Yuki Kato[1], Satoshi Haniu[1], Yoshiki Nakajima[2], Fusamichi Akita[2,3], Jian-Ren Shen[2], Takumi Noguchi[1] ([1]Grad. Sch. Sci., Nagoya Univ., [2]Res. Inst. Interdiscip. Sci., Okayama Univ., [3]JST-PRESTO)

PF-010 Effects of cryoprotectants on the efficiency of S-state transition in oxygen-evolving photosystem II
Yoshiki Nakajima[1], Fusamichi Akita[1,2], Jian-Ren Shen[1] ([1]Res. Inst. Interdiscip. Sci., Unv. Okayama, [2]JST, PRESTO)

PF-011 Factors to regulate the species-dependent equilibrium of the S_2-state isomers of the water-oxidizing Mn_4CaO_5 cluster in photosystem II
Shota Taguchi[1], Liangliang Shen[2], Guangye Han[2], Jian-Ren Shen[3], Takumi Noguchi[1], Hiroyuki Mino[1] ([1]Grad. Sch. Sci., Nagoya Univ., [2]Key Lab. Photobiol., Inst. Botany, Chinese Acad. Sci., China, [3]Res. Inst. Interdiscip. Sci., Okayama Univ.)

PF-012 Comparison of Photosystem II Complexes in *Anabaena* sp. PCC 7120 Isolated through Cell Disruption with Glass beads or Lysozyme Treatment
Sayaka Nakaji[1], Masahiro Aota[2], Mitsunori Katayama[3], Toshiyuki Shinoda[4], Kaichiro Endo[5], Asako Ishii[2], Tatsuya Tomo[4], Hajime Wada[5], Naoki Mizusawa[2,6] ([1]Graduate School of Science, Hosei University, [2]Faculty of Bioscience and Applied Chemistry, Hosei University, [3]College of Industrial Technology, Nihon University, [4]Graduate School of Science, Tokyo University of Science, [5]Graduate School of Arts and Sciences, The University of Tokyo, [6]Research Center for Micro-Nano Technology, Hosei University)

PF-013 Reassessment of state transitions for activating cyclic electron flow
Kenji Takizawa[1,2] ([1]National Institute for Basic Biology, [2]Astrobiology Center)

PF-014 The role of D1-R140 and D2-T231 interacting with a phosphatidylglycerol molecule (PG714) in the structure and functions of photosystem II
Yuji Fujita[1], Mayu Matsubara[2], Yuto Sugawara[3], Kaichiro Endo[4], Toshiyuki Shinoda[5], Tatsuya Tomo[5], Kenjin Shen[6], Asako Ishi[3], Koichi Kobayashi[4], Hajime Wada[2,4], Naoki Mizusawa[1,3,7] ([1]Graduate School of Science and Engineering, Hosei University, [2]Graduate School of Science, The University of Tokyo, [3]Faculty of Bioscience and Applied Chemistry, Hosei University, [4]Graduate School of Arts and Sciences, The University of Tokyo, [5]Faculty of Science, Tokyo University of Science, [6]Research Institute for Interdisciplinary Science, The University of Okayama, [7]Research Center for Micro-Nano Technology, Hosei University)

PF-015 Quantitative and functional variation of photosystems of Fe-deficient leaves among barley(*Hordeum vulgare*) cultivars
Yuna Wakabayashi, Yuta Majima, Rika Uehara, Akihiro Saito, Takuji Ohyama, Kyoko Higuchi (Agri. Chem., Tokyo Univ. Agri.)

PF-016 Differing isoforms of the cobalamin binding photoreceptor AerR oppositely regulate photosystem expression

Haruki Yamamoto, Mingxu Fang, Carl Bauer (Molecular and Cellular Biochemistry Department, Indiana University)

PF-017 The effect of environmental stress on the amino acid primary structure of the photosynthetic reaction center complex in photosynthetic bacteria

Yurika Morioka, Sakiko Nagashima, Setsuko Hirose, Satoshi Hanada (Department of Biol. Sci. Tokyo Met. Univ.)

■ Environmental Responses of Photosynthesis

PF-018 Functional analysis of heat-sensitive mutant identified by screening using tag-lines of genes encoding chloroplast membrane proteins

Fumiyoshi Myouga, Kazuo Shinozaki (RIKEN CSRS)

PF-019 Quantitative proteome analysis of *Synechocystis* sp. PCC 6803 under different spectral lights

Masakazu Toyoshima, Masumi Sakata, Yoshihiro Toya, Fumio Matsuda, Hiroshi Shimizu (Dept. of Bioinfo. Eng., Grad. Sch. IST, Osaka Univ.)

PF-020 Circadian rhythm of the balance between intracellular reducing power and ROS-level in *Synechococcus elongatus* PCC7942

Kenya Tanaka[1], Masahito Ishikawa[2,3], Souishiro Kato[3,4], Shuji Nakanishi[1,3] ([1]Grad. Sch. Eng. Sci., Osaka Univ., [2]Grad. Sch. Eng., Nagoya Univ., [3]RCSEC, Osaka Univ., [4]AIST)

PF-021 Effects of reduced unsaturation of membrane lipids on growth and productivity of the *Synechocystis* sp. PCC6803 mutant engineered for free fatty acid production

Sumie Keta[1], Honoka Saruhashi[1], Yuuya Senoo[2], Kazutaka Ikeda[3], Tatsuo Omata[4], Makiko Aichi[1] ([1]Biol. Chem., Chubu Univ., [2]Med., Nagoya Univ., [3]IMS, Riken, [4]Grad. Sch. Bioagri. Sci., Nagoya Univ.)

■ Primary metabolism

PF-022 Metabolic Flux Analysis of *Synechocystis* sp. PCC 6803 Grown Under Different Spectral Lights

Chiaki Yamamoto[1], Sayaka Kitamura[2], Masakazu Toyoshima[2], Yoshihiro Toya[2], Hiroshi Shimizu[2] ([1]Sch. Eng., Osaka Univ., [2]Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ.)

PF-023 Functional analysis of the glutamine binding domain repeat protein (CmACR) in the unicellular red alga *Cyanidioschyzon merolae*

Tokiaki Takemura, Sousuke Imamura, Kan Tanaka (CLS, Tokyo Tech)

PF-024 Diverse functions of starch decomposition products in developing fruit of tomato

Chiaki Matsukura[1], Xiaoran Yu[2], Yonggen Yin[3], Hiroshi Ezura[1] ([1]T-PIRC, Univ. Tsukuba, [2]Grad. Sch. Life Env. Sci., Univ. Tsukuba, [3]Nat. Inst. Quantum Radiological Sci. Tech.)

PF-025 Analysis of membrane trafficking regulation in plant C/N nutrient response

Yoko Hasegawa[1], Akari Fujimaki[1], Yongming Luo[1], Koki Mukuta[2], Tomohiro Uemura[3], Yohann Boutte[4], Akihiko Nakano[5], Takeo Sato[1], Junji Yamaguchi[1] ([1]Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ., [2]Sch. Sci., Hokkaido Univ., [3]Graduate School of Humanities and Sciences, Ochanomizu Univ., [4]Laboratory of Membrane Biogenesis - CNRS/Bordeaux University - France, [5]Live Cell Super-Resolution Imaging Research Team, RIKEN Center for Advanced Photonics)

PF-026 Biochemical analysis of ubiquitin signals on a SNARE protein involved in plant C/N response

Akari Fujimaki[1], Yoko Hasegawa[1], Takeo Sato[1], Syouta Hozuki[1], Tomohiro Uemura[2], Akihiko Nakano[3], Junji Yamaguchi[1] ([1]Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ., [2]Graduate School of Humanities and Sciences, Ochanomizu University, [3]Live Cell Super-Resolution Imaging Research Team, RIKEN Center for Advanced Photonics)

PF-027 Induction of chloroplast development in the detached root tissues is disturbed in the *Arabidopsis gles1* mutant that has a defect in chloroplast envelope-localized lipid transporter

Tomoki Obata[1], Ryosuke Tadakuma[1], Koichi Kobayashi[2], Koh Iba[1], Juntaro Negi[1] ([1]Department of Biology, Faculty of Sciences, Kyushu University, [2]Faculty of Arts and Sciences, Osaka Prefecture University)

PF-028 Engineering of Arabidopsis plants to produce high-value oils in leaves

Yuuki Ebiya[1], Hiroyuki Ohta[1,2], Mie Shimojima[1] ([1]School of Life Science and Technology, Tokyo Institute of Technology, [2]OPERA, JST)

PF-029 Do cyanobacteria synthesize triacylglycerols?

Natsumi Mori, Naoki Sato (Univ. of Tokyo, Grad. School Arts Sciences)

PF-030 Functional analysis of a proline-knot-like motif of LDSP in Nannochloropsis

Shohei Yasuda, Takashi Nobusawa, Masako Iwai, Mie Shimojima, Hiroyuki Ohta (Tkyo tech)

PF-031 Novel insights into mechanisms underlying growth defects associated with trinucleotide repeat expansion in Arabidopsis thaliana

Yimeng Li[1], Yuji Sawada[1], Kensuke Kawade[2], Hirokazu Tsukaya[3], Masami Yokota Hirai[1] ([1]RIKEN Center for Sustainable Resource Science (CSRS), [2]Okazaki Institute for Integrative Bioscience (OIIB), [3]Tokyo University)

PF-032 A search for novel transcription factors involved in flavin metabolism of plants

Junya Namba[1], Takanori Maruta[1], Takahiro Ishikawa[1], Kazuya Yoshimura[2], Shigeru Shigeoka[3], Takahisa Ogawa[1] ([1]Grad. Sch. Nat. Sci. Technol., Shimane Univ., [2]Dept. Food Nutr. Sci., Coll. Biosci. Biotech., Chubu Univ., [3]Dept. Adv. Biosci., Fac. Agr., Kindai Univ.)

PF-033 Genetic analysis of callose deposition during phosphate starvation response in *Arabidopsis thaliana*

Koei Yachi[1], Tan Anh Nhi Nguyen[1], Kentaro Okada[1], Kei Hiruma[1,2], Yusuke Saijo[1] ([1]Grad. Sch. Sci. Tech., NAIST, [2]JST, Presto)

■ Secondary metabolism

PF-034 *In vivo* functional analysis of terpene synthase genes from medicinal plant *Scoparia dulcis*.

Kazuya Ishita, Ryo Yamamoto, Yoshimi Yamamura, Fumiya Kurosaki, Jung-Bum Lee (Graduate School Med & Pharm. Sci., Univ. Toyama)

PF-035 Production of betalain-producing gentian plants by constitutive and petal specific promoters

Masahiro Nishihara, Atsumi Higuchi, Aiko Watanabe, Hideyuki Takahashi (Iwate Biotechnology Research Center)

PF-036 Molecular analysis of persulfide metabolism involved in hydrogen sulfide dependent signaling

Takayuki Shimizu[1], Tatsuru Masuda[1], Shinji Masuda[2] ([1]Grad. Sch. Arts and Sci., Univ. Tokyo, [2]Cent. Biol. Res. and Inform., Tokyo Inst. Technol.)

■ Biomembrane/Ion and solute transport

PF-037 The role of sphingolipids in the dynamics of plasma membrane in plants

Minoru Nagano[1], Yohann Boutte[2], Adiilah Mamode-Cassim[2], Laetitia Fouillen[2], Maki Kawai-Yamada[3], Sebastien Mongrand[2] ([1]Ritsumeikan Univ., [2]Bordeaux Univ., [3]Saitama Univ.)

PF-038 Identification and characterization of novel factors involved in the flavin transport in plants

Madoka Kikuchi[1], Takuto Sugimoto[1], Miho Harada[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]Dept. Adv. Biosci., Fac. Agr., Kindai Univ.)

PF-039 A Study for Taxane Compound Transporters from Yew

Hiroaki Kuasno[1], Hiroshi Minami[2], Yoshihiro Kato[2], Homare Tabata[2], Kazufumi Yazaki[1] ([1]Laboratory of Gene Expression, Research Institute for Sustainable Humanosphere, Kyoto University, [2]Lifescience Center, Hokkaido Mitsui Chemicals)

PF-040 Screening for Transporters Required for Shikonin Secretion Mechanism

Kanade Tatsumi, Takuji Ichino, Yuka Saida-Munakata, Kazufumi Yazaki (RISH, Kyoto Univ.)

PF-041 Glutathione, applied to leaves, activates zinc transport from roots to shoots in oilseed rape plants

Shin-ichi Nakamura[1], Arunee Wongkaew[2], Yuji Nakai[3], Hiroki Rai[4], Naoko Ohkama-Ohtsu[2] ([1]Tokyo University of Agriculture, [2]Tokyo University of Agriculture and Technology, [3]Hirosaki University, [4]Akita Prefectural University)

PF-042 Apoplastic bypass flow is involved in cadmium uptake in rice

Izumi Mori[1], Carlos Arias-Barreiro[1], Lia Ooi[1], Muhammad Sobahan[2], Yoshimasa Nakamura[2], Yoshihiko Hirai[2], Yoshiyuki Murata[2] ([1]IPSR, Okayama Univ., [2]Grad. Sch. Env. Life. Sci., Okayama Univ.)

PF-043 ATP Binding Cassette Proteins ABCG37 and ABCG33 function as cesium uptake carriers in Arabidopsis thaliana

Mohammad Arif Ashraf[1], Sayaka Kumagai[2], Ryohei Sugita[3], Keitaro Tanoi[3,4], Abidur Rahman[1,2] ([1]United Graduate School of Agricultural Sciences, Iwate University, Morioka, 020-8550, Japan, [2]Faculty of Agriculture, Iwate University, Morioka, 020-8550, Japan, [3]Graduate School of Agriculture and Life Sciences, The University of Tokyo, 1-1-1 Yayoi, Bunkyo-ku, Tokyo, 113-8654, Japan, [4]PRESTO, Japan Science and Technology Agency (JST), 4-1-8 Honcho, Kawaguchi, Saitama 332-0012, Japan)

■ Membrane trafficking

PF-044 Identification of RAB5 effectors containing PH domain REAP2 and REAP3 in Arabidopsis

Seung-won Choi[1], Kazuo Ebine[2,5], Naoya Kato[3], Takafumi Ishihara[3], Chie Suzuki[3], Yuki Sugiyama[3], Yumiko Tanaka[3], Takashi Ueda[2,5], Akihiko Nakano[4], Emi Ito[1] ([1]Dept. Natural Sciences, ICU, [2]Div. Cellular Dynamics, NIBB, [3]Grad. Sch. Science, Univ. Tokyo, [4]RIKEN, RAP, [5]Sch. Life Sci., SOKENDAI)

PF-045 Analysis of a new PH domain-containing effector of plant RAB5s

Emi Ito[1], Seung-won Choi[1], Kazuo Ebine[2,3], Takafumi Ishihara[4], Chie Suzuki[4], Yuki Sugiyama[4], Akihiko Nakano[5], Takashi Ueda[2,3] ([1]Dept. Natural Sciences, ICU, [2]Div. Cellular Dynamics, NIBB, [3]Sch. Life Sci., SOKENDAI, [4]Grad. Sch. Science, Univ. Tokyo, [5]RIKEN, RAP)

PF-046 Functional analysis on sequences responsible for sorting of vacuolar lumenal proteins to vacuole in *Arabidopsis thaliana*

Shuhei Kohata[1], Yuga Shinozaki[2], Kazuhiro Kuga[2], Hidehisa Shimizu[2], Mitsuo Jisaka[2], Kazushige Yokota[2], Tsuyoshi Nakagawa[1], Kohji Nishimura[1,2] ([1]Dept. Mol. Func. Gen., Int. Cent. Sci. Res., Shimane Univ., [2]Dept. Life Sci., Fac. Life Environ. Sci, Shimane Univ.)

PF-047 Sucrose-starvation induced degradation of TGN localized proteins

Yamato Oda[1], Satoru Asatsuma[2], Hiroaki Nakasone[1], Abiodun Moses O[2], Kiminori Toyooka[3], Ken Matsuoka[1,2,4] ([1]Graduate School of Bioresource and Bioenvironmental, Kyushu University, [2]Faculty of Agriculture, Kyushu University, [3]RIKEN CSRS, [4]Biotron Application center, Kyushu University)

■ Organelles/Cytoskeleton

PF-048 Characterization of Chloroplast Protein Import in Red Alga, *Cyanidioschyzon merolae*.

Sanghun Baek[1,2], Yukari Asakura[1], Gaku Fujii[3], Sousuke Imamura[3], Kan Tanaka[3], Masato Nakai[1] ([1]Inst. Prot. Res., Osaka Univ., [2]Grad. Sch. Sci., Osaka Univ., [3]Inst. Innov. Res., Tokyo Inst. Tech.)

PF-049 Physiological Consequences Of Autophagy Deficiency In The Moss Physcomitrella patens

Most. Mohoshena Aktar, Kyosuke Mukae, Tomoya Tano, Mai Sato, Junyu Bao, Ryo Funada, Toshihisa Kotake, Daisuke Takezawa, Yuko Inoue-Aono, Yuji Moriyasu (Graduate School of Science and Engineering, Saitama University)

PF-050 Characterization of a Non-Photosynthetic-Type Protein Translocation Machinery at the Inner Envelope Membrane of Plastid (Chloroplast) in *Arabidopsis thaliana*.

Xueyang Zhao[1,2], Takeshi Higa[1], Masato Nakai[1] ([1]Inst. Prot. Res., Osaka Univ., [2]Grad. Sch. Sci., Osaka Univ.)

PF-051 The Localization of Chlorophyllase in Arabidopsis thaliana

Jun-Wei Lin[1,2], Tin-Han Shih[1], Chih-Wen Sun[2], Chi-Ming Yang[1] ([1]Biodiversity Research Center, Academia Sinica, Taipei, Taiwan, [2]Department of Life Sciences, National Taiwan Normal University, Taipei, Taiwan)

PF-052 Effects of Sodium Chloride on Chloroplast division in the Moss Physcomitrella patens

Thi Huong Do[1], Prapapron Pongthai[1], Hiroyoshi Takano[2], Yasushi Yoshioka[3], Ooi-Kock Teh[1], Tomomichi Fujita[1] ([1]Grad. Sch. Life Sci., Univ. Hokkaido, [2]Grad. Sch. Sci, Univ. Kumamoto, [3]Grad. Sch. Sci, Univ. Nagoya)

PF-053 Functional study in GTPase activity of VIPP1 involved in chloroplast membrane integrity

Kenichi Shioya, Norikazu Ohnishi, Wataru Sakamoto (IPSR, Okayama Univ.)

PF-054 Identification and analysis of the suppressor genes of *crl* in *Arabidopsis thaliana*

Ryo Yoshimura[1], Ryohei Seta[1], Takamasa Suzuki[2], Yasushi Yoshioka[1] ([1]Div. Biol. Sci., Grad. Sch. Sci., Nagoya Univ., [2]Col. Biosci. Biotech., Chubu Univ.)

PF-055 Functional analysis of organelle exonuclease DPD1 in rice

Tsuneaki Takami[1], Hiroshi Yamatani[2], Makoto Kusaba[2], Wataru Sakamoto[1] ([1]IPSR., Okayama Univ., [2]Grad. Sch. Sci., Hiroshima Univ.)

PF-056 Complementation Analysis of *MurE* Knockout Lines Showing Defects for Chloroplast Division in Moss and for Chloroplast Development in *Arabidopsis*

Ichiro Kajisa[1], Xiaofei Lin[2], Yilan E[2], Hiromi Kudo[1], Susumu Takio[3,4], Katsuaki Takechi[3], Hiroyoshi Takano[3] ([1]Grad. Sch. Sci. & Tech., Univ. Kumamoto, [2]Col. of Life Sci., Univ. Inner Mongolia, [3]FAST, Univ. Kumamoto, [4]Cent. Water Cycle, Mar. Environ. Disast. Manage.)

PF-057 Analysis of mitochondrial RNA processing factors involved in lateral root development

Akihito Mamiya[1], Kurataka Otsuka[1], Kento Kobayashi[2], Yusuke Yagi[2], Takahiro Nakamura[2], Takashi Hirayama[3], Munetaka Sugiyama[1] ([1]Dept. Biol. Sci., Grad. Sch. Sci., Univ. Tokyo, [2]Dept. Biosci. & Biotech., Fac. Agr. Sci., Kyusyu Univ., [3]Inst. Plant Sci. & Res., Okayama Univ.)

PF-058 Defense gene expression upregulated by mitochondrial perturbation-induced Ca^{2+} signals

Takaki Murata, Koji Shimotani, Miho Kotani, Marina Onoue, Kanako Yamasaki, Satoshi Sano, Takashi Shiina (Grad. Sch. Life and Env. Sci., Kyoto Pref. Univ)

■ Cell wall

PF-059 Effects of Gajyumaru latex on cell growth and cell wall structure and properties in fission yeast S.japonicus

Momoko Terao, Yoh Sakuma, Masahiro Inouhe (Biology and Environmental Science, Graduate School of Science and Technology, Ehime University)

PF-060 Increase in Pectin Methylesterase Activity in Transgenic Poplar Trees with an Introduced Pectin Methylesterase Gene.

Koichi Kakegawa[1], Mitsuru Nishiguchi[2] ([1]Dept. Forest Resources Chemistry, Forestry and Forest Products Res. Inst., [2]Dept. Forest Molecular Genetics and Biotechnology, Forestry and Forest Products Res. Inst.)

PF-061 Analysis of cell wall and genes related to it in Napiergrass

Tomoko Niki[1], Shingo Sakamoto[1], Yasuyo Himuro[2], Yusuke Ueta[2], Madoka Yonekura[2], Satoshi Kondo[2], Kunio Matsui[2], Takehiko Shimada[2], Kaoru Suzuki[1], Nobutaka Mitsuda[1] ([1]Bioprod. Res. Inst., AIST, [2]Agriculture & Biotechnology Business Division, Toyota Motor Corporation)

PF-062 Development of selection system by gene expression in Napier grass

Yasuyo Himuro[1], Tomoko Niki[2], Shingo Sakamoto[2], Nobutaka Mitsuda[2], Yusuke Ueta[1], Madoka Yonekura[1], Satoshi Kondo[1], Kunio Matsui[1], Kaoru Suzuki[2], Takehiko Shimada[1] ([1]Agric. Biotechnol. Bus. Div., Toyota Motor Corp., [2]Bioprod. Res. Inst., AIST)

■ Cell cycle/Cell division

PF-063 Vacuole may be involved in asymmetric cell division of protonemal stem cells, which is directed by a GRAS family transcriptional factor in *Physcomitrella patens*

Renqi Wang[1], Ooi-Kock Teh[1], Alisa Vyacheslavova[1], Mitsuyasu Hasebe[3], Tomomichi Fujita[1,2] ([1]Dept. Biol. Sci, Hokkaido University, [2]Fac. Sci, Hokkaido University, [3]National Institute for Basic Biology)

PF-064 Involvement of RopGTPase signaling in the slime papillae development in *Marchantia polymorpha*

Takuma Hiwatashi, Hidehiro Fukaki, Tetsuro Mimura, Kimitsune Ishizaki (Graduate School of Science, Kobe University)

PF-065 Functional analysis of a novel GRAS-type transcription factor E1M required for proper cell cycle regulation in meristem.

Yuji Nomoto[1], Rieko Noda[1], Toshiya Suzuki[2], Takamasa Suzuki[3], Kenichiro Maeo[1], Masaki Ito[1] ([1]Grad. Sch. Bioagr. Sci., Nagoya Univ., [2]Plant Genet. Lab., Nat. Inst. Genet., [3]Coll. Biosci. Biotech., Chubu Univ.)

■ Vegetative growth

PF-066 Colony formation from mesophyll protoplast of *Perilla frutescens*

Mizuki Nakamura[1], Tomoko Murayama[2] ([1]Natl. Inst. tech., Sasebo Col. Department of Chemical and Biological Engineering, [2]Natl. Inst. tech., Sasebo Col. Department of Chemical and Biological Engineering)

PF-067 Growth of leaf and Usefulness as the experiment material of Ceylon-Benkei

Keiko Goto[1], Akira Nakamura[2] ([1]Pediatrist, [2]Emeritus professor, Univ. of Shizuoka)

PF-068 Genotypic comparative analysis of the early phase of adventitious root formation in *Eucalyptus*

Takato Kameyama[1], Hiroaki Machino[1], Kazuo Watanabe[2,3], Taichi Oguchi[2,3] ([1]College of Biological Sciences, School of Life & Environmental Sciences, University of Tsukuba, [2]Faculty of Life & Environmental Sciences, University of Tsukuba, [3]Tsukuba Plant Innovation Research Center (T-PIRC), University of Tsukuba)

PF-069 Regulation of cytokinin in lateral root growth by root pruning

Jiahang Miao[1], Dongyang Xu[2], Emi Yumoto[3], Takao Yokota[3], Masashi Asahina[3], Masaaki Watahiki[1,4] ([1]Grad. Sch. Life. Sci., Hokkaido Univ., Sapporo, [2]Sch. Biomed. Sci., Inst. Geno., Huaqiao Univ., Amoy, China, [3]Dep. Biosci., Teikyo Univ., Utsunomiya, [4]Div. Biol. Sci., Fac. Sci., Hokkaido Univ., Sapporo)

PF-070 A yeast one-hybrid screening to identify transcription factors that regulate auxin biosynthesis during haustorium initiation in parasitic plants

Takanori Wakatake[1], Satoko Yoshida[2], Ken Shirasu[1,3] ([1]CSRS, RIKEN, [2]Bioscience, NAIST, [3]Grad. Sch. Sci., Univ. Tokyo)

PF-071 ANGUSTIFOLIA Regulates Cell Elongation In Both Gametophyte And Sporophyte Phases In The Moss Physcomitrella patens.

Hiroaki Nagase[1], Yoshikazu Hashida[1], Katsuaki Takechi[2], Tomoyuki Yabe[1], Susumu Takio[2,3], Yoshikatsu Sato[4], Mitsuyasu Hasebe[5], Hirokazu Tsukaya[6], Hiroyoshi Takano[2] ([1]Grad. Sch. Sci. Tech., Univ. Kumamoto, [2]FAST., Univ. Kumamoto, [3]Center Water Cycle, Mar. Environ. Disast. Manage., Univ. Kumamoto, [4]NIBB-ITBM., Univ. Nagoya, [5]NIBB, SOKENDAI, [6]Grad. Sch. Sci., Univ. Tokyo)

PF-072 *PpTAW*s, encoding an ALOG transcription factors, are required for stem cell maintenance in *Physcomitrella patens*

Yuki Hata[1], Yuji Hiwatashi[2], Junko Kyozuka[1], Satoshi Naramoto[1] ([1]Graduate School of Lifescience, Tohoku University, [2]School of Food, Agricultural and Environmental Sciences, Miyagi University)

PF-073 Search for factors which are important for cell-to-cell communication or cell polarity regulation with chemical screening in the moss *Physcomitrella patens*

Chiyo Jinno[1], Naoya Kadofusa[2], Ayato Sato[2], Tomomichi Fujita[3] ([1]Sch. Sci., Univ. Hokkaido, [2]WPI-ITbM, Univ. Nagoya, [3]Grad. Fac. Sci., Univ. Hokkaido)

PF-074 Gene-Expression Profiling of Shoot Regeneration from the Epidermis in Cultured Stem Segments of *Torenia fournieri*.

Hatsune Morinaka[1], Akihito Mamiya[1], Hiroaki Tamaki[1], Takamasa Suzuki[2], Momoko Ikeuchi[3], Akira Iwase[3], Keiko Sugimoto[3], Tetsuya Higashiyama[4], Munetaka Sugiyama[1] ([1]Botanical Gardens, Grad. Sch. Sci., Univ. Tokyo, [2]Dept. Biol. Chem., Coll. Biosci. Biotech., Chubu Univ., [3]CSRS, Riken, [4]ITbM, Nagoya Univ.)

PF-075 The role of plant autophagy in callus formation

Yuki Utsugi[1], Akira Iwase[2], Kohki Yoshimoto[1] ([1]Meiji Univ., Sch. Agric. Dep. Life Sci., [2]RIKEN, CSRS)

PF-076 Novel meristematic organ on the cauline leaf of *Rorippa aquatica*

Shuka Ikematsu, Ami Sasaki, Rumi Amano, Tomoaki Sakamoto, Seisuke Kimura (Kyoto-sangyo Univ.)

PF-077 The relationships between phytohormones and vegetative propagation in *Rorippa aquatica*

Rumi Amano[1], Hokuto Nakayama[2], Risa Momoi[1], Shozuka Gunji[3], Yumiko Takebayashi[4], Tomoaki Sakamoto[1], Hiroyuki Kasahara[4,5], Hitoshi Sakakibara[4,6], Ali Ferjani[3,7], Seisuke Kimura[1] ([1]Facul. Life Sci., Kyoto Sangyo Univ., [2]Dept. of Plant Biology, University of California, Davis, [3]Unit. Grad. Sch. Edu., Univ. Tokyo Gakugei, [4]RIKEN, CSRS, [5]GIR, Tokyo Univ. Agri. Tech., [6]Nagoya Univ., [7]Dept. Biol., Tokyo Gakugei Univ.)

PF-078 ASHH2 Regulates Arabidopsis Callus Formation And Shoot Regeneration Through Photosynthesis/light And Glucose Metabolism Pathways

Ryosuke Makino[1], Kaoru Sugimoto[1], Yuki Katsuyama[1], Hiroya Ishihara[1], Satoshi Kadokura[1], Takamasa Suzuki[2], Takuya Sakamoto[1], Sachihiro Matsunaga[1] ([1]Dept. Applied Bio. Sci., Fac. Sci. Tech., Tokyo Univ. Sci., [2]Chubu Univ., Department of Bio. Sci. Tech., Kasugai)

PF-079 Analysis of novel *eda1* mutant of *Marchantia polymorpha* with ectopic meristem formation

Yuya Mori[1], Kento Otani[1], Shohei Yamaoka[2], Ryuichi Nishihama[2], Takayuki Kohchi[2], Taku Takahashi[1], Hiroyasu Motose[1] ([1]Grad. Sch. Nat. Sci. & Tech., Okayama Univ., [2]Grad. Sch. Biostudies, Kyoto Univ.)

PF-080 Gene expression analyses in the unique meristems of one-leaf plants, *Monophyllaea*

Ayaka Kinoshita[1], Hiroyuki Koga[1], Sujung Kim[2], Nobuyoshi Mochizuki[2], Akira Nagatani[2], Hirokazu Tsukaya[1,3] ([1]Grad. Sch. Sci., Univ. Tokyo, [2]Grad. Sch. Sci., Univ. Kyoto, [3]NINS, ExCELLS)

PF-081 Analysis of REPRESSOR OF SOMATIC EMBRYOGENESIS 1 (RSE1) transcription factor that controls cell totipotency in Arabidopsis

Jun Nakayama[1], Tsubasa Yamagata[2], Hironori Takasaki[2], Miho Ikeda[2], Masaru Ohme-Takagi[2] ([1]Sch. Sci., Univ. Saitama, [2]Grad. Sch. Sci. Eng., Univ. Saitama)

PF-082 Genome wide association mapping for phytic acid content in rice grain

Ishara Perera[1], Ayaka Fukushima[2], Tatsuki Akabane[2], Naoki Hirotsu[1,2] ([1]Grad. Sch. Life Sci. Toyo Univ., [2]Fac. Life Sci. Toyo Univ.)

PF-083 Natural variation of phytic acid contents in rice germplasm and characterization of low and high phytic acid rice

Ayaka Fukushima[1], Ishara Perera[2], Tatsuki Akabane[1], Fumiya Asano[1], Koki Hosoya[1], Naoki Hirotsu[1,2] ([1]Fac. Life Sci. Toyo Univ., [2]Grad. Sch. Life Sci. Toyo Univ.)

PF-084 The Mechanism of action of Arabidopsis thaliana IAP like proteins (AtlLPs) for germination

Masami Nakamura[1], Reona Takano[2], Rio Shimizu[2], Katsumi Higashi[1,2] ([1]Grad. Sci. & Eng. Bio, Teikyo Univ. Sci., [2]Dept. Life&Health Sci., Teikyo Univ. Sci.)

PF-085 Functional analysis of adaptin binding protein on endosperm development in Arabidopsis seeds morphological functions of adaptin binding protein in Arabidopsis

Keito Yamaguchi, Yuki Nakao, Reo Sugiyama, Naoto Kawakami (Department of Life Sciences, Univ. Meiji)

PF-086 Physiological role of a cell-wall protein SRPP in Arabidopsis seed maturation

Natsuki Tanaka-Takada, Hiroshi Uno, Masayoshi Maeshima (Grad. Sch. Bioagr. Sciences, Nagoya University)

PF-087 Natural variation in seed germination response to temperature and phenology in Arabidopsis

Hiroki Maruyama[1], Jun Shigeeda[1], Nanami Morijiri[1], Nozomi Nagatake[1], Misaki Tochinai[1], Ryo Shimizu[1], Masatomo Kobayashi[2], Sei Iuchi[2], Naoto Kawakami[1] ([1]Laboratory of Plant Molecular Physiology, Department of Life Sciences, School of Agriculture, Meiji University, [2]Experimental Plant Division, RIKEN BioResource Research Center)

PF-088 The Mechanism of Submergence-Induced Suppression of Stomatal Development in an Amphibious Aquatic Plant, *Callitriche palustris*.

Yuki Doll[1], Hiroyuki Koga[1], Hirokazu Tsukaya[1,2] ([1]Grad. Sch. Sci., Univ. Tokyo., [2]ExCELLS, NINS.)

PF-089 Senescence of the Arabidopsis leaf disk with the meta-caspase gene knockdown plant

Kensin Sakano, Takuma Suwa, Hiroshi Hayashi (Fac. Biosci. Biotec., Fukui Pref. Univ.)

■ Vegetative growth

PF-090 Phenotypic analysis of the parthenocarpy and bubbling fruit mutant in tomato

Yu Lu, Johan Hunziker, Ryoichi Yano, Hiroshi Ezura, Tohru Ariizumi (Fac. Life and Envir. Sci., Univ. Tsukuba)

PF-091 Gene networks underlying the diversity in persimmon fruit shapes

Haruka Maeda[1], Takashi Akagi[1,2], Noriyuki Onoue[3], Atsushi Kono[3], Ryutaro Tao[1] ([1]Grad. Sch. Agri., Kyoto Univ., [2]JST PRESTO, [3]Inst. of Fruit Tree and Tea Science, NARO)

PF-092 Crosstalk between auxin and cytokinin for the spatio-temporal regulation of floral meristem activities in Arabidopsis

Ze Hong Lee[1], Yoshitaka Tatsumi[1], Nobutoshi Yamaguchi[1,2], Toshiro Ito[1] ([1]NAIST, Biological Sciences, [2]Precursory Research for Embryonic Science and Technology (PRESTO), JST)

PF-093 The longevity of shoot apical meristems in *clavata3* mutants

Yukun Wang, Makoto Shirakawa, Toshiro Ito (Graduate School of Biological Science, Nara Institute of Science and Technology)

PF-094 Function of H3K4 methylation in Homeotic Development in Plants

Satoyo Oya[1,2], Soichi Inagaki[2], Tetsuji Kakutani[1,2] ([1]Grad. Sch. Sci., UTokyo, [2]National Institute of Genetics)

■ Plant hormones/Signaling molecules

PF-095 Selective role of YUCCA gene family in the root-pruning induced lateral root formation

Yu Chen[1], Masaaki Watahiki[1,2] ([1]Grad. Sch. Life. Sci., Hokkaido Univ., [2]Fac. Sci., Hokkaido Univ.)

PF-096 Growth control of lateral root through auxin biosynthesis and transport

Xiaoli Sun[1], Masaaki Watahiki[1,2] ([1]Grad. Sch. Life. Sci., Hokkaido Univ., [2]Fac. Sci., Hokkaido Univ.)

PF-097 Structure and action of auxin-responsive genetic switches

Keita Tanaka[1], Alejandra Freire-Rios[2], Victoria Mironova[3], Roeland Boer[4], Dolf Weijers[1] ([1]Laboratory of Biochemistry, Wageningen UR, [2]Laboratory of Cell Biology, Wageningen UR, [3]Novosibirsk State University, [4]IRB Barcelona, BIST)

PF-098 A mechanism for communication between epidermal and cortical tissues in *Lotus japonicus* root nodule symbiosis

Takashi Goto[1,2], Meng Liu[1,2], Takashi Soyano[1,2], Masayoshi Kawaguchi[1,2] ([1]National Institute for Basic Biology, [2]The Graduate University for Advanced Studies)

PF-099 Rooting activity of Phenyllactic acid is a consequence of Phenyl acetic acid production

Yuko Maki[1], Hiroshi Soejima[1], Takeo Sato[2], Masaaki Watahiki[2], Junji Yamaguchi[2] ([1]Snow Brand Seed Co., ltd, [2]Fuc. Sci., Hokkaido Univ.)

PF-100 Effects of calcium dynamics on the gene expressions involved in auxin polar transport and recycling of PIN protein

Riko Inoue[1], Naoya Hayashi[1], Mariko Oka[2] ([1]Grad. Sch. Agric., Tottori Univ., [2]Fac. Agric., Tottori Univ.)

PF-101 Auxinic herbicides dicamba, picloram and 2,4-dichlorophenoxyacetic acid control weed by deploymerizing cellular actin

Haruna Sakai[1], Abidur Rahman[2] ([1]Grad. Sch. Agro-Biosci., Univ. Iwate, [2]Dept. Agriculture Agro-Biosci., Univ. Iwate)

PF-102 Characterization of biosynthesis pathway and function of novel cytokinins produced by *Rhodococcus fascians*

Alicia Surjana[1], Mio Takahata[1], Nanae Ueda[2], Mikiko Kojima[2], Hitoshi Sakakibara[1] ([1]Grad. Sch. Bioagri. Sci., Nagoya Univ., [2]RIKEN CSRS)

PF-103 Biosynthesis pathway of ABA mediates the regeneration of root system in *Arabidopsis*

Kou Kyo[1], Masaaki Watahiki[1,2] ([1]Grad. Sch. Life. Sci., Hokkaido Univ., [2]Fac. Sci., Hokkaido Univ.)

PF-104 Downstream pathway of abscisic acid inducible Arabidopsis MAP3Ks, MAP3K17/18.

Daisuke Matsuoka[1], Masayuki Hazama[2], Takashi Nanmori[3], Katsuhiko Sakamoto[1,2] ([1]Biosigal Research Center, Kobe Univ., [2]Grad. Sch. Agric. Sci., Kobe Univ., [3]Faculty of Health and Nutrition, Otemae Univ.)

PF-105 Functional analysis of brassinosteroid in woodland strawberry

Hikari Ishii, Yukihisa Shimada, Ayako Nakamura (Yokohama City University, KIBR)

PF-106 Arabidopsis transcription factors in BRs signaling by Yeast-two hybrid method

Kenjiro Fujita[1,2], Reika Hasegawa[3], Ayumi Yamagami[1], Miho Ikeda[3], Nobutaka Mitsuda[4], Tetsuo Kushiro[2], Kazuo Shinozaki[1], Masaru Takagi[3,4], Tadao Asami[5], Takeshi Nakano[1] ([1]CSRS, RIKEN, [2]Dept. Agric. Chem., Meiji Univ., [3]Grad. Sch. Science. Technol. Saitama Univ., [4]AIST., [5]Dept. Appl. Bio. Chem., Univ. of Tokyo)

PF-107 Functional analysis of brassinosteroid signaling factor BSHs

Rina Su[1,2], Ayumi Yamagami[1], Tomoko Miyaqi[1], Masaaki Sakuta[2], Tadao Asami[3], Kazuo Shinozaki[1], Takeshi Nakano[1] ([1]RIKEN CSRS, [2]Ochanomizu Univ, [3]Dept. Appl. Biol. chem. Univ of Tokyo)

PF-108 CEP5 and CEPR1 contribute to zinc homeostasis in *Arabidopsis thaliana*

Hou Xiao[1], Yuji Yamaguchi[1], Mami Kobayashi[1], Izumi Mori[2], Hiroyuki Daimon[3], Yoshikatsu Matsubayashi[4], Kousuke Hanada[5], Yoichiro Fukao[1] ([1]Dept. Bioinfo., Ritsumeikan Univ., [2]IPSR, Okayama Univ., [3]Fac. Agri, Ryukoku Univ., [4]Div. Biol. Sci., Grad. Sch. Sci., Nagoya Univ., [5]Dept. Biosci. Bioinfo., Kyusyu Inst. Tech.)

PF-109 Characterization of defensin-like (DEFL) family proteins on Zinc deficient condition in *Arabidopsis thaliana* root

Tomoya Ohshita[1], Kotomi Yokoyama[1], Mami Kobayashi[1], Izumi Mori[2], Shigeo S. Sugano[3,4], Yoichiro Fukao[1] ([1]Grad. Sch, Life Sci., Ritsumeikan Univ., [2]IPSR, Okayama Univ., [3]R-GIRO, Ritsumeikan Univ., [4]JST, PRESTO.)

PF-110 Analysis Of Mutants Showing An Altered Response To TOLS2 Peptide That Negatively Regulates *Arabidopsis* Lateral Root Initiation

Riku Nishimaru[1], Yuka Aoki[1], Koichi Toyokura[1,2], Akinori Shinoda[1], Tatsuaki Goh[1,3], Kimitsune Ishizaki[1], Tetsuro Mimura[1], Hidehiro Fukaki[1] ([1]Grad. Sch. Sci., Univ. Kobe, [2]Grad. Sch. Sci., Univ. Osaka, [3]Graduate School of Science and Technology, Nara Institute of Science and Technology)

PF-111 Exhaustive analysis of small proteins and peptides in xylem sap under different nutrient conditions

Satoru Okamoto[1,2], Shungo Kobori[3], Kie Kumaishi[3], Yumiko Makino[4], Takamasa Suzuki[5], Yasunori Ichihashi[2,3] ([1]Niigata Univ., [2]JST PRESTO, [3]RIKEN BRC, [4]NIBB, [5]Chubu Univ.)

PF-112 Screening and analyses of the mode of action of novel putative plant defense activators that activate salicylic acid- or jasmonic acid- pathways

Nobutaka Kitahata[1,2], Yuho Saito[1], Takamitsu Kurusu[3], Masataka Nakano[1], Yasuhiro Ishiga[4], Tadao Asami[5], Kazuyuki Kuchitsu[1,2] ([1]Tokyo Univ. of Sci., [2]IFC, Tokyo Univ. of Sci., [3]Suwa Univ. of Sci, [4]Univ. of Tsukuba, [5]Univ. of Tokyo)

PF-113 Analysis of *urm15* mutant defective in jasmonate-induced trichome formation

Yuki Yoshida[1], Kiyotaka Okada[2], Shinichiro Sawa[1] ([1]Grad. Sch. Sci. Tech., Kumamoto Univ., [2]Dept. Agr., Ryukoku Univ.)

PF-114 Identification of the genes regulated by NtCBP60g and NtSARD1, tobacco CBP60-type transcription factors

Tuyet Nhung Nguyen Thi, Kumiko Takagi, Shinpei Katou (Fac. Agr., Shinshu Univ.)

PF-115 Investigation of the key mechanisms of 4-phenylbutanoic acid for increasing root hairs

Youichi Kondou, Takahiro Sato, Issei Takahashi, Kenta Nakatsuka, Hirokazu Iida (Kanto Gakuin Univ. College Sci. Eng.)

PF-116 Molecular mechanism of plant callus formation accelerated by promoter of plant growth (PPG)

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

PF-117 Chemical screening for identifying RGF signaling pathway components

Daiki Tanaka[1], Yoko Hayashi[1], Ayato Sato[2], Yoshikatsu Matsubayashi[1], Hidefumi Shinohara[1] ([1]Grad. Sch. Sci., Nagoya Univ., [2]ITbM, Nagoya Univ.)

PF-118 Analysis of a mutant of Arabidopsis thaliana that shows low-sensitivity to an auxin/brassinosteroid signal transduction inhibitor NJ15

Naiyanate Tanaka-Jaroensanti[1], Sho Miyazaki[1], Kenji Tomita[1], Akito Hosoi[2], Keisuke Tanaka[3], Shinsaku Ito[2], Satoshi Iuchi[4], Takeshi Nakano[5], Masatomo Kobayashi[4], Masatoshi Nakajima[1], Tadao Asami[1] ([1]Dept. Appl. Biol. Chem., Univ. of Tokyo., [2]Dept. Bioscience, Tokyo Univ. Agric., [3]NODAI Genome Research Center, [4]RIKEN BRC, [5]RIKEN CSRS)

■ Photoreceptors/Photoresponses

PF-119 Influence of green-absorbing phytochrome on plant growth

Chise Otsuji, Masafumi Nomura, Hayato Tokumoto, Shizue Yoshihara (College Life, Env., Adv. Sci., Univ. Osaka Prefecture)

PF-120 Light-dependent induction of hypocotyl elongation by the N-terminal 26 peptides of Arabidopsis phyB

Masafumi Nomura, Chise Ootsuji, Hayato Tokumoto, Shizue Yoshihara (College Life, Env., Adv. Sci., Univ. Osaka Prefecture)

PF-121 The effects of lipid transporter flippase mutations on phototropin responses at low temperature.

Tomomi Suzuki[1,2], Masaya Iriguchi[1], Masahiro Nagao[1], Yusuke Aihara[3], Akira Nagatani[1] ([1]Grad. Sch. Sci., Univ. Kyoto, [2]JST PRESTO, [3]Grad. Sch. Sci., Univ. Nagoya)

PF-122 Analysis of cortical microtubule orientation regulated by blue light

Shotaro Hayashi[1], Juri Kikuchi[1], Takahiro Hamada[2], Hayato Tokumoto[1], Shizue Yoshihara[1] ([1]Col. Life Env. Adv. Sci., Osaka pref. univ., [2]Grad. Sch. Arts Sci., Univ. Tokyo)

PF-123 Light-dependent regulation of cortical microtubule dynamics speeds in plants

Juri Kikuchi[1], Shotaro Hayashi[1], Takahiro Hamada[2], Hayato Tokumoto[1], Shizue Yoshihara[1] ([1]Col. Life Env. Adv. Sci., Osaka pref. univ., [2]Grad. Sch. Arts Sci., Univ. Tokyo)

PF-124 Regulation of chloroplast dark positioning in adaxial/abaxial polarity mutants of *Arabidopsis thaliana*

Takahiro Kojima[1], Suguru Kai[1], Yasuhiro Isida[1], Etsuo Yokota[2], Shingo Takagi[1] ([1]Grad. Sch. Sci., Osaka Univ., [2]Grad. Sch. Life Sci., Univ. Hyogo)

PF-125 Analysis of *Arabidopsis* TF-GR line that accumulates anthocyanin by blue and far-red lights.

Takachika Munesada[1,2], Setsuko Shimada[1], Yoko Horii[1], Tomoko Kuriyama[1], Mika Kawashima[1], Taku Takahashi[3], Minami Matsui[1] ([1]RIKEN CSRS, [2]Yokohama City Univ., Graduate school of NanoBioscience, [3]Okayama Univ., Graduate School of Natural Science and Technology)

PF-126 Requirement Of Kinase Activity Of CDKA On The Novel Functions In The Moss, *Physcomitrella patens*

Eggie Febrianto Ginanjar[1], Masaki Ishikawa[2], Masami Sekine[3], Natsumi Inoue[1], Mitsuyasu Hasebe[2], Ooi-Kock Teh[4], Tomomichi Fujita[4] ([1]Grad. Sch. of Life Sci. Hokkaido Univ., [2]Natl. Inst. Basic. Biol., [3]Fac. of Bioresour. Environ. Sci., Ishikawa Pref. Univ., [4]Fac. of Sci. Hokkaido Univ.)

PF-127 Gene expression analysis of microbial rhodopsin without retinal-binding lysine from *Guillardia theta*

Yumeka Yamauchi[1], Masae Konno[1,2], Keiichi Inoue[1,3,4], Hideki Kandori[1,2] ([1]Life Sci. Appl. Chem., Grad. Sch. Eng., NIT, [2]OBTRC, NIT, [3]ISSP, Univ. Tokyo, [4]PRESTO, JST)

PF-128 Blue light dependent carotenoid biosynthesis and its effects on photo-acclimation in Euglena gracilis

Yuri Tanno[1], Shaka Kato[2], Senji Takahashi[1,3], Kintake Sonoike[4], Yutaka Kodama[5], Shinichi Takaichi[6], Tomoko Shinomura[1,3] ([1]Grad. Sch. Sci. Eng., Teikyo Univ., [2]Center Plant Aging Res., Inst. Basic Sci., [3]Dept. Biosci., Teikyo Univ, [4]Fac. Edu. & Int. Arts Sci., Waseda Univ., [5]Center Biosci. Res. & Edu., Utsunomiya Univ., [6]Dept. Mol. Microbiol., Tokyo Univ. Agric.)

■ Flowering/Clock

PF-129 Search for proteins involved in the degradation of KaiC and the effect on rhythm by KaiC turnover.

Keiko Imai[1], Yoko Kitayama[2], Masayuki Fujiwara[3], Kenyo Kaneko[4], Hiroshi Ito[4], Takao Kondo[2] ([1]Laboratory of Biology Kansai Med. Univ., [2]Div. Biol. Sci., Grad. Sch. Sci., Nagoya Univ., [3]Institute for Advanced Biosciences, Keio Univ., [4]Labolatory for Biological Rhythms, Kyushu University)

PF-130 Functional characterization of two LOV-containing histidine kinases, LHK1 and LHK2, in the green alga Chlamydomonas reinhardtii.

Wataru Tomida[1], Takuya Matsuo[2], Tetsuhiro Otsuka[1], Tomonori Suzuki[3], Setsuyuki Aoki[1] ([1]Graduate School of Informatics, Nagoya University, [2]Center for Gene Research, Nagoya University, [3]School of Informatics and Sciences)

PF-131 Analysis of synchronization patterns and its processes of circadian rhythms in a duckweed plant under partly-illuminated light conditions

Ayana Yoshinaga, Jun Yomo, Shogo Ito, Tokitaka Oyama (Dept. Bot., Grad. Sch. Sci., Kyoto Univ.)

PF-132 Development of genetic tools for overexpressing or disrupting genes in duckweeds, *Lemna minor* and *L. turionifera*

Shogo Ito, Tokitaka Oyama (Dept. Bot., Div. Biol. Sci., Grad. Sch. Sci., Kyoto Univ.)

PF-133 LNK, Transcriptional activator of circadian clock

Aya Matsumura[1], Saori Takao[2], Takamasa Suzuki[3], Toshinori Kinoshita[2], Norihito Nakamichi[2] ([1]Graduate School of Science, Nagoya University, [2]Institute of Transformative Bio-molecules, Nagoya University, [3]College of Biosci, Chubu University)

PF-134 Differential effects of light-to-dark transitions on phase setting in circadian expression among clock-controlled genes in Pharbitis nil

Ryosuke Hayama[1], Tsuyoshi Mizoguchi[1], George Coupland[2] ([1]International Christian University, [2]Max Planck Institute for Plant Breeding Research)

PF-135 Identification and analysis of FT family genes in Sugarcane

Sumire Fujiwara[1], Tomoko Niki[1], Akari Nakasone[2], Yoshimi Nakano[1], Nobutaka Mitsuda[1], Yasuyo Himuro[2], Madoka Yonekura[2], Satoshi Kondo[2], Kunio Matsui[2], Takehiko Shimada[2], Kaoru Suzuki[1] ([1]Bioprod. Res. Inst., AIST, [2]Agric. Biotechnol. Bus. Div., Toyota Motor Corp.)

■ Environmental responses A

PF-136 Analysis of a mutant showing strong positive phototaxis in the green alga *Chlamydomonas reinhardtii*

Yuichiro Hoga[1,4], Keisuke Okajima[2,6], Masako Nakajima[4], Noriko Ueki[3,4], Jiro Nomata[1,4], Katsushi Yamaguchi[5], Shuji Shigenobu[5], Jun Minagawa[2,6], Toru Hisabori[1,4], Ken-ichi Wakabayashi[1,4] ([1]Sch. Life Sci Biotech, Tokyo Tech, [2]NIBB, [3]CUNY, Brooklyn, [4]CLS, Tokyo Tech, [5]NIBB, [6]SOKENDAI)

PF-137 Regulatory mechanisms of the ROS-producing enzymes, Rbohs, by Ca^{2+} binding and phosphorylation and their evolution in plants.

Takafumi Hashimoto[1,2], Takeru Itabashi[1,2], Yoichi Funaki[1], Kenji Hashimoto[3], Kazuyuki Kuchitsu[1,2,3] ([1]Dept. Appl. Biol. Sci., Tokyo Univ. of Sci., [2]Agricultural Interdisciplinary Sci. & Tech. Course, Tokyo Univ. of Sci., [3]Imaging Frontier Center, Tokyo Univ. of Sci.)

PF-138 Comprehensive analysis of ROS-producing enzymes and Ca^{2+}-permeable channels involved in diverse stress-induced signaling in *Marchantia polymorpha*

Misaki Hasegawa[1], Hiroki Shindo[1], Hikaru Mizoe[1], Takeru Itabashi[1], Kenji Hashimoto[2], Kazuyuki Kuchitsu[1,2] ([1]Dept. of Appl. Biol. Sci., Tokyo Univ. of Sci., [2]Imaging Frontier Center, Tokyo Univ. of Sci.)

PF-139 Comprehensive reverse genetic analysis of monodehydroascorbate reductases in Arabidopsis

Mio Tanaka, Naoki Matsubara, Takahisa Ogawa, Takahiro Ishikawa, Takanori Maruta (Dept. Life Sci. Biotechnol., Fac. Life Environ. Sci., Shimane Univ.)

PF-140 Dehydroascorbate reduction systems in plants

Hiromi Ueno, Yusuke Terai, Takahisa Ogawa, Takahiro Ishikawa, Takanori Maruta (Dept. Life Sci. Biotechnol., Fac. Life Environ. Sci., Shimane Univ.)

PF-141 Physiological and morphological adjustments of the duckweed fronds shifting the life forms from water-surface float to water-bottom sink.

Hiroyuki Ono[1], Nozomi Arai[1], Yoh Sakuma[2], Masahiro Inouhe[2] ([1]Department of Biology, Faculty of Science, Ehime University, [2]Biology and Environmental Science, Graduate School of Science and Technology, Ehime University)

PF-142 The Analysis of High Gene Expression of Ascorbic Acid Biosynthesis Enzymes in Acerola

Marina Suekawa[1], Akari Inoue[1], Takayuki Kondo[1,2], Yukichi Fujikawa[1], Eriko Uchida[3], Takeshi Koizumi[3], Muneharu Esaka[1] ([1]Grad. Sch. Bio. Sci., Univ. Hiroshima, [2]Grad. Sch. Com. Sci. Sys. Eng., Univ. Kyutech., [3]Nichirei Foods Inc.)

PF-143 The bZIP protein VIP1 binds protein phosphatase 2A B" subunits

Hyuk Sung Yoon[1], Daisuke Tsugama[1,2], Kaien Fujino[1], Tetsuo Takano[2] ([1]Grad. Sch. Agri., Hokkaido Univ., [2]ANESC., Univ. Tokyo)

■ Environmental responses B

PF-144 Diversity of Biofilm formation under various environmental storesses in Synechocystis sp. PCC 6803.

Koichi Takahashi[1], Haruna Ishikawa[2], Ayako Itagaki[2], Junji Uchiyama[1,2,3], Hisataka Ohta[1,2,3] ([1]Grad. Sch. of Sci., Tokyo Univ. of Sci., [2]Grad. Sch. of Math & Sci. Edu., Tokyo Univ. of Sci., [3]Fac. of Sci., Tokyo Univ. of Sci.)

PF-145 Effect of Grafting on Drought Tolerance in *Solanum lycopersicum*

Maria Isabel Fuentes Merlos[1], Makoto Endo[2], Shusei Sato[1], Atsushi Higashitani[1] ([1]Grad. Sch. Life Sci., Tohoku Univ., [2]Takii & Co., LTD.)

PF-146 Characterization of root-specific drought-inducible MYB transcription factors for the enhancement of water use efficiency in Arabidopsis

Zarnab Ahmad[1,2], Khurram Bashir[1], Sultana Rasheed[1], Bushra Rashid[2], Tayyab Husnain[2], Motoaki Seki[1,3,4,5] ([1]Plant Genomic Network Research Team RIKEN CSRS, [2]CEMB, University of the Punjab, Lahore, Pakistan, [3]Kihara Institute for Biological Research, Yokohama City University, [4]CREST, JST, 4-1-8 Honcho, Kawaguchi, Saitama, 332-0012, Japan, [5]Plant Epigenome Regulation Laboratory, CPR, RIKEN)

PF-147 Role of endogenous abscisic acid in osmotic, cold and sugar responses in Marchantia polymorpha

Nobiza Khatun, Kei Saito, Akida Jahan, Daisuke Takezawa (Saitama University)

PF-148 Functional analysis of B3 MAPKKK in ABA and osmotic stress responses of *Arabidopsis thaliana*

Hyeokjin Bak[1], Goro Masuda[1], Shota Kobayashi[1], Shohei Katsuda[1], Masashi Saruhashi[1,2], Daisuke Takezawa[2], Izumi Yotsui[1], Teruaki Taji[1], Yoichi Sakata[1] ([1]Department of Bioscience, Tokyo University of Agriculture, Japan, [2]Graduate School of Science and Engineering Univ. Saitama)

PF-149 Functional analysis of chloroplast-localized NAD kinase in plant abiotic stress responses

Ryosuke Hashimoto[1], Atsuko Miyagi[2], Yuji Sawada[3], Muneo Sato[3], Kohji Yamada[1], Masami Yokota Hirai[3], Maki Kawai-Yamada[3], Keishi Osakabe[1], Yuriko Osakabe[1] ([1]Fac. Biosci. Bioindust., Tokushima Univ., [2]Grad. Sch. Sci. Eng., Saitama Univ., [3]RIKEN CSRS)

PF-150 A novel AP2/ERF transcription factor regulates cuticular wax formation under dehydration response

Kaoru Urano[1], Kyonoshin Maruyama[2], Yoshimi Oshima[3], Toshiki Ishikawa[4], Mayuko Sato[1], Maki Kawai-Yamada[4], Kiminori Toyooka[1], Kazuko Yamaguchi-Shinozaki[5], Kazuo Shinozaki[1] ([1]RIKEN Center for Sustainable Resource Science (CSRS), [2]Japan International Research Center for Agricultural Sciences (JIRCAS), [3]Bioproduction Research Institute, Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology, [4]Graduate School of Science and Engineering, Saitama University, [5]Graduate School of Agricultural and Life Sciences, The University of Tokyo)

PF-151 Anti-Ageing Activities of a Salt-Inducible Mycosporine-like Amino Acid Isolated from a Halotolerant Cyaobacterium

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

PF-152 Chemical screening of compounds enhancing salinity stress tolerance

Kaori Sako[1,5], Chien Van Ha[2], Akihiro Matsui[1], Maho Tanaka[1], Ayato Sato[3], Motoaki Seki[1,4,5] ([1]CSRS, RIKEN, [2]Danforth Center, [3]ITbM, Nagoya Univ., [4]Kihara Inst., Yokohama City Univ., [5]CREST, JST)

PF-153 Initial Responses to Salt Stress in Barley Varieties Showing Different Salt Tolerance

Aya Ohnishi, Maki Katsuhara (Okayama University Institute of Plant Science and Resources)

PF-154 Growth and environmental adaptation of Mongolian plants *Chloris virgata* and *Arabidopsis mongolica*

Bolortuya Byambajav[1,2], Ayumi Yamagami[1], Davaapurev Bekh-Ochir[2], Udval Gombosuren[3], Jigjidsuren Sodnomdarjaa[3], Battogtokh Tugsjargal[3], Batkhuu Javzan[2], Tadao Asami[4], Kazuo Shinozaki[1], Takeshi Nakano[1,2] ([1]CSRS, RIKEN, [2]Joint Univ. of National Univ. of Mongolia and RIKEN, [3]Res. Ins. of Ani Husb, [4]Dept. Appl. Biol. Chem., Univ. of Tokyo)

PF-155 Characterization of polyamine biosynthetic enzymes involved in biofilm formation in *Synechocystis* sp. PCC 6803

Kota Kera[1], Tatsuya Nagayama[1], Kei Nanatani[1], Chika Saeki-Yamoto[1], Akira Tominaga[1], Satoshi Souma[1], Nozomi Miura[1], Kota Takeda[1,2], Syunsuke Kayamori[1], Eiji Ando[3], Kyohei Higashi[4], Masashi Kihana[1], Kazuei Igarashi[4], Nobuyuki Uozumi[1] ([1]Grad. Sch. Eng., Tohoku Univ., [2]Grad. Sch. Bio Sci., Tohoku Univ., [3]Clinical and Biotechnology B. U., Shimadzu Corporation, [4]Grad. Sch. Med, Chiba University.)

PF-156 A *Salicornia europaea* gene (*SeNN43*) encoding a short peptide improved plant salt tolerance and induced swelling of root cells.

Hikaru Sakamoto[1], Kenta Kainuma[1], Aoto Kitamura[1], Yoshiki Nakahara[2], Maki Katsuhara[2], Suguru Oguri[1] ([1]Fac. Bioindustry., Tokyo Univ. Agri., [2]IPSR, Okayama Univ.)

PF-157 Expression of soybean plant hemoglobin gene family under environmental stress

Masato Araragi[1], Airi Ikeura[2], Toshiki Uchiumi[1] ([1]Grad. Sch. Sci. Eng., Kagoshima Univ., [2]Fac. Sci., Kagoshima Univ)

PF-158 Natural variation of leaf ionome in Al-accumulater tea plants

Hiroto Yamashita[1,2], Hideyuki Katai[3], Akio Morita[2], Takashi Ikka[2] ([1]Uni. Agr., Gifu Univ., [2]Fac. Agr., Shizuoka Univ., [3]Tea Res. Cent., Shizuoka Pref.)

■ Environmental responses C

PF-159 Tendency of response to low-temperature for evergreen broad-leaves trees in the field

Ayano Sasaki[1], Matsuo Uemura[1,2], Yukio Kawamura[1,2] ([1]Grad. Sch. Sci., Univ. Iwate, [2]Fac. Agri., Univ. Iwate)

PF-160 Molecular analysis of the temperature response in *Saintpaulia* leaves.

Kana Motooka[1], Miwa Ohnishi[2], Kazuko Iida[3], Yoshihiro Suzuki[4], Kimitsune Ishizaki[1], Hidehiro Fukaki[1], Hidetoshi Iida[3], Tetsuro Mimura[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]Eng. Boil. Res. C., Kobe Univ., [3]Dep. Biol. Tokyo Gakugei Univ., [4]Fac. Sci. Kanagawa Univ.)

PF-161 Enhancement of freezing tolerance by the purine metabolite allantoin and its mechanism in Arabidopsis

Yuhi Hashiguchi, Hiroshi Shimada, Atsushi Sakamoto (Grad. Sch. Sci., Hiroshima Univ.)

PF-162 Involvement of Xyloglucan Endotransglucosylase/Hydrolase in Plant Freezing Tolerance

Daisuke Takahashi[1], Arun Sampathkumar[1], Ryusuke Yokoyama[2], Takeshi Kuroha[2], Kazuhiko Nishitani[2], Ellen Zuther[1], Dirk K. Hincha[1] ([1]Max-Planck-Inst. Mol. Plant Physiol., [2]Grad. Sch. Life Sci. Tohoku Univ.)

PF-163 Analysis of low temperature insensitive mutants in Arabidopsis

Arisa Nakamura, Naoko Yamaguti, Narumi Okazaki, Syouhei Fuzimoto, Tsuyoshi Furumoto (Faculty of Agriculture, Ryukoku University)

PF-164 PIF4 is a negative regulator in cold signaling

Renhu Na[1], Hiroki Okuda[1], Rieko Nozawa[1], Tsuyoshi Furumoto[2], Kenji Miura[1] ([1]Grad. Sch. Life and envi. Sci., Univ. Tsukuba, [2]Fac. Agri., Univ. Ryukoku)

PF-165 Heat stress response in growth of domesticated and wild radish species

Yukiko Nakamura[1], Wang Qing-Wei[2], Riichi Oguchi[1], Shin-Ichi Morinaga[3], Kouki Hikosaka[1] ([1]Grad. Sch. Life Sci., Univ. Tohoku, [2]Forest Research and Management Organization, [3]Bio Sci., Univ. Nihon)

PF-166 Analysis of relationship between maintenance of heat stress memory and chromosome higher order structure

Yui Fujiwara[1], Takuya Sakamoto[1], Yuki Sakamoto[2], Nobutoshi Yamaguchi[3], Toshiro Ito[3], Sachihiro Matsunaga[1] ([1]Dept. Applied Bio. Sci., Fac. Sci. Tech., Tokyo Univ. Sci., [2]IFC, RIST, Tokyo univ. sci., [3]Grad. Sch. Bio. Sci., NAIST)

PF-167 *CoHT* is involved in variation of heat tolerance via regulation of pre-mRNA splicing among *A. thaliana* accessions

Kazuho Isono[1], Keisuke Tanaka[2], Takashi Tsuchimatsu[3], Kousuke Hanada[4], Izumi Yotsui[1], Yoichi Sakata[1], Teruaki Taji[1] ([1]Dept. of Bioscience, Tokyo Univ. of Agriculture, [2]NODAI Genome Research Center, [3]Dept. of Biology, Chiba Univ., [4]Dept. of Bioscience and Bioinformatics, Kyushu Institute of Technology)

PF-168 Functional analysis of rice OsHsfA1 transcription factor in the heat stress response

Moeko Noguchi[1], Naohiko Ohama[1], Daisuke Todaka[1], Satoshi Kidokoro[1], Kazuo Shinozaki[2], Kazuko Yamaguchi-Shinozaki[1] ([1]Grad. Sch. Agr. Life Sci., Univ. Tokyo, [2]Center for Sustainable Resource Science, RIKEN)

PF-169 Functional analysis of a major sigma factor binding protein in a cyanobacterium *Synechococcus elongates* PCC 7942

Hazuki Hasegawa[1], Tatsuhiro Tsurumaki[1], Ikki Kobayashi[2], Sousuke Imamura[1], Kan Tanaka[1] ([1]Tanaka-Imamura lab, Laboratory for Chemistry and Life Science, Tokyo Tech, [2]Graduate School of Engineering, Chiba Univ.)

PF-170 A single seed treatment with hydroxyl radical / reactive oxygen species: a potential solution against emerging threat of multiple abiotic stresses.

Md Mostafa Kamal[1], Carlos Erazo[2], Daisuke Takahashi[3], Karen Tanino[4], Yukio Kawamura[1], Matsuo Uemura[1] ([1]Unit. Grad. Sch. Agr. Sci., Iwate Univ. Japan, [2]Dept. Bio. Sci., Icesi Univ. Colombia, [3]Max Planck Inst. Mol Plant Phys. Germany, [4]Dept. Plant Sci., Univ. Sask. Canada)

PF-171 Biochemical analysis of the Arabidopsis polyphosphatase GppA/Ppx homolog for elucidating physiological function of polyphosphate in plants

Masataka Inazu[1], Doshun Ito[1], Shinji Masuda[2] ([1]Department of Life Science and Technology, Tokyo Institute of Technology, [2]Center for Biological Resources and Informatics, Tokyo Institute of Technology)

PF-172 Polyhydroxybutyrate accumulation in Synechocystis sp. PCC 6803 in starved nutrient-species dependent manners

Kazuho Hirai, Miki Nojo, Yosuke Sato, Mikio Tsuzuki, Norihiro Sato (Tokyo University of Pharmacy and Life Sciences)

PF-173 Is Hormonal Regulation Involved in Sulfur Dioxide-Induced Stomatal Closure?

Lia Ooi, Takakazu Matsuura, Izumi Mori (IPSR, Okayama Univ.)

PF-174 A search for plant hormones involved in a formation of barrier to radial oxygen loss along the adventitious roots in rice (*Oryza sativa*)

Kana Shimizu, Katsuhiro Shiono (Dept. Biosci. & Biotech., Fukui Pref. Univ.)

PF-175 Regulation of OsmiR396 family in developing rice leaves at elevated CO_2

Yonghyun Kim, Mitsue Miyao-Tokutomi (Grad. Sch. Agricul. Sci., Tohoku Univ.)

PF-176 Analysis and experimental verification of a mathematical model for root system architecture in response to nitrogen availability

Hironori Fujita[1,2], Mika Tsugane[1], Masayoshi Kawaguchi[1,2] ([1]Natl. Inst. Basic Biol., [2]SOKENDAI)

■ Plant-organism interaction A

PF-177 Studies on sugar-responsive modulation of pattern-triggered immunity in Arabidopsis plants

Xingwen Li[1], Kotaro Kusaka[2], Shigetaka Yasuda[3], Yusuke Saijo[3], Takeo Sato[1], Junji Yamaguchi[1] ([1]Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ., [2]Sch. Sci., Hokkaido Univ., [3]Grad. Sch. Sci. Tech., NAIST)

PF-178 *BSR2* is Involved in Disease Resistance and Seed Size

Satoru Maeda[1], Youichi Kondou[2], Minami Matsui[2], Masaki Mori[1] ([1]NIAS, [2]RIKEN Yokohama)

PF-179 Involvement of *Nicotiana benthamiana* Exportins in Induction of Defense Responses Against *Phytophthora infestans*.

Yuri Mizuno[1], Sayaka Imano[1], Maurizio Camagna[1], Takamasa Suzuki[2], Aiko Tanaka[1], Ikuo Sato[1], Sotaro Chiba[1], Kazuhito Kawakita[1], Daigo Takemoto[1] ([1]Grad. Sch. Bioagr. Sci., Nagoya Univ., [2]Chubu Univ.)

PF-180 Secretory Peptides SAR8.2 are Required for Non-host Resistance of *Nicotiana benthamiana* to Taxonomically Distant *Phytophthora* Species.

Sayaka Imano[1], Yohei Kondou[1], Yusuke Shibata[1], Tatsuhiko Kondo[1], Aiko Tanaka[1], Ikuo Sato[1], Sotaro Chiba[1], Koji Kageyama[2], Kazuhito Kawakita[1], Daigo Takemoto[1] ([1]Grad. Sch. Bioagr. Sci., Nagoya Univ., [2]River Basin Research Center)

PF-181 Disruption of the MAMP-induced MEKK1-MKK1/MKK2-MPK4 Pathway Activates the TNL Immune Receptor SMN1/RPS6

Momoko Takagi[1,2], Kohei Hamano[2], Hiroki Takagi[3,4], Takayuki Morimoto[2], Kazuya Akimitsu[1,2], Ryohei Terauchi[3,5], Ken Shirasu[6], Kazuya Ichimura[1,2] ([1]Unit. Grad. Sch. Agri., Ehime Univ., [2]Facult. and Grad. Sch. Agri., Kagawa Univ., [3]Iwate Biotech. Res. Cent., [4]Dep. Biopro. Sci., Ishikawa Pref. Univ., [5]Sch. Agri. Sci., Kyoto Univ., [6]RIKEN CSRS)

PF-182 DEAD-box RNA helicase SMN2 is a component of RNA exosome and involved in proper expression of *SMN1/RPS6*

Momoko Takagi[1,2], Naoki Iwamoto[1], Yuta Kubo[1], Takayuki Morimoto[1], Hiroki Takagi[3,4], Keisuke Tanaka[5], Teruaki Taji[6], Kazuya Akimitsu[1,2], Ryohei Terauchi[4,7], Ken Shirasu[8], Kazuya Ichimura[1,2] ([1]Grad. Sch. Agri., Kagawa Univ., [2]Unit. Grad. Sch. Agri., Ehime Univ., [3]Facult. Biores. Env. Sci., Ishikawa Pref. Univ., [4]Iwate Biotech. Res. Cent, [5]Nodai Genome Res. Cent. Tokyo Univ. Agri., [6]Facult. Appli. Bio-Sci. Dep. Tokyo Univ. Agri., [7]Grad. Sch. Agri., Kyoto Univ., [8]RIKEN CSRS)

PF-183 Identification of *Arabidopsis* LysM-type receptors involved in immune response induced by polymeric chitin

Keigo Naito[1], Sumire Matukawa[2], Mai Yoshioka[1], Roxana Y. Parada[1], Mayumi Egusa[1], Shinsuke Ifuku[3], Hironori Kaminaka[1] ([1]Fac. Agr., Tottori Univ., [2]Grad Sch. Agr., Tottori Univ., [3]Grad Sch. Eng., Tottori Univ.)

PF-184 Dimerization and activation of Arabidopsis MAPKKKs

Kanako Fujio, Koji Yamaguchi, Misato Kamei, Shoko Yamaguchi, Masahiro Okazaki, Tsutomu Kawasaki (Grad. Sch. Agri., Kinki Univ)

PF-185 Xanthomonas TAL effectors are directly recognized by the NB-LRR immune receptor Xa1.

Maho Izumitani, Shunsuke Ando, Toshikazu Ouchi, Koji Yamaguchi, Satomi Yoshimura, Tsutomu Kawasaki (Dept. Adv. Biosci. Kindai Univ)

PF-186 Molecular mechanism of immune suppression in rice by *Xoo* effctor, XopZ

Gota Yamamoto[1], Mizuki Kimura[1], Satomi Yosimura[1], Koji Yamaguchi[1], Seiji Tsuge[2], Tsutomu Kawasaki[1] ([1]Dept. Adv. Biosci. Kindai Univ, [2]Grad. Sch Agric. Kyoto Pref. Univ)

PF-187 Proteome analysis of leaf epidermis of the Arabidopsis *ein3-1* mutant showing enhanced resistance against *Fusarium graminearum*

Daisuke Tamaoki[1], Daishi Ikeda[2], Ichirou Karahara[1], Takumi Nishiuchi[3] ([1]Grad. Sch. Sci. Eng., Univ. Toyama, [2]Dept. Biol., Fac. Sci., Univ. Toyama, [3]ASRC, Kanazawa Univ.)

PF-188 The role of jasmonates and ethylene in elicitation of secondary metabolism in rice

Kadis Mujiono[1,2], Tomonori Shinya[1], Ivan Galis[1] ([1]IPSR, Okayama Univ., [2]Fac. Agric., Mulawarman Univ., Indonesia)

PF-189 Two rice homologues of tobacco *MYB8* gene do not significantly affect phenolamide levels in herbivory-elicited rice leaves

Hiroki Takahashi[1], Joackin B. Andama[1,2], Yuko Hojo[1], Tomonori Shinya[1], Ivan Galis[1] ([1]IPSR, Okayama Univ., [2]Abi Zonal Agric. Res. Dev. Inst., NARO, Uganda)

PF-190 Development of robust method for measurement of internal leaf volatiles in rice

Tilisa Tohi[1], Kadis Mujiono[1,2], Tomonori Shinya[1], Ivan Galis[1] ([1]IPSR, Okayama Univ., [2]Fac. Agric., Mulawarman Univ., Indonesia)

PF-191 Pilot field experiments for identification of novel herbivory-related QTLs by the use of rice BIL population

Nhan Thanh Ho[1,2], Tomonori Shinya[1], Ivan Galis[1] ([1]IPSR, Okayama Univ., [2]CLRRI, Vietnam)

■ Plant-organism interaction B

PF-192 Symbiotic properties of *Mesorhizobium loti* transconjugant carrying a flavohemoglobin gene on its chromosome
Yusuke Maesako, Mitsutaka Fukudome, Toshiki Uchiumi (Graduate School of Science and Engineering, Kagoshima University, Kagoshima, Japan)

PF-193 The legume-rhizobial gene-for-gene interaction based on the *Lotus japonicus* and *Mesorhizobium loti* co-expression network
Tsuneo Hakoyama[1], Atsuko Hirota[1], Yoshikazu Shimoda[2], Makoto Hayashi[1] ([1]Riken, CSRS, [2]NARO, NIAS)

PF-194 What kind of responses is caused in leaves through shoot-mediated long-distance control of nodulation?
Nao Okuma[1,2], Takashi Soyano[1,2], Masayoshi Kawaguchi[1,2] ([1]National Institute for Basic Biology Division of Symbiotic Systems, [2]SOKENDAI (The Graduate University for Advanced Studies))

PF-195 Study on Improvement of Cadmium Tolerance of Lotus japonicus by Mycorrhizal Symbiosis
Toshio Sano, Koyuki Hamaoka (Hosei Univ.)

PF-196 Distinct Gene Regulatory Networks For Phosphate Acquisition And Carbon-phosphate Trade-offs In Mycorrhizal Plants
Hayato Maruyama[1], Yusaku Sugimura[1], Ayumi Tezuka[2], Atsushi J. Nagano[2], Tatsuhiro Ezawa[1] ([1]Grad. Sch. Agri., Hokkaido Univ., [2]Fac. Agri., Ryukoku Univ.)

PF-197 Evolutionary analysis of LysM receptor-like kinase in land plants
Ruman Hafijur, Yasuyuki Kawaharada (Iwate University)

PF-198 Interaction of cytoplasmic domains of LysM receptors is an important factor to determine the direction of downstream responses, defense or symbiosis.
Maruya Suzuki[1], Ryota Numazaki[1], Tomomi Nakagawa[2], Naoto Shibuya[1], Hanae Kaku[1] ([1]Dept. Life Sci., Meiji Univ, [2]Symbiotic Systems, NIBB)

PF-199 Effects of nutrient conditions on haustorium formation in parasitic plants
Xiang Zhang, Songkui Cui, Satoko Yoshida (NAIST)

PF-200 Involvement of the intracellular membrane trafficking in the interaction of parasitic plant with host plant
Reika Miyawaki, Koh Aoki (Grad. Sch. Life Environ. Sci., Osaka Pref. Univ.)

■ Epigenetic regulation

PF-201 DNA demethylation specific transposon regulation machanism
Masahiro Fukuda[1], Kosuke Nozawa[2], Atsushi Kato[3], Hidetaka Ito[3] ([1]Sch, Sci, Univ, Hokkaido, [2]Grad, Sch, Life Sci, Univ, Hokkaido, [3]Fac, Sch, Sci, Univ, Hokkaido)

PF-202 Elucidation of chromosome structure and epigenetic mechanism of gene regulation in primitive red alga *Cyanidioschyzon merolae*
Minami Nakayama[1], Takuya Sakamoto[1], Tomoko Matsunaga[1], Miyako Kitagawa[1], Kan Tanaka[2], Tokiaki Takemura[2], Takamasa Suzuki[3], Sachihiro Matsunaga[1] ([1]Dept. Applied Bio. Sci., Fac. Sci. Tech., Tokyo Univ. Sci., [2]Tokyo Tech, Sch of Life Sci & Tech., [3]Chubu Univ., Department of Bio. Chem., Bio. Sci. Tech., Kasugai)

PF-203 MAPK-mediated epigenetic regulation of AGO4 in plant immunity
Shinya Nakagawa[1], Koji Yamaguchi[1], Gota Yamamoto[1], Yuya Tanaka[1], Nobutoshi Yamaguchi[2], Kenichi Tsuda[3], Tsutomu Kawasaki[1] ([1]Grad. Sch. Agri., Univ. Kindai, [2]Grad. Sch. Biol. Sci., NAIST, [3]MPIPZ)

PF-204 Ecotype-specific response to environmental stress
Kosuke Nozawa[1], Atsushi Kato[2], Hidetaka Ito[2] ([1]Grad. Sch. Life Sci., Univ. Hokkaido, [2]Fac. Sci., Univ. Hokkaido)

■ Transcriptional, post-transcriptional/Translational regulations/Protein modification & degradation

PF-205 Functional analysis of TARP1/2 in *Arabidopsis* shoot regeneration
Takahito Takei[1], Misato Ohtani[2,3], Yuichiro Watanabe[1,4], Takahiro Hamada[4,5] ([1]Grad. Sch. Sci., Univ. Tokyo, [2]Grad. Sch. Biol. Sci., NAIST, [3]CSRS, Riken, [4]Grad. Sch. Art and Sci, Univ. Tokyo, [5]JST, PRESTO)

PF-206 Nucleolar stress promotes expression of Arabidopsis ANAC082, a nucleolar stress response mediator, by inducing alternative splicing that removes an inhibitory upstream open reading frame
Shun Sasaki[1], Rin Kudo[1], Daiki Sasahara[1], Hiro Takahashi[2], Shun Watanabe[3], Iwai Ohbayashi[4], Munetaka Sugiyama[5], Satoshi Naito[1,3], Hitoshi Onouchi[1] ([1]Grad. Sch. Agric., Hokkaido Univ., [2]Grad. Sch. Med. Sci., Kanazawa Univ., [3]Grad. Sch. Life Sci., Hokkaido Univ., [4]Haixia Inst. Sci. Tech., Fujian Agriculture and Forestry Univ., [5]Grad. Sch. Sci., Univ. Tokyo)

PF-207 Analysis of the activation mechanism of plant S6 kinase using yeast lacking Ypk3

Misaki Yaguchi[1], Akiko Kozaki[2] ([1]Graduate School of Science, [2]Shizuoka University Faculty of Biology)

PF-208 Transfer RNA wobble uridine modification affects the leaf cell development in plants.

Yumi Nakai[1], Gorou Horiguchi[2], Kosei Iwabuchi[3], Akiko Harada[4], Masato Nakai[5], Ikuko Hara-Nishimura[3], Takato Yano[1] ([1]Dept. of Biochem., Osaka Med. College, [2]Dept. of Life Sci., Rikkyo Univ., [3]Faculty of Sci. and Eng., Konan Univ., [4]Dept. of Biol., Osaka Med. College, [5]Inst. Protein Res., Osaka Univ.)

■ Systems biology

PF-209 Genome analysis for the liverwort Marchantia polymorpha and the diatom Nitzschia sp. NIES4239

Takako Mochizuki[1], Yasuhiro Tanizawa[1], Shohei Yamaoka[2], Ryuichi Nishihama[2], Takehiko Kanazawa[3], Sean A. Montgomery[4], Chang Liu[5], Bence Galik[6], Frederic Berger[4], Takashi Ueda[3], Katsuyuki T. Yamato[7], Takayuki Kohchi[2], Goro Tanifuji[8], Ryoma Kamikawa[9], Yasukazu Nakamura[1] ([1]Genome Informatics Lab., NIG, [2]Grad. Sch. of Biostudies, Kyoto Univ., [3]Div. of Cellular Dynamics, NIBB, [4]Gregor Mendel Institute, [5]ZMBP Tubingen, [6]Vienna Biocenter Bioinformatic Core facility, [7]B.O.S.T., Univ. Kindai, [8]Department of Zoology, National Museum of Nature and Science, [9]Faculty of Integrated Human Studies, Kyoto Univ.)

PF-210 Chronological Analysis of Chromatin Modification Using Barley Grown Under Field Conditions.

Yoko Ikeda[1], Asaka Kanatani[1], Komaki Inoue[2], Daisuke Saisho[1], Jun Ito[3], Hiroyuki Tsuji[3], Keiichi Mochida[1,2,3], Takashi Hirayama[1] ([1]IPSR, Okayama Univ., [2]CSRS, RIKEN, [3]KIBR, Yokohama City Univ.)

■ Others

PF-211 Generation of transgene-free genome-edited tobacco plants using an RNA virus vector

Hirotaka Ariga[1], Hidetaka Kaya[2], Seiichi Toki[2,3,4], Kazuhiro Ishibashi[1] ([1]Plant and Microbe Research Unit, Inst. of Agrobiol. Sci., NARO, [2]Plant Genome Engineering Research Unit, Inst. of Agrobiol. Sci., NARO, [3]Grad. Sch. Nanobio., Yokohama City Univ., [4]Kihara Inst. Biol. Res., Yokohama City Univ.)

PF-212 An efficient DNA- and selectable marker-free genome editing system in rice using zygotes and possible application to other crop species

Erika Toda[1,2], Narumi Koiso[1], Tety Maryenti[1], Arika Takebayashi[2], Masako Ichikawa[3], Takatoshi Kiba[2], Keishi Osakabe[4], Yuriko Osakabe[2,4], Hitoshi Sakakibara[2], Norio Kato[1,2,3], Takashi Okamoto[1,2] ([1]Dept. Biol. Sci., Tokyo Metropolitan Univ., [2]BZP, RIKEN, [3]Plant Innovation Center, Japan Tobacco Inc., [4]Fac. Biosci. Bioindust., Tokushima Univ.)

PF-213 Infrared laser-evoked site-specific DNA recombination in *Marchantia polymorpha*

Masahiro Moriya[1], Ryuichi Nishihama[2], Hiroko Urawa[1] ([1]Gifu Shotoku Gakuen Univ., [2]Grad. Sch. Biostudies, Kyoto Univ.)

PF-214 Development of *in planta*-regeneration system for genome editing in tomato

Nozomu Kira, Risa Ueta, Takahito Watanabe, Eiko Takayanagi, Hideki Sakamoto, Chihiro Abe, Ryosuke Hashimoto, Yuriko Osakabe, Keishi Osakabe (Fac. Biosci. Bioindust., Tokushima Univ.)

PF-215 Development of a genome editing system in spinach via agroinfiltration.

Choyo Tai[1], Shigeo S. Sugano[2,3], Yoichiro Fukao[1] ([1]Grad. Sch. Life Sci., Ritsumeikan Univ., [2]R-GIRO, Ritsumeikan Univ., [3]JST, PRESTO)

PF-216 Development of a precise genome editing with no artificial sequences based on rice gene targeting

Yusuke Matsui[1], Zenpei Shimatani[1,2], Rie Terada[1] ([1]Grad. Sch. Agr., Univ. Meijo, [2]Grad. Sch. Sci., Univ. Kobe)

PF-217 Designing heme protein based oxygen sensing indicators

Jiro Nomata, Toru Hisabori (Tokyo Tech, CLS)

PF-218 AgarTrap-mediated transformation of tobacco callus

Shoko Tsuboyama, Yutaka Kodama (C-bio., Utsunomiya Univ.)

PF-219 Development of a technique to glue organelles

Yuta Fujii[1], Keiji Numata[2], Yutaka Kodama[1,2] ([1]C-Bio, Utsunomiya Univ., [2]CSRS, RIKEN)

PF-220 Development of a Regulatory System of Membrane Potential in Plant Using Microbial Rhodopsin

Masae Konno[1,2], Hideki Kandori[1,2] ([1]Life Sci. Appl. Chem., Grad. Sch. Eng., NIT, [2]OBTRC, NIT)

PF-221 Identification and Expression Analysis of 5'-Upstream Region of *U6* Genes from Caster Bean

Masatake Kanai[1], Kyoko Nagata[1], Kazumi Hikino[1], Mikio Nishimura[2], Kenji Komazawa[3], Shoji Mano[1,4] ([1]Natl. Inst. Basic Biol., Dept. Cell Biol., [2]Konan Univ., Facul. Sci. Engineer., [3]Itoh Oil Chemicals Co., LTD, [4]SOKENDAI, Dept. Basic Biol.)

PF-222 Morphological and Molecular Characterisation of Domatia Development in Myrmecophytes

Emma Sarath[1], Hirokazu Tsukaya[1,2] ([1]Graduate School of Science, The University of Tokyo, [2]ExCELLS, National Institutes of Natural Sciences)

PF-223 Multiple effects of *OsbZIP1* on the growth and yields of rice

Mohammad Saiful Islam, Saki Yoshida, Nobuhiro Tanaka, Yoshihiro Ohmori, Takehiro Kamiya, Toru Fujiwara (Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo)

PF-224 Possibility of chloroplast localization of *Arabidopsis thaliana* tRNA ligase (tRL) in response to strong light stress and subcellular localization of tRL in *Brassica* family

Naoki Okamoto[1], Markus Englert[2], Kazuhito Akama[1] ([1]Grad. Sch. Nat. Sci. and Tech., Univ. Shimane, [2]Dept. Mol. Biophys. and Biochem., Univ. Yale)

PF-225 Evaluation of pre-treatments and durability for metabolomics using GC/MS

Aya Anegawa, Hidetaka Anazawa, Kuniyo Sugitate, Sadao Nakamura (Agilent Technologies Japan, Ltd.)

■ Photosynthesis

PL-001 Interaction Analysis Between the Rieske/cyt*b* Complex and *C*-type Cytochromes in 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-002 Metabolic engineering attempts to produce retinal via β-carotene in *Rhodobacter capsulatus*

Kaori Shimizu[1], Shinichi Takaichi[2], Kazuhiko Saeki[1] ([1]Department of Biological Sciences, Nara Women's University, [2]Department of Molecular Microbiology, Tokyo University of Agriculture)

PL-003 Loss of photosynthetic growth ability in the cyanobacterium *Leptolyngbya boryana* during long-term cultivation under heterotrophic conditions in the dark

Shintaro Hida[1], Haruki Yamamoto[1], Kazuma Uesaka[2], Chie Tomatsu[1], Kunio Ihara[2], Yuichi Fujita[1] ([1]Grad. Sch. Bioagricultural. Sci., Nagoya Univ., [2]Center for Gene Research, Nagoya Univ.)

PL-004 Biochemical characterization of the PSI core complexes from a cyanobacterium Anabaena sp. PCC 7120

Tian-Yi Jiang, Ryo Nagao, Jian-Ren Shen (RIIS, Okayama University)

■ Primary metabolism

PL-005 A search for superior alleles leading to better growth of plants in nitrogen deficient environments.

Zhana Chagan, Yasuhito Sakuraba, Shuichi Yanagisawa (Biotech. Res. Center, Univ. Tokyo)

PL-006 Studies on the molecular mechanisms of nitrogen-responsive flowering in Arabidopsis

Takeo Sato[1], Miho Sanagi[1], Shoki Aoyama[1], Shogo Ito[2], Mitsutomo Abe[3], Takato Imaizumi[4], Junji Yamaguchi[1] ([1]Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ., [2]Grad. Sch. Sci., Kyoto Univ., [3]Grad. Sch. Sci., The Univ. Tokyo, [4]Dept. Biol., Univ. Washington)

PL-007 Grain amino acid composition in Tos17 insertion lines for asparagine synthetase

Fumi Imagawa, Soichi Kojima (Tohoku University)

PL-008 The role of sphingolipid catabolic pathways in Arabidopsis treated with Fumonisin B1

Daiki Yanagawa, Hiroyuki Imai (Biology Dept., Grad. Sch. Nat. Sci., Konan Univ.)

■ Secondary metabolism

PL-009 Diversity of Chlorophyll Degradation Pathways in Higher Plants

Minh-Khiem Nguyen[1,2], Szu-Hsien Lin[1], Tin-Han Shih[1], Chi-Ming Yang[1] ([1]Biodiversity Research Center, Academia Sinica, [2]Faculty of Applied Sciences, Ton Duc Thang University, Ho Chi Minh City, Vietnam)

■ Biomembrane/Ion and solute transport

PL-010 Characterization of phosphate uptake mechanism in marine diatoms

Kanako Maeda, Nanae Kimura, Yohei Fukuchi, Toshiki Sugiyama, Kensuke Nakajima, Yoshinori Tsuji, Yusuke Matsuda (Kwansei-Gakuin University Department of Bioscience)

PL-011 Electrophysiological Analysis of Rice OsHKT1;1 variants

Shahin Imran[1], Maki Katsuhara[1], Tomoaki Horie[2] ([1]Okayama University, IPSR, [2]Shinshu University, Department of Applied Biology)

PL-012 Identification and functional analysis of transporter genes involved in phosphorus redistribution in rice

Namiki Mitani-Ueno, Naoki Yamaji, Jian Feng Ma (IPSR, Okayama Univ.)

PL-013 ER-localized aquaporin SIP2;1 is involved in avoidance of ER stresses in *Arabidopsis thaliana*

Ryosuke Sato, Masayoshi Maeshima (Laboratory of Cell Dynamics Graduate School of Bioagricultural Sciences Nagoya University)

PL-014 Search for the genes encoding the free fatty acid exporter in *Synechocystis* sp. PCC 6803

Makiko Aichi[1], Tenma Suzuki[1], Kodai Tanaka[1], Tatsuki Mizutani[1], Takanori Hasegawa[1], Shiori Nagano[1], Sumie Keta[1], Tatsuo Omata[2] ([1]Department of Biological Chemistry, Chubu University, [2]Graduate School of Bioagricultural Sciences, Nagoya University)

■ Cell cycle/Cell division

PL-015 Transcriptome analysis reveals dynamic expression changes during tuberous root formation in *Arabidopsis thaliana*

Sakiko Nishioka[1], Takuya Sakamoto[1], Takamasa Suzuki[2], Sachihiro Matsunaga[1] ([1]Dept. Applied Bio. Sci., Fac. Sci. Tech., Tokyo Univ. Sci., [2]Chubu Univ., Department of Bio. Chem., Bio. Sci. Tech., Kasugai)

■ Vegetative growth

PL-016 Mitochondrial pyruvate dehydrogenase contributes to auxin-regulated organ development

Iwai Ohbayashi, Xiaomin Song, Song Sun, Masahiko Furutani (Fujian Agriculture and Forestry University (FAFU))

PL-017 Roles of nucleolar proteins in establishment of leaf polarity and gene body methylation mediated by zinc-finger-like protein AS2 in Arabidopsis thaliana.

Masataka Suzuki[1], Simon Vial-Pradel[1], Hiro Takahashi[2], Munehiro Sugiyama[3], Sumie Keta[1], Shoko Kojima[1], Yasunori Machida[4], Chiyoko Machida[1] ([1]Grad. Sch. Biosci. Biotech., Chubu. Univ, [2]Grad. Medical Science., Kanazawa. Univ, [3]Grad. Sci., Univ. Tokyo, [4]Grad. Sci., Nagoya. Univ)

PL-018 Genetic interaction between AS1, AS2 and MET1, HDA6 in establishment of leaf adaxial-abaxial polarity in Arabidopsis thaliana

Misato Yamakawa[1], Shoko Kamiya[1], Sayuri Ando[1], Yasunori Machida[2], Shoko Kojima[1], Chiyoko Machida[1] ([1]Grad. Sch. Biosci. Biotech, Chubu Univ., [2]Grad. Sch. Sci., Nagoya Univ.)

PL-019 Function of zinc-finger-like protein ASYMMETRIC LEAVES2 (AS2) for formation of AS2 bodies in leaf development of Arabidopsis thaliana

Shoko Kamiya[1], Sayuri Ando[1], Shoko Kojima[1], Yasunori Machida[2], Chiyoko Machida[1] ([1]Grad. Sch. Biotech., Univ. Chubu, [2]Grad. Sch. Sci., Univ. Nagoya)

PL-020 The Role of *Pressed flowerb* in The Morphogenesis of Flattened Leaf Blade

Xiaofeng Yin[1], Hirokazu Tsukaya[1,2] ([1]Grad. Sch. Sci., Univ. Tokyo, [2]NINS, ExCELLS)

PL-021 Regulatory mechanisms restricting *ATML1* activity to the outermost cells

Hiroyuki Iida[1], Ayaka Yoshida[1], Gerd Jürgens[2], Shinobu Takada[1] ([1]Grad. Sch., Osaka Univ, [2]ZMBP, Univ. Tüebingen)

■ Reproductive growth

PL-022 Analysis of ENDOSPERM3, which regulates fertilization-independent endosperm development

Yilin Zhang[1], Hironori Takasaki[2], Miho Ikeda[2], Daisuke Maruyama[3], Nobutaka Mitsuda[4], Tetsu Kinoshita[3], Masaru Ohme-Takagi[2] ([1]DEPT. BIOCHEM. MB., Univ. Saitama, [2]Grad. Sch. Sci. Eng., Univ Saitama, [3]Kihara Institute for Biological Research, Univ. Yokohama City, [4]Bioproduction Research Institute, AIST)

PL-023 Pollen Tube Attraction3 Is there more than one attractant in the upper pistil?

Koyo Iwata, Futo Kubo, Masao Ito (Nagoya-city Koyo High School)

■ Plant hormones/Signaling molecules

PL-024 Functional analysis of rice Gibberellin 3-oxidase 1 in reproductive organ

Kyosuke Kawai[1], Sayaka Takehara[1], Toru Kashio[1], Aya Ito[1], Hiroyasu Furuumi[2], Ken-ichi Nonomura[2], Makoto Matsuoka[1], Miyako Ueguchi-Tanaka[1] ([1]Bioscience and Biotechnology Center, Nagoya University, [2]Experimental Farm, National Institute of Genetics)

PL-025 The role of Gibberellin 3-oxidase 1 in anther development of rice

Minami Morii, Akihiko Sugihara, Kyosuke Kawai, Toru Kashio, Aya Ito, Sayaka Takehara, Makoto Matsuoka, Miyako Ueguchi-Tanaka (Bioscience and Biotechnology Center, Nagoya University)

PL-026 Is Ethylene Involved in the Twining of the Morning Glory? - Expression Analysis of ACC Synthase Genes in the Stem -

Tomoe Yofune, Tsuyoshi Kaneta (Grad. Sch. Sci & Eng., Ehime Univ.)

PL-027 Analysis of transcriptional regulation of *ACL5*, which encodes thermospermine synthase in *Arabidopsis thaliana*

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

PL-028 Screening of chemical compounds for activating SnRK2

Shoko Matsuoka[1], Riyo Imamura[2], Yoshiteru Noutoshi[3], Takayoshi Okabe[2], Taishi Umezawa[1] ([1]Grad. Sch. BASE, Tokyo. Univ. Agric. Tech., [2]Drug Discovery Initiative, Tokyo Univ., [3]Dep. Agric., Okayama Univ.)

PL-029 Highly sensitive and high throughput phytohormone quantification platform

Mikiko Kojima[1], Yumiko Takebayashi[1], Hitoshi Sakakibara[2] ([1]CSRS., RIKEN, [2]Grad. Sch. Bioagri Sci., Nagoya Univ)

PL-030 Identification of a two-component system with PAS-histidine kinases in the moss *Physcomitrella patens*

Kota Nakai[5], Kensuke Sato[4], Masashi Ryo[1], Takafumi Yamashino[2], Yuji Nomoto[2], Yuki Goto[1], Mizuho Ichinose[3], Mamoru Sugita[3], Setsuyuki Aoki[4] ([1]Graduate School of Information Science, Nagoya University, [2]Graduate School of Bioagricultural Sciences, Nagoya University, [3]Center for Gene Research, Nagoya University, [4]Graduate School of Informatics, Nagoya University, [5]School of Information and Sciences, Nagoya University)

■ Photoreceptors/Photoresponses

PL-031 The study of phyA-dependent suppression of shade avoidance response to deep shade

Ryota Otsuki, Nobuyoshi Mochizuki, Tomomi Suzuki, Akira Nagatani (Grad. Sch. Sci., Univ. Kyoto)

PL-032 A Possible Involvement of Phytochrome in Blue-Light-Induced Nuclear Photorelocation in *Marchantia polymorpha*

Chihoko Nomoto[1], Yuya Tosaka[1], Kosei Iwabuchi[2], Shingo Takagi[1] ([1]Grad. Sch. Sci., Univ. Osaka, [2]Faculty of Science and Engineering, Univ. Konan)

PL-033 Anatomical analysis of shoot apical meristem tissue at the growth of potato bud under different light and temperature conditions

Yuki Morishige[1], Naoya Mori[2], Hiroyuki Watanabe[1] ([1]Agri., Univ. Tamagawa, [2]Res. Inst., Univ. Tamagawa)

PL-034 Seed germination of transgenic *Arabidopsis* expressing *Adiantum* photoreceptor phytochrome3

Mina Horiuchi[1], Izumi Kimura[2], Yuki Kimura[2], Takeshi Kanegae[1,2] ([1]Dept. of Biol. Sci., Grad. Sch. of Sci., Tokyo Metropolitan Univ., [2]Dept. of Biol. Sci., Grad. Sch. of Sci. and Eng., Tokyo Metropolitan Univ.)

PL-035 Exploring Unidentified Physiological Function of Phytochrome3 in Fern *Adiantum capillus-veneris*

Izumi Kimura, Takeshi Kanegae (Dept. of Biol. Sci., Grad. Sch. of Sci. and Eng., Tokyo Metropolitan Univ.)

■ Flowering/Clock

PL-036 NanoLuc as a highly sensitive reporter in plant cell

Ken-ichiro Taoka[1], Zenpei Shimatani[2], Mana Ogawa[3], Hiromi Saitoh[3], Yoichi Ikeda[3], Hiroko Akashi[1], Koji Yamaguchi[4], Rie Terada[3], Tsutomu Kawasaki[4], Hiroyuki Tsuji[1] ([1]KIBR, Yokohama City Univ., [2]Grad. Sch. Sci., Tech. and Innov., Kobe Univ., [3]Grad. Sch. Agri., Meijo Univ., [4]Grad. Sch. Agri., Kindai Univ.)

PL-037 A dual-color bioluminescence reporter system to simultaneously monitor expression levels of two genes in plant cells

Emiri Watanabe, Shogo Ito, Tokitaka Oyama (Dept. Bot., Grad. Sch. Sci., Kyoto Univ.)

■ Environmental responses A

PL-038 Polar auxin transport is essential to maintain growth and development of etiolated pea seedlings on 1 *g* conditions: Relevance to the International Space Station experiment

Kensuke Miyamoto[1,2], Akinori Inui[2], Eiji Uheda[2], Mariko Oka[3], Motoshi Kamada[4], Chiaki Yamazaki[5], Toru Shimazu[5], Haruo Kasahara[6], Hiromi Sano[6], Tomomi Suzuki[7], Akira Higashibata[7] ([1]Fac. Liberal Arts & Sciences, Osaka Prefecture Univ., [2]Grad. School. Sci., Osaka Prefecture Univ., [3]Fac. Agriculture, Tottori Univ., [4]Advanced Engineering Services Co., Ltd., [5]Japan Space Forum, [6]Japan Manned Space System Corporation, [7]Japan Aerospace Exploration Agency)

PL-039 Screening of a mutant with defect in the light/dark response of the expression of VTC2 gene encoding a rate-limiting enzyme for ascorbate biosynthesis in plants

Kazuya Yoshimura[1], Riki Ishiguro[1], Takahiro Ishikawa[2] ([1]Dept. Food Nutr. Sci., Coll. Biosci. Biotech., Chubu Univ., [2]Dept. Life Sci. Biotechnol., Fac. Life Environ. Sci., Shimane Univ.)

PL-040 Molecular mechanism of oxidative damage to translation factor EF-G in the cyanobacterium *Synechococcus elongatus* PCC 7942

Kazushi Kuwano, Kensuke Takagi, Shin Koreeda, Yoshitaka Nishiyama (graduate school of science and engineering, saitama university)

PL-041 Characterization of mutants with altered root growth response to mechanical stress in *Arabidopsis thaliana*

Takashi Okamoto[1], Shogo Takatani[1], Hidetoshi Iida[2], Hiroyasu Motose[1], Taku Takahashi[1] ([1]Grad. Sch. Sci. Tech, Okayama Univ., [2]Dept. Biol., Tokyo Gakugei Univ.)

■ Environmental responses B

PL-042 Low Magnesium Tolerance 1 physically associates with ER-localized Mg transporters and plays an important role in extending Mg stress adaptation range in *Arabidopsis thaliana*

Zhihang Feng, Takehiro Kamiya, Toru Fujiwara (Department of Applied Biological Chemistry, the University of Tokyo)

PL-043 Genome-wide association study to identify genes regulating growth rate of rice seedlings under low nitrogen conditions

Bian Bian, Kenji Yano, Takehiro Kamiya, Toru Fujiwara (The University of Tokyo, Graduate School of Agricultural and Life Sciences)

PL-044 Golgi-localized OsFPN1 is required for cobalt and nickel homeostasis in rice

Manman Kan, Toru Fujiwara, Takehiro Kamiya (Graduate School of Agricultural and Life Sciences, The University of Tokyo)

PL-045 Transcriptional Biomarker to evaluate Al rhizotoxicity in soybean -An Approach for managing Pulse crop production in Acid Soil Region

Raj Kishan Agrahari[1], Yuriko Kobayashi[2], Hiroyuki Koyama[3] ([1]The United Graduate School of Agricultural Science, Gifu university, [2]Faculty of Applied Biological Sciences, [3]Faculty of Applied Biological Sciences)

■ Environmental responses C

PL-046 Light-regulation in Pediastrum duplex: Physiological outcomes and Gene expression analysis

Harshavardhini Sridharan[1], Shota Kato[2,3], Tasuku Simada[2], Tomohiro Suzuki[4], Tomoko Shinomura[2] ([1]Grad. Sch. Sci., Teikyo Univ, [2]BioSci., Sch. Sci. Eng., Teikyo Univ, [3]Center Plant Aging Res., Inst. Basic Sci., [4]C-Bio., Utsunomiya Univ)

PL-047 Role of Sll1558 in environmental stress tolerance in cyanobacterium Synechocystis sp. PCC6803.

Junji Uchiyama[1,2,3], Yuuta Ichikawa[2], Mamoru Sambe[2], Ayumi Matsuhashi[2], Yutaro Ito[4], Hisataka Ohta[1,2,3] ([1]Fac. of Sci., Tokyo univ. of Sci, [2]Dept. of Math. and Sci. Edu., Grad. Sch. of Math. and Sci. Edu., Tokyo univ. of Sci., [3]Dept. of Math. and Sci. Edu., Grad. Sch. of Sci., Tokyo univ. of Sci., [4]Dept. of Bio. Sci. and Tech., Grad. Sch. of Ind. Sci. and Tech., Tokyo univ. of Sci.)

PL-048 Connection between low sulfur response and repression of glucosinolate synthesis: Involvement of SLIM1 transcription factor in the induction of SDI1 expression under low sulfur condition.

Ryota Kawaguchi[1], Akiko Maruyama-Nakashita[2] ([1]Sch. Agr., Kyushu Univ., [2]Fac. Agr., Kyushu Univ.)

PL-049 Phosphate starvation affects the subcellular localization of phosphatidic acid phosphohydrolases in Arabidopsis

Sota Makimura[1], Yushi Yoshitake[1], Hiroyuki Ohta[1,2], Mie Shimojima[1] ([1]School of Life Science and Technology, Tokyo Institute of Technology, [2]OPERA, JST)

PL-050 Identification of a Transcription Factor, SPL7, Involved in the Enhanced Expression of *SULTR2;1* in *Arabidopsis* Roots

Tsukasa Ushiwatari[1], Nobutaka Mitsuda[2], Toshiharu Shikanai[3], Akiko Maruyama-Nakashita[1] ([1]Fac. Agr., Kyushu Univ., [2]BPRI, AIST, [3]Grad. Sch. Sci., Kyoto Univ.)

PL-051 Isolation of new chemical compounds as helpers for better phytoremediation and plant nutrition efficiency

Ju Yeon Moon, Takae Miyazaki, Eri Adams, Ryoung Shin (RIKEN CSRS Environmental Response Research Unit, 1-7-22 Suehirocho, Tsurumi-ku, Yokohama, Kanagawa, Japan)

PL-052 Mutation of Specific Paralogs of Arabidopsis Ribosomal Protein Alters Response to Nutrient Stresses

Hirofumi Fukuda[1], Naoyuki Sotta[1], Mayuki Tanaka[1], Seidai Takamatsu[2], Yukako Chiba[2,3], Kyoko Miwa[4], Satoshi Naito[2,5], Toru Fujiwara[1] ([1]Agri., Univ. Tokyo, [2]Grad. Sch. Life Sci., Hokkaido Univ., [3]Grad. Sch. Sci., Hokkaido Univ., [4]Grad. Sch. Envr. Sci, Hokkaido Univ., [5]Grad. Sch. Agri., Univ. Tokyo)

PL-053 Statistical modeling for functional data and its application to crop yield data

Hidetoshi Matsui[1,2], Keiichi Mochida[3,4,5,6] ([1]Shiga Univ., [2]JST PRESTO, [3]RIKEN, [4]Okayama Univ., [5]Yokohama City Univ., [6]JST CREST)

■ Plant-organism interaction A

PL-054 The Possibility Of Plant Immunity Induction By Applying Exogenous Polyols.

Ken Sakuma[1], Toshio Sano[2] ([1]Grad. Sch. Sci and Tech., Hosei univ., [2]Applied Plant Sci., Dept. Lifescience, Hosei univ.)

■ Plant-organism interaction B

PL-055 Genetic analysis of phosphate starvation responses (PSR) in *Arabidopsis thaliana*

Hong Ye[1], Kei Hiruma[1,2], Pathompitaknukul Kuldanai[1], Shion Yamaguchi[1], Yusuke Saijo[1] ([1]Grad. Sch. Biol. Sci., NAIST, [2]JST, Presto)

■ Epigenetic regulation

PL-056 Visualization Of Histone Modification Using Live-imaging Tool In Plant

Megumi Matsuoka[1], Takuya Sakamoto[1], Mio Shibuta[1], Noriyoshi Yagi[1], Hiroshi Kimura[2], Sachihiro Matsunaga[1] ([1]Dept. Applied Bio. Sci., Fac. Sci. Tech., Tokyo Univ. Sci., [2]Tokyo Tech, Institute of Innovative Research)

■ Others

PL-057 Development of powerful CRISPR/Cas9 and TALEN vectors using the translational enhancer dMac3

Hiroaki Shimada[1], Hiroaki Kusano[2], Mariko Ohnuma[1], Takahiro Asahi[1], Daichi Honma[1], Takaaki Horie[1], Hitomi Onodera[1], Kenji Asano[3], Takahiro Noda[3], Hiromi Mutsuro-Aoki[1], Hiroshi Teramura[1] ([1]Dept Biol Sci & Technol, Tokyo University of Science, [2]RISH, Kyoto Univ., [3]Hokkaido Agri Res Center, NARO)

PL-058 Non-destructive imaging of element dynamics in plant using radioisotope

Nobuo Suzui[1], Naoki Kawachi[1], Jun Furukawa[2], Keitaro Tanoi[3,4] ([1]TARRI, QST, [2]CRiED, Univ. Tsukuba, [3]Grad. Sch. Agri. Life Sci., Univ. Tokyo, [4]JST PRESTO)

PL-059 Cas9-RNP-induced genome editing in the industrial green alga *Coccomyxa* sp. strain KJ

Yuya Yoshimitsu[1], Jun Abe[2], Jumpei Hayakawa[2], Yoko Ide[1], Shigeaki Harayama[2] ([1]Advanced Research and Innovation Center, DENSO CORPORATION, [2]Research and Development Initiative, Chuo University)

PL-060 Analysis of sequence changes on genome edited hexaploid *Chrysanthemum morifolium* using high-throughput sequencing

Mitsuko Kishi-Kaboshi[1,2], Hisataka Numa[3], Ryutaro Aida[1], Katsutomo Sasaki[1] ([1]Institute of Vegetable and Floriculture Science, NARO, [2]JSPS research fellowship (RPD), [3]The Advanced Analysis Center, NARO)

PL-061 AI- and automation-assisted high-throughput yeast one-/two-hybrid screening system for transcription factor isolation

Nobutaka Mitsuda[1], Fumie Tobe[1], Miyuki Nakata[1], Masahiro Takahara[2], Yuko Takiguchi[1], Yoko Horii[3], Toru Ishizuka[1], Hiroaki Ichikawa[4], Minami Matsui[3], Masaru Ohme-Takagi[1,5] ([1]Bioproduction RI, AIST, [2]Acacia Horticulture, [3]CSRS, RIKEN, [4]Inst. Agrobiol. Sci., NARO, [5]Grad. School Sci. Eng., Saitama Univ.)

PL-062 Current status of the resources related to *Lotus japonicus*

Shusei Sato[1], Shogo Nitanda[1], Syohei Kusakabe[1], Stig Andersen[2], Vikas Gupta[2], Nadia Kamal[3], Klaus Mayer[3], Masatsugu Hashiguchi[4], Hidenori Tanaka[4], Ryo Akashi[4] ([1]Grad. Sch. Life Sci., Tohoku Univ., [2]Aarhus Univ., [3]Helmholtz Zentrum Munchen, [4]Fac. Agr., Univ. of Miyazaki)

PL-063 Collection and Maintenance of Plant Cell Lines at RIKEN BRC in 2019

Toshihiro Kobayashi, Satoshi Iuchi, Masatomo Kobayashi (RIKEN BRC)

PL-064 Collective search function of Arabidopsis thaliana bioresource database at RIKEN BRC

Satoshi Iuchi, Masatomo Kobayashi (RIKEN BRC Experimental Plant Division)

PL-065 Research ethics education by active learning in a postgraduate course: current situation and issues in the second year of implementation

Emiko Harada[1], Misako Urabe[1], Takayoshi Kusumoto[1,2], Ko-ichi Takakura[1], Sayoko Hata[1], Takayoshi Nishida[1], Masahiro Maruo[1] ([1]The University of Shiga Prefecture, [2]Kusumoto Patents & Trademarks)