Program: POSTER PRESENTATION

■ Growth regulators

PF-001 Development of compounds showing ethylene like activity

Masashi Suzuki[1], Yuko Kengoyama[1], Tsubasa Mizuno[1], Yusaku Imamura[1], Nobutaka Kitahata[1,2], Keiko Abe[1], Shinji Okada[1], Tadao Asami[1] ([1]Dept. Appl. Biol. Chem., Univ. of Tokyo, [2]Dept. Appl. Biol. Sci., Tokyo Univ. of Science)

PF-002 Ethylene is a major regulator of root apical meristem development in Arabidopsis thaliana

Mohammad Arif Ashraf, Yukie Kobayashi, Abidur Rahman (Cryobiofrontier Research Center, Iwate University)

PF-003 Roles of auxin in controlling chromatin structure

Aida Nazlyn Nazari[1], Hirotomo Takatsuka[1], Masaaki Umeda[1,2] ([1]Nara Institute of Science and Technology, JAPAN, [2]JST, CREST, JAPAN)

PF-004 Feedback regulation of Auxin biosynthesis through SCF^{TIR1} complex.

Shin Takato[1], Marie Mitsui[1,2], Yosuke Ishida[1], Masashi Suzuki[1], Yusuke Kakei[1], Chiaki Yamazaki[1], Takahiro Ishii[3], Ken-ichiro Hayashi[4], Shozo Fujioka[2], Ayako Nakamura[1], Keiichi Mochida[1,2], Kazuo Soeno[3], Yukihisa Shimada[1] ([1]Kihara Ins. Biol., Yokohama city Univ., [2]RIKEN, [3]NARO/WARC, [4]Dept. Bioc., Okayama Univ. of Sci.)

PF-005 Characterization of novel genes that regulate Indole-3-butyric acid response in Arabidopsis thaliana

Miori Yoshida[1], Taiki Hanzawa[1], Takehiko Ogura[2], Wolfgang Busch[2], Abidur Rahman[1] ([1]Cryobiofrontier Research Center,Faculty of Agriculture, Iwate University, [2]Gregor Mendel Institute, Austrian Academy of Sciences, Vienna Biocenter)

PF-006 Role of ABA signaling in fruit development and ripening in tomato

Chakyung Bok[1,2], Tetsuo Oikawa[2], Yukari Nagatoshi[2], Takuya Ogata[2], Yoshihiro Okabe[1], Tohru Ariizumi[1], Hiroshi Ezura[1], Yasunari Fujita[1,2] ([1]Grad. Sch. Life Environ. Sci., Univ. Tsukuba, [2]Biol. Resources Post-harvest Div., JIRCAS)

PF-007 Role of ABA signaling in auxin-responsive gene expression in Arabidopsis

Yukari Nagatoshi[1], Chagyon Boku[1,2], Takuya Ogata[1], Yasunari Fujita[1,2] ([1]Biol. Resources Post-harvest Div., JIRCAS, [2]Grad. Sch. Life Environ. Sci., Univ. Tsukuba)

PF-008 Functional analysis of MAP kinase cascade in ABA signaling

Misaki Hirotani[1], Ryo Yoshimura[3], Mika Nomoto[3], Fuminori Takahashi[2], Yasuomi Tada[3], Taishi Umezawa[1] ([1]Grad. Sch. BASE, TUAT, [2]RIKEN BRC, [3]Grad. Sch. Science, Nagoya Univ.)

PF-009 Phenylboronic acid analogs are effective auxin biosynthesis inhibitors targeting YUCCA

Yusuke Kakei[1], Chiaki Yamazaki[1], Masashi Suzuki[1], Ayako Nakamura[1], Akiko Sato[1], Yosuke Ishida[1], Rie Kikuchi[1,4], Shouichi Higashi[2], Yumiko Kokudo[3], Takahiro Ishii[3], Kazuo Soeno[3], Yukihisa Shimada[1] ([1]Kihara Ins. Biol., Yokohama city Univ, [2]Yokohama city Univ, [3]NARO/WARC, [4]Kanagawa univ)

PF-010 Functional analysis of jasmonate-responsive transporter GTR1 during stamen development in *Arabidopsis thaliana*

Miyu Kanamori-Sato[1], Yuko Sasaki-Sekimoto[2], Hikaru Saito[1], Mie Simojima[1], Hiroyuki Ohta[1,2] ([1]Grad. Sch. Biosci. Biotech., Tokyo Tech, [2]ELSI, Tokyo Tech)

PF-011 Regulatory Roles of PIP5K Genes in Plant Cell Morphogenesis and Their Redundancy

Machiko Watari, Romain Blanc-Mathieu, Mariko Kato, Tomohiko Tsuge, Hiroyuki Ogata, Takashi Aoyama (Institute for Chemical Research, Kyoto University)

PF-012 Functional Analyses of bHLH Transcription Factor Working in The Downstream Pathway of Rice Gibbrellin Signaling Repressor, SLR1

Takuma Hikami[1], Shunsuke Kinoshita[1], Hideki Yoshida[1], Nobutaka Mitsuda[2], Mayu Mohri[1], Masaru Ohme-Takagi[3], Makoto Matsuoka[1], Miyako Ueguchi-Tanaka[1] ([1]BBC, Nagoya Univ, [2]BPRI, AIST, [3]IEST, Saitama Univ)

PF-013 A framework for identification of the substrate and signaling pathway of CYP78 regulating lateral organ and seed size.

Izumi Mizuno, Jun-ichi Itoh, Ken-ichiro Hibara (Grad.Sch.Agric.Life Sci., U.Tokyo)

PF-014 Expression study of *ISOPENTENYLTRANSFERASE* genes in the rosulate *Streptocarpus rexii* in the light of the evolution of the cytokinin biosynthesis multigene family

Kanae Nishii[1,2], Yun-Yu Chen[3,5], Frank Wright[4], Katrin MacKenzie[4], Alberto Spada[6], Chun-Neng Wang[5], Michael Möller[2] ([1]Gakugei Univ., [2]RBGE, [3]Univ. Edinburgh, [4]BioSS, [5]NTU, [6]Univ. Milan)

PF-015 The effect of strigolactones on rhizome formation in *Oryza longistaminata*

Naoki Kitaoka[1,2], Takashi Kumaki[1], Mikihisa Umehara[3], Motoyuki Ashikari[2,4], Yoshiya Seto[1,2], Shinjiro Yamaguchi[1,2] ([1]Grad. Sch. of Life Sci., Tohoku Univ., [2]JST/CREST, [3]Grad. Sch. of Life Sci., Toyo Univ., [4]Bioscience and Biotechnology Center, Nagoya Univ.)

PF-016 Expression analysis of *KISS ME DEADLY* genes controlling protein degradation of B-type response regulators

Hiroshi Noguchi[1], Hirotomo Takatsuka[1], Masaaki Umeda[1,2] ([1]Nara Institute of Science and Technology, Graduate School of Biological Science, [2]JST CREST)

PF-017 Nitrogen stimulates rhizome growth via the cytokinin biosynthesis in *Oryza lonsistaminata*

Kyohei Shibasaki, Arika Takebayashi, Nanae Ueda, Nobue Makita, Yumiko Takebayashi, Mikiko Kojima, Hitoshi Sakakibara (RIKEN CSRS)

PF-018 Identification of Essential Amino Acid Residues in KAI2/HTL, a Karrikin Receptor in Arabidopsis

Tomoki Akatsu, Yu Morimoto, Yoshiya Seto, Kiyoshi Mashiguchi, Shinjiro Yamaguchi (Grad. Sch. Life. Sci., Tohoku Univ.)

PF-019 Analysis of Spatio-temporal Gene Expression during Tissue-reunion in Incised *Arabidopsis* Flowering Stem using Laser micro-dissection.

Miyuki Nakanowatari[1], Kentaro Ogura[2], Maasa Banse[2], Shinobu Satoh[3], Masashi Asahina[1,2] ([1]Grad. Sch. Sci. & Eng., Teikyo Univ., [2]Dept. Biosci, Teikyo Univ., [3]Life & Environ Sci., Univ. Tsukuba.)

PF-020 Elucidation of plant morphogenesis mechanism by interactions between SET DOMAIN GROUP and auxin

Takeru Saiki, Yuka Kadoya, Nobutoshi Yamaguchi, Toshiro Ito (NAIST)

■ Plant hormones/Signaling molecules

PF-021 A study on CLE peptide-meditated environmental signaling in Arabidopsis thaliana

Dichao Ma, Akie Shimotohno, Yuki Kondo, Hiroo Fukuda (Grad. Sch. Sci., Univ. Tokyo)

PF-022 Functional analysis of CLE16 and CLE17 in Arabidopsis using the CRISPR/Cas9 system

Chie Shimaoka[1], Yasuka Yamaguchi[2], Shinichiro Sawa[2], Takashi Ishida[2] ([1]Sci., Univ. Kumamoto, [2]Grad. Sch. Sci., Univ. Kumamoto)

PF-023 Generation of CRISPR/spCas9 mediated loss-of-CLE peptide mutants in *Arabidopsis*.

Yasuka Yamaguchi[1], Mika Yoshimura[1], Yuko Imamura[1], Chie Shimaoka[2], Ryota Tateishi[2], Shinichiro Sawa[1,2], Takashi Ishida[1] ([1]Grad. Sch. Sci. Technol, Kumamoto Univ., [2]Fac. Sci., Kumamoto Univ.)

PF-024 Functional Analysis of the GA-GID1-DELLA Signaling Module in the Liverwort *Marchantia polymorpha*

Rui Sun, Keisuke Inoue, Ryunosuke Kusunoki, Ryuichi Nishihama, Shohei Yamaoka, Takayuki Kohchi (Grad. Sch. Biostudies, Kyoto Univ.)

PF-025 Identification and Characterization of Strigolactone Receptor in Moso Bamboo (*Phyllostachys heterocycla*)

Ikuo Takahashi[1], Guo-Dong Li[2], Hidemitsu Nakamura[1], Tadao Asami[1] ([1]Grad. Sch. Agric. Life. Sci., Univ. Tokyo, [2]Nurtur. Sta. State Key Lab. Subtrop. Silvicult., Zhejiang Agric. For. Univ.)

PF-026 Improvement of wheat drought tolerance utilizing ABA receptor

Masanori Okamoto[1,2], Fumitaka Abe[3], June-Sik Kim[1], Hisashi Tsujimoto[1], Kousuke Hanada[4], Ryosuke Mega[1] ([1]Arid Land Res. Center, Tottori University, [2]PRESO, JST, [3]NARO, Natl. Inst. of Crop Science, [4]Frontier Res. Acad. for Young Researchers, Kyushu Inst. of Tech.)

PF-027 Functional analysis of the N-terminal region ABA and abiotic stress-responsive Raf-like kinase (ARK) in *Physcomitrella patens*

Masashi Saruhashi[1], Yumiko Ishizaki[1], Kazuya Hagiwara[1], Kenji Komatsu[2], Taishi Umezawa[3], Yoichi Sakata[4], Daisuke Takezawa[1] ([1]Grad. Sch. Sci and Eng., Saitama Univ., [2]Dept. Biopro. Tech. JC. Tokyo Univ. Agric., [3]Grad. Sch. BASE, Tokyo Univ. Agric. Tech., [4]Dept. Bioscience, Tokyo Univ. Agric.)

PF-028 Phosphoproteomic analysis of dormant and after-ripened barley seeds

Shinnosuke Ishikawa[1], Huminori Takahashi[2], Saho Mizukado[2], Jose Maria Barrero[3], Frank Gubler[3], Taishi Umezawa[1] ([1]Grad. Sch., BASE TUAT, [2]Riken CSRS, [3]CSIRO Plant Industry, Australia)

PF-029 Pharmacological approach to the mechanism of auxin-induced H^+-ATPase phosphorylation

Kohei Teramoto[1], Koji Takahashi[1], Shin-ichiro Inoue[1], Toshinori Kinoshita[2] ([1]Division of Bioligical Science, Graduate School of Science, Nagoya University, Furo-cho, Chikusa-ku, Nagoya, Aichi 464-8601, Japan, [2]Institute of Transformative Bio-Molecules(WPI-ITbM), Nagoya University, Furo-cho, Chikusa-ku, Nagoya, Aichi 464-8601, Japan)

PF-030 Transcriptional context shifts plant immune cofactors between activator/repressor behavior

Mika Nomoto[1], Hironaka Tsukagoshi[2,3], Tsuyoshi Mori[1], Takamasa Suzuki[4,5], Michael Skelly[6], Nodoka Oka[1], Tomonao Matsushita[3,7], Mutsutomo Tokizawa[8], Yoshiharu Y. Yamamoto[8], Tetsuya Higashiyama[1,4,9], Steven Spoel[6], Yasuomi Tada[1,2]

([1]Grad. Sch. of Sci., Nagoya Univ., [2]Center for Gene Res., Nagoya Univ., [3]JST, PRESTO, [4]JST, ERATO, Higashiyama Live-Holonics Project, [5]Coll. of Biosci. and Biotech., Chubu Univ., [6]Sch. Biol. Sci., Univ. of Edinburgh, [7]Fac. of Agr., Kyushu Univ., [8]Fac. of Appli. Biol. Sci., Gifu Univ., [9]WPI-ITbM, Nagoya Univ.)

PF-031 Signaling pathway involving *SOG1* and *SnRK1* controls *Arabidopsis* development via mitochondrial ATP

Hidefumi Hamasaki[1,2,5], Yukio Kurihara[1], Takashi Kuromori[3], Megumi Kobayashi[4], Yuko Imura[3], Noriko Nagata[4], Hiroaki Shimada[2], Yoshiharu Y. Yamamoto[5], Minami Matsui[1] ([1]Synthetic Genomics Research Team, Yokohama Inst. Riken, [2]Dept. Biol. Sci. & Tech, Tokyo Univ. Sci., [3]Gene Discovery Research Group, Yokohama Inst. Riken, [4]Japan Woman's Univ., [5]Gifu Univ. Faculty of Applied Biol. Sci.)

PF-032 RERJ1, a rice wound inducible transcription factor

An in vivo and in vitro interaction profile with JA- Signaling factors

Ioana Valea[1], Kenji Gomi[2], Hideaki Nojiri[1], Kazunori Okada[1] ([1]The University of Tokyo, Biotechnology Research Center, Laboratory of Environmental Biotechnology, [2]Kagawa University, Faculty of Agriculture, Plant Genome and Resource Research Center)

PF-033 A search for long-distance mobile peptides in soybean xylem sap

Satoru Okamoto[1,2], Takamasa Suzuki[2,3], Masayoshi Kawaguchi[4], Tetsuya Higashiyama[2,3,5], Yoshikatsu Matsubayashi[2] ([1]RIKEN CSRS, [2]Grad. Sch. Sci., Nagoya Univ., [3]ERATO Higashiyama Live-Holonics Project, [4]NIBB, [5]WPI-ITbM., Nagoya Univ.)

PF-034 Functional analysis of ABA in *Cyanidioschyzon merolae*

Yuki Kobayashi[1], Hiroyuki Ando[2], Mitsumasa Hanaoka[2], Kan Tanaka[1,3] ([1]CRL, Tokyo Tec., [2]Chiba Univ., [3]JST, CREST)

PF-035 OsMYC2-Mediated Transcriptional Regulation Of The Biosynthetic Gene For Flavonoid Phytoalexin In Rice

Satoshi Ogawa[1], Koji Miyamoto[2], Hisakazu Yamane[2], Hideaki Nojiri[1], Kazunori Okada[1] ([1]Biotechnology Research Center, The Univ. of Tokyo, [2]Dept. of Biosciences, Teikyo Univ.)

■ Vegetative growth

PF-036 Characterization of five homologs encoding STRUBBELIG-type leucine-rich repeat receptor-like kinases in the moss *Physcomitrella patens*

Kiyotaka Soeishi[1], Hiroki Mukai[1], Susumu Takio[1,2], Katsuaki Takechi[1], Hiroyoshi Takano[1,3] ([1]Grad. Sch. Sci. Tech., Kumamoto Univ., [2]Center Marine Environ. Stud., Kumamoto Univ., [3]Inst. Pulsed Power Sci., Kumamoto Univ.)

PF-037 Identifification of a novel TCP transcription factor controlling tendril formation in Cucumis melo

Shinya Nakano[1], Masatoshi Sonoda[1], Eisho Nishino[1], Hideyuki Suzuki[2], Takahide Sato[1], Toshikatsu Oizumi[3,4], Shinji Mizuno[3,5] ([1]Glad. Sch. of Hort., Chiba Univ., [2]Kazusa DNA Res. Inst., [3]Chiba Prefectural Agric. and Foresty. Res. Cent., [4]Inst. for Hort. Plant Breeding, [5]College of Bioresource Sci., Nihon Univ.)

PF-038 Role of cytokinin signaling in proliferation of vascular cambium in A. thaliana

Miyu Imamura[1], Yurina Shimada[1], Nobutaka Mitsuda[2,3], Masaru Ohme-Takagi[2,4], Yumiko Takebayashi[5], Hitoshi Sakakibara[5], Takafumi Yamashino[1] ([1]Grad. Sch. Bio. Sci., Nagoya Univ., [2]Bio. Res. Inst., Nat. Inst. of Adv. Ind. Sci. Tech., [3]Grad. Sch. Sci. Eng., Saitama Univ., [4]Inst. Env. Sci. Tech., Saitama Univ., [5]RIKEN CSRS)

PF-039 Functional analysis of auxin in rice leaf development using YUCCA inhibitors

Fumika Kubo, Yukiko Yasui, Hiro-Yuki Hirano (Grad. Sch. Sci., Univ. Tokyo)

PF-040 Genetic analysis of the *AtIPT3* and homologous during leaf development through the AS1-AS2-*ETT* pathway in *Arabidopsis thaliana*

Kana Koda[1], Nanako Ishibashi[2], Mikiko Kojima[3], Ayami Nakagawa[1], Hiro Takahashi[4], Hitoshi Sakakibara[3,5], Yasunori Machida[2], Chiyoko Machida[1], Shoko Kojima[1] ([1]Grad. Sch. of Biosci. and Biotech., Chubu Univ., [2]Grad. Sch. of Sci., Nagoya Univ., [3]RIKEN, CSRS, [4]Grad. Sch. of Hort., Chiba Univ., [5]Grad. Sch. of Bioagr., Nagoya Univ.)

PF-041 Analysis of roles of AS1-AS2 in adaxial-abaxial differentiation and cell division in *Arabidopsis thaliana* leaves by chemical biology

Motoki Tamai[1], Ayami Nakagawa[1], Shoko Kojima[1], Yasunori Machida[2], Chiyoko Machida[1] ([1]Grad. Schl. Biosci. Biotechnol., Chubu Univ., [2]Grad. Schl. Sci., Nagoya Univ.)

PF-042 Analysis of function of chemical compounds that inhibit or promote growth of *Arabidopsis thaliana*

Kazuaki Kawasaki[1], Ayami Nakagawa[2], Yuka Atsumi[1], Byung-Yoon Cha[1], Je-Tae Woo[1], Kazuo Nagai[1], Shoko Kojima[1], Johji Miwa[3], Chiyoko Machida[1] ([1]Grad. Schl. Biosci. Biotechnol., Chubu Univ., [2]Asagiri Agriculture, Co. LTD, [3]Institute for the Promotion of Research, Chubu Univ.)

PF-043 Epigenetic regulator AS1-AS2 and modifiers control the level of DNA methylation of the ETTIN locus in establishment of leaf adaxial-abaxial polarity in Arabidopsis thaliana

Chiyoko Machida[1], Simon Vial-Pradel[1], Ayami Nakagawa[1], Takuma Ito[1], Mayumi Iwasaki[1], Yasunori Machida[2], Shoko Kojima[1] ([1]Grad. Sch. of Biosci. and Biotech., Chubu University, [2]Grad. Sch. of Sci., Nagoya University)

PF-044 Metabolome Profiling Reveals Roles Of Abscisic Acid In Growth And Development In Arabidopsis

Takuya Yoshida[1,2], Yasunari Fujita[3,4], Alisdair R. Fernie[2], Kazuko Yamaguchi-Shinozaki[1] ([1]Grad. Sch. Agr. Life Sci., Univ. Tokyo, [2]Max Planck Institute of Molecular Plant Physiology, [3]Biol. Resources Post-harvest Div., JIRCAS, [4]Grad. Sch. Life Env. Sci., Univ. Tsukuba)

PF-045 Visualization of xylem sap flow

Yumi Iwai, Hiroo Fukuda (Grad. Sch. Sci., Univ. Tokyo)

PF-046 Analysis of *Arabidopsis thaliana* Stomata Mutant *bagel3*

Chisato Yamada[1], Takamasa Suzuki[2], Tetsuya Higashiyama[3,4,5], Tsuyoshi Nakagawa[1] ([1]Dept. Mol. Func. Genet., Int. Center Sci. Res., Shimane Univ., [2]Col. Biosci. Biotech., Chubu Univ., [3]WPI-ITbM, Nagoya Univ., [4]JST, ERATO, [5]Grad. Sch. Sci., Nagoya Univ.)

PF-047 Search of the morphogenesis-related peptide ROT4 interacting proteins

Tomoyuki Furuya[1], Pin Guo[1,2], Tomoko Mori[3], Shuji Shigenobu[3], Hirokazu Tsukaya[1,4] ([1]Grad. Sch. Sci., Univ. Tokyo, [2]College of Life Sci., Wuhan Univ., [3]NIBB, NINS, [4]Okazaki Institute for Integrative Bioscience, NINS)

PF-048 Functional characterization of GCAM1, an R2R3-MYB essential for the development of gemma cup in the liverwort *Marchantia polymorpha* L.

Shigeyuki Tsukamoto[1], Tomomi Sugaya[2], Katsuyuki T. Yamato[3], Ryuichi Nishihama[4], Hiroyoshi Kubo[5], Hidehiro Fukaki[1], Tetsuro Mimura[1], Takayuki Kohchi[4], Kimitsune Ishizaki[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]Department of Basic Biology, SOKENDAI., [3]B.O.S.T., Kinki Univ., [4]Grad. Sch. Biostudies, Kyoto Univ., [5]Fac. Sci., Shinshu Univ.)

PF-049 Developmental analysis of branched structure in leaves of aquatic ferns *Microsorum pteropus* and its varieties

Saori Miyoshi[1], Akiko Nakamasu[2], Seisuke Kimura[1] ([1]Faculty. Life Sci., Univ. Kyoto Sangyo, [2]Grad. Sch. Med. Sci., Univ. Kyusyu)

PF-050 Functional characterization of a *LATERAL SUPPRESSOR* homolog in *Marchantia polymorpha*

Marina Uno[1], Shigeyuki Tsukamoto[2], Hidehiro Fukaki[2], Tetsuro Mimura[2], Kimitsune Ishizaki[2] ([1]Fac. Sci., Kobe Univ., [2]Grad. Sch. Sci., Kobe Univ.)

PF-051 Identification of the gene *GEMMA CUP-ASSOCIATED MYB 2* involved in the formation of gemma cup in *Marchantia polymorpha*.

Hideyuki Takami[1], Shigeyuki Tsukamoto[1], Akihide Masuda[2], Hidehiro Fukaki[1], Tetsuro Mimura[1], Takayuki Kohchi[2], Kimitsune Ishizaki[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]Grad. Sch. Biostudies, Kyoto Univ.)

PF-052 Screening of transcription factors that regulate useful phenotype in Arabidopsis

Tsubasa Yamagata[1], Miho Ikeda[2], Masaru Ohme-Takagi[2] ([1]Dept. of Sci., Univ. Saitama, [2]Grad. Sch. Sci. & Eng., Univ. Saitama)

PF-053 Identification of a candidate for causal mutation in a novel dwarf soybean mutant.

Susumu Hiraga[1], Tetsuya Yamada[1], Minoru Nishimura[2], Setsuko Komatsu[1] ([1]NARO Inst. Crop Sci., [2]Fac. Agr., Niigata Univ.)

PF-054 Functional Analysis of Transcription Factor HR0109 Related to Regulation of Plant Morphogenesis

Mikiya Takahashi, Miho Ikeda, Masaru Ohme-Takagi (Grad. Sch. Sci. Eng., Univ. Saitama)

PF-055 Characterization of *KARAPPO*, an essential gene for gemma formation in *Marchantia polymorpha*

Takuma Hiwatashi[1], Katsushi Yamaguchi[2], Shuji Shigenobu[2], Shinichi Sawa[3], Hiroyuki Kirita[4], Hidehiro Fukaki[1], Tetsurou Mimura[1], Takayuki Kohchi[4], Kimitsune Ishizaki[1] ([1]Grad.Sch.Sci.,Univ.Kobe, [2]NIBB, [3]Grad.Sch.Sci.Tech.,Univ.Kumamoto, [4]Grad.Sch.Bio.,Univ.Kyoto)

PF-056 Analysis of mutants showing an altered response to TOLS2 peptide that is involved in *Arabidopsis* lateral root initiation

Yuka Aoki, Koichi Toyokura, Akinori Shinoda, Tatsuaki Goh, Kimitsune Ishizaki, Tetsuro Mimura, Hidehiro Fukaki (Graduate School of Science, Kobe University)

PF-057 The function of an R2R3-MYB on the development of epidermal tissues of *Marchantia polymorpha*

Ayano Morikoshi[1], Kimitsune Ishizaki[2], Hiroyoshi Kubo[1] ([1]Fac. Sci., Shinshu Univ., [2]Grad. Sch. Sci., Kobe Univ.)

PF-058 Physiological study of the response to thermospermine in *Marchantia polymorpha*

Takuya Furumoto[1], Kento Otani[1], Kimitsune Ishizaki[2], Takayuki Kohchi[3], Hiroyasu Motose[1], Taku Takahashi[1] ([1]Grad. Sch. Nat. Sci. & Tech., Okayama Univ., [2]Grad. Sch. Sci., Kobe Univ, [3]Grad. Sch. Biostudies, Kyoto Univ)

PF-059 ERECTA-family signaling coordinates layer-specific stem cell maintenance in the shoot apical meristem

Yuka Kimura[1,2], Masao Tasaka[3], Keiko Torii[4,5], Naoyuki Uchida[2] ([1]Grad. Sch. Sci., Nagoya Univ., [2]ITbM, Nagoya Univ., [3]Grad. Sch. Bio. Sci., NAIST, [4]Univ. Washington, [5]HHMI)

PF-060 *COP1* and *EMC1* Regulate Cell Proliferation in Shoots.

Mayu Nakagawa[1], Takamasa Suzuki[2,3], Tetsuya Higashiyama[3,4,5], Sumie Ishiguro[6], Hitoshi Suzuki[1] ([1]Fac. of Sci. and Engn., Ishinomaki Senshu Univ., [2]Coll. of Biosci. and Biotech, Chubu Univ., [3]ERATO, JST, [4]ITbM, Nagoya Univ., [5]Grad. Sch. of Sci., Nagoya Univ., [6]Grad. Sch. of Bioagr., Nagoya Univ.)

PF-061 *KORPOKKUR* Gene Is The Essential Gene For Proper Cellular Development And Vegetative Phase Change

Namiko Satoh-Nagasawa[1], Nobuhiro Nagasawa[1], Kenji Ueda[1], Yasuo Nagato[2], Hiroetsu Wabiko[1] ([1]Fac. Biores. Sci., Akita Pref. U., [2]Grad. Sch. Agric. Life Sci., U. Tokyo)

PF-062 Searching the senescence associated genes of rice downstream of transcription factor gene OsNY37

Yousra El mannai, Nao Konno, Kenji Ueda, Namiko Satoh-Nagasawa, Hiroetsu Wabiko (Akita Prefectural University, Faculty of Bioresource Sciences)

PF-063 Identification and characterization of a bHLH gene involved in gemma germination in the liverwort *Marchantia polymorpha*

Mikako Yoshikawa[1], Shigeyuki Tsukamoto[2], Hidehiro Fukaki[2], Tetsuro Mimura[2], Kimitsune Ishizaki[2] ([1]Fac. Sci., Kobe Univ., [2]Grad. Sch. Sci. Kobe Univ.)

PF-064 Suppression of germination and seedling growth by a glutaredoxin OsGRXC2;2 in rice

Shigeto Morita[1,2], Satoru Adachi[1], Jun'ichi Nakamura[1], Kiyoka Adachi[1], Takehiro Masumura[1,2], Shigeru Satoh[3] ([1]Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ., [2]Kyoto Pref. Agr. Forest. Fish. Technol. Center, [3]Fac. Agr., Ryukoku Univ.)

PF-065 Screening of Arabidopsis Putative Ptdins3-phosphate-binding Proteins Related to Autophagy

Yuki Fujiki[1,2], Natsumi Kanazawa[1], Takashi Nagashima[1], Youngsook Lee[3], Ikuo Nishida[1,2] ([1]Fac. of Sci., Saitama Univ., [2]Grad. Sch. of Sci. and Eng., Saitama Univ., [3]Div. of Integrative Biol. and Biotech., POSTECH)

PF-066 Expression analysis in root of a candidate gene 91071 for columnar growth habit in apple.

Masato Wada, Kazuma Okada, Shigeki Moriya, Toshio Hanada, Yuki Moriya (Tanaka), Chikako Honda, Hiroshi Iwanami, Kazuyuki Abe (Nat. Inst. Fruit Tree Sci. NARO.)

■ Reproductive growth

PF-067 Functional analysis of *ALOG* family protein in *Marchantia polymorpha*

Satoshi Naramoto[1], Kimitsune Ishizaki[2], Masaki Shimamura[3], Hiroki Tokunaga[1], Akiko Yoshida[1], Nariyuki Tsukamoto[2], Hideyuki Takami[2], Ryuichi Nishihama[4], Takayuki Kochi[4], Junko Kyozuka[1] ([1]Grad. Sch., Life Sci., Tohoku Univ., [2]Grad. Sch. Sci., Kobe Univ., [3]Grad. Sch. Sci., Hiroshima Univ., [4]Grad. Sch. Biostudies, Kyoto Univ.)

PF-068 Control of the meristem phase transition by a cooperative action of *TAW1* and *BOP* genes

Hiroki Tokunaga[1], Akiko Yoshida[1], Ryo Yamazaki[2], Junko Kyozuka[1] ([1]Grad. Sch., Life Sci., Tohoku Univ., [2]Grad. Sch., Agr. and Life Sci., Tokyo Univ.)

PF-069 Physiological roles of autophagy in the regulation of development and metabolism in rice

Takamitsu Kurusu[1,2], Bunki Toh[3], Yuri Sera[3], Shingo Sakamoto[4], Shigeru Hanamata[2,3], Seijiro Ono[5], Yozo Okazaki[6], Kotaro Nihira[3], Nobutaka Kitahata[2,3], Mikiko Kojima[6], Hitoshi Sakakibara[6], Kazuki Saito[6], Kenichi Nonomura[5], Nobutaka Mitsuda[4], Yuichi Tada[1], Kazuyuki Kuchitsu[2,3] ([1]Sch. Biosci. Biotech., Tokyo Univ. Tech., [2]Imaging Frontier Center, Tokyo Univ. Sci., [3]Dept. Appl. Biol. Sci., Tokyo Univ. Sci., [4]Bioproduction Research Inst., NAIST, [5]Experimental Farm, NIG, [6]Center for Sustainable Resource Science, RIKEN)

PF-070 Functional Characterization of PeMADS28, a B-sister MADS-box Gene, From Phalaenopsis equestris

Ching-Yu Shen[1], You-Yi Chen[1], Shien-Wen Lin[2], Wen-Chieh Tsai[1] ([1]Institute of Tropical Plant Sciences, National Cheng Kung University, [2]Lin Family Biotechnology Co.)

PF-071 Stigmatic papillae elongate in response to ambient humidity in Arabidopsis thaliana

Seiji Takeda[1,2], Kohki Ochiai[1], Satomi Sakazono[3], Masao Watanabe[3], Keita Suwabe[4] ([1]Kyoto Prefectural University, [2]Kyoto Prefectural Biotechnology Research Center, [3]Tohoku University, [4]Mie University)

PF-072 Transcription factors that regulate parthenocarpy

Hibari Hayashi[1], Miho Ikeda[2], Masaru Ohme-Takagi[2] ([1]Dept. of. Sci., Univ. Saitama, [2]Grad. Sch. Sci & Eng., Univ. Saitama)

PF-073 Complex genome rearrangement events occurred in a rice cleistogamous mutant induced by gamma irradiation.

Shinnosuke Ohmori[2], Hitoshi Yoshida[1] ([1]NARO Inst. Crop Sci., [2]NARO Agric. Res. Ctr.)

PF-074 Expression and functional analyses zof novel subtilisin-like protease genes during the early stage of rice seed development

Aimi Tokairin, Daichi Satou, Ken-ichi Tsutsumi, Yasushi Saitoh (Cryobiofrontier Research Center)

PF-075 Involvement of actin filament in petal growth in Arabidopsis

Shun Kikuchi[1], Haruyo Kijima[1], Takumi Higaki[2], Koichi Toyokura[3], Takamasa Suzuki[4,5], Tetsuya Higashiyama[5,6,7], Kiyotaka Okada[8], Seiichiro Hasezawa[2], Hitoshi Sakakibara[1,9], Sumie Ishiguro[1] ([1]Grad. Sch. of Bio-agr., Nagoya Univ., [2]Grad. Sch. of Frontier Schiences, The University of Tokyo., [3]Grad. Sch. of Sci., Kobe Univ., [4]Coll. of Biosci. and Biotech, Chubu Univ., [5]ERATO, JST, [6]WPI-ITbM, Nagoya Univ., [7]Grad. Sch. of Sci., Nagoya Univ., [8]Sch. of Agr., Ryukoku Univ., [9]RIKEN. CSRS)

PF-076 Analysis of a globular shaped embryo mutant, *odm-192*, in rice

Kiyoe Ishimoto, Sato Yutaka (Graduate School of Bioagricultural Sciences Nagoya University)

PF-077 How do tomato plants inhibit meristem phase transition in unfavorable environmental conditions?

Kosuke Fukui, Hitoshi Sakakibara (CSRS, Yokohama inst., Riken)

PF-078 Self-incompatibility signaling starts from the plasma membrane in the Brassicaceae

Masaya Yamamoto[1], Takeshi Nishio[1], June Nasrallah[2] ([1]Graduate School of Agricultural Science, Tohoku University, [2]Section of Plant Biology, Cornell University)

PF-079 Functional analysis of pollen-expressed cysteine-rich protein CR3

Hiroaki Morimoto[1], Chiho Arakawa[1], Wataru Egusa[1], Hiromi Masuko-Suzuki[2], Mai Matsushima[1], Go Suzuki[3], Masao Watanabe[2], Keita Suwabe[1] ([1]Fac. Biores., Univ. Mie, [2]Grad. Sch. Life Sci., Univ. Tohoku, [3]Div. Nat. Sci., Univ. Osaka Kyouiku)

PF-080 QTL analysis of primed-seed longevities in Arabidopsis

Naoto Sano, Mitsunori Seo (RIKEN CSRS)

PF-081 Expression analyses of the wasabi (*Wasabia japonica*) genes that control seed dormancy and germination

Tomoki Horigane, Tiaki Okamoto, Hatsumi Nozue, Masahiro Nogawa, Masayuki Nozue (Fac. of Textile Sci and Tech., Shinshu Unvi)

PF-082 Identification of *Cullin1*-family Genes and Analysis of Their Function in Self-incompatibility in *Petunia* (Solanaceae)

Ken-ichi Kubo[1], Mai Tsukahara[1], Tetsuyuki Entani[2], Kohji Murase[1], Seiji Takayama[1] ([1]Grad. Sch. Bio. Sci., NAIST, [2]Inst. Sci. Indust. Res., Osaka Univ)

■ Flowering/Clock

PF-083 Analysis of the flowering regulation mechanism in response to C/N nutrient availability

Shoki Aoyama[1], Yoshie Morita[1], Yuko Nomura[2], Hirofumi Nakagami[2], Shogo Ito[3], Mitsutomo Abe[4], Takato Imaizumi[5], Takeo Sato[1], Junji Yamaguchi[1] ([1]Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ., [2]RIKEN, CSRS, [3]Dept. Botany, Grad. Sch. Sci., Kyoto Univ., [4]Grad. Sch. Sci., Univ. Tokyo, [5]Dept. Biol., Univ. Washington)

PF-084 Competition between florigen Hd3a and antiflorigen RCN for regulation of inflorescence architecture in rice

Miho Suzuki[1], Ken-ichiro Taoka[1], Rie Ishikawa[2], Chiaki Terakawa[2], Momoko Yoneyama[3], Chojiro Kojima[3], Ko Shimamoto[2] ([1]Kihara Institute for Biological Research, YCU, [2]Nara Institute of Science and Technology, [3]Institute for Protein Research, Univ. Osaka)

PF-085 Regulation of plant growth and flowering by SET DOMAIN GROUP in light environmental response

Yuka Kadoya, Takeru Saiki, Nobutoshi Yamaguchi, Toshiro Ito (NAIST)

PF-086 Molecular and genetic analysis of tuberigen homolog, *SP6A* of tomato

Mizuki Yamada, Chie Moriya, Koji Goto (RIBS Okayama)

PF-087 Isolation and expression of *FT* gene from Japanese beech tree

Yasunori Ohmiya[1], Kanami Sugiyama[3], Shuichi Matsuda[4], Chiaki Igashira[3], Naoko Miyamoto[2], Shinji Akada[3] ([1]Forestry and Forest Products Research Institute, [2]FFPRI FTBC Tohoku, [3]Fac. Atri. Life Sci., Hirosaki U., [4]Cryobiofrontier Research Center, Facul. Agric., Iwate U.)

PF-088 Arabidopsis deadenylase AtCCR4 is involved in the regulation of circadian clock.

Akiko Nagumo[1], Yuya Suzuki[2], Masami Yokota Hirai[3], McClung C. Robertson[4], Pamela J. Green[5], Junji Yamaguchi[2,6], Yukako Chiba[2,6,7] ([1]Shcl. Sci., Hokkaido Univ., [2]Grad. Schl. Life Sci., Hokkaido Univ., [3]RIKEN CSRS, [4]Dept. Biol. Sci., Dartmouth Coll., [5]Delaware Biotech. Inst., Univ. Delaware, [6]Fac. Sci., Hokkaido Univ., [7]JST PRESTO)

■ Bioresources

PF-089 Improving PHB Production In *Synechocystis* sp. PCC 6803 By Overexpression of NAD Kinase

Kazuaki Nagai[1,2], Yosihiro Ozeki[1,2], Akiyo Yamada[1,2] ([1]Tokyo University of Agriculture and technology, [2]JST-CREST)

PF-090 Development of useful bioresources for the research with Arabidopsis accessions

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

PF-091 Collection and Maintenance of Plant Cell Lines at RIKEN BRC in 2016

Toshihiro Kobayashi, Masatomo Kobayashi (BRC, RIKEN)

■ Photoreceptors/Photoresponses

PF-092 Arabidopsis phot1 and phot2 phosphorylate BLUS1 kinase with different efficiencies in stomatal opening

Atsushi Takemiya, Ken-ichiro Shimazaki (Fac. Sci., Kyushu Univ.)

PF-093 Functional studies on the blue light receptor cryptochrome of fern *Adiantum* by using transgenic *Arabidopsis*

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

PF-094 Light-dependent gene expression profiles in transgenic *Arabidopsis* expressing the fern *Adiantum* phytochrome 3

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

PF-095 Functional analyses of the C-terminus of AHA1 in blue light-dependent stomatal opening

Shota Yamauchi[1], Atsushi Takemiya[2], Toshinori Kinoshita[3], Ken-ichiro Shimazaki[2] ([1]Grad. Sch. Systems Life Sciences. Kyushu Univ., [2]Faculty of Science. Kyushu Univ., [3]WPI-ITbM. Nagoya Univ.)

PF-096 Actin meshwork formation and its role in the chloroplast photorelocation movement of the moss *Physcomitrella patens*

Haruka Ishii[1], Masahiro Kasahara[2], Akeo Kadota[1] ([1]Department of Biological Sciences, Graduate School of Science and Engineering, Tokyo Metropolitan University, [2]Graduate School of Science and Engineering, Ritsumeikan University)

PF-097 Spectral sensitivity of phototaxis in the symbiotic alga *Symbiodinium* sp.

Yusuke Aihara[1], Ayaka Kikuchi[1,2], Shinichiro Maruyama[3], Shin-ichi Takahashi[1,2], Jun Minagawa[1,2] ([1]NIBB, [2]SOKENDAI, [3]Grad. Sch. Life Sci., Tohoku Univ.)

PF-098 Development of algal cultivation system with LED light source and the effects of irradiation wavelength on growth and photosynthetic characteristics in *Synechococcus elongatus* PCC7942

Ayaka Mine[1], Yosuke Kiguchi[1], Masami Eguchi[1], Kyoichi Harada[1], Masahiro Tamoi[2], Shigeru Shigeoka[2], Ichiro Kijihana[1] ([1]NKsystem Co., Ltd., [2]Dept. Adv. Biosci., Fac. Agr., Kinki Univ.)

PF-099 PpCDKAs in the moss, *Physcomitrella patens* regulate light responses

Liang Bao[1], Natsumi Inoue[1], Shinya Kawata[1], Yuma Makiguchi[1], Mitsuhiro Ishibashi[1], Natsumi Noda[2], Masaki Ishikawa[3,4], Takeshi Higa[5], Yuji Hiwatashi[6], Masami Sekine[7], Mitsuyasu Hasebe[3,4], Masamitsu Wada[5], Tomomichi Fujita[2] ([1]Grad. Sch. of Life Sci., Hokkaido Univ., [2]Fac. Sci., Hokkaido Univ., [3]Natl. Inst. Basic Biol., [4]Dept. Basic Biol., Sch. Life Sci., Grad. Univ. Adv. Stud., [5]Fac. Sci., Kyusyu Univ., [6]Sch. Food, Agri. Environ. Sci., Miyagi Univ., [7]Dept. of Bioprod., Ishikawa Pref. Univ.)

PF-100 Cyanobacterial BLUF protein PixD-dependent light signal transduction mechanism

Yuki Sugimoto[1], Shinji Masada[2] ([1]Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, [2]Center for Biological Resources and Informatics, Tokyo Institute of Technology)

PF-101 The Effect of Blue Light on Phosphorylation State of Zmphot1 in Maize Coleoptiles

Hiromi Suzuki[1], Toshiaki Isobe[2], Chiharu Fujita[2], Masato Taoka[2], Takashi Okamoto[1], Tomokazu Koshiba[1] ([1]Dept. of Biol. Sci., Tokyo Metropolitan Univ., [2]Dept. of Chem., Tokyo Metropolitan Univ.)

PF-102 Identification and functional analyses of the protein kinase that interacts with blue light-receptor phototropins in Arabidopsis

Shin-ichiro Inoue[1], Eirini Kaiserli[2], Hirotaka Takahashi[3], Tatsuya Sawasaki[3], Toshinori Kinoshita[4], John M Christie[2], Zhang Xiao[5], Atsushi Takemiya[6], Ken-ichiro Shimazaki[6] ([1]Grad. Sch. Sci., Nagoya Univ., [2]Univ. Glasgow, [3]PROS, Ehime Univ., [4]ITbM, Nagoya Univ., [5]Henan Univ., [6]Grad. Sch. Sci., Kyushu Univ.)

PF-103 Functional analysis of PP2C-Ds in stomatal movement

Hodaka Sugimoto[1], Yohei Takahashi[1,2], Yuki Hayashi[1], Koji Takahashi[1], Shin-ichiro Inoue[1], Mee Yeon Park[3], William.M Gray[3], Toshinori Kinoshita[1,4] ([1]Division of Biological Science, Nagoya University, [2]Division of Biological Science, University of Carlifornia, [3]Department of Plant Biology, Minnesota University, [4]Institute of Transformative Bio-Molecule (ITbM), Nagoya University)

PF-104 Physiological study of the regulation of leaf senescence by light signals

Toshiaki Kozuka[1], Yukimasa Shimono[1], Ryohei Inoue[1], Makoto Kusaba[1,2] ([1]Grad. Sch. Sci., Hiroshima Univ., [2]CREST)

PF-105 Light switches on the gravi-sensitivity of maize roots by inducing de novo IAA biosynthesis in root apex

Ken Youkawa[1,2], Hiromi Suzuki[1], Sayuri Nakano[1], Yuriko Yoshida[1], Takashi Okamoto[1], Frantisek Baluska[2], Tomokazu Koshiba[1] ([1]Tokyo Metropolitan University, [2]Department of Plant Cell Biology, IZMB, University of Bonn)

PF-106 Light-induced Nuclear Positioning in Gemmalings of the Liverwort *Marchantia polymorpha*

Kosei Iwabuchi[1], Aino Komatsu[2], Yuuki Sakai[2], Kentaro Tamura[1], Shingo Takagi[3], Takayuki Kohchi[2], Ikuko Hara-Nishimura[1] ([1]Grad. Sch. Sci., Kyoto Univ., [2]Grad. Sch. Biostudies, Kyoto Univ., [3]Grad. Sch. Sci., Osaka Univ.)

■ Organelles/Cytoskeletons

PF-107 Evolutionally conserved region RYNLRR of NMCP1 interacts to the chromatin remodeling protein ARP7.

Ryota Mochizuki, Daisuke Tsugama, Kaien Fujino, Kiyoshi Masuda (Grad. Sch. Agr., Univ. Hokkaido)

PF-108 A role of phragmoplast associated kinesin NtPAKRP2 in tobacco BY-2 cells

Hiroki Yasuhara, Maimi Inoue, Masatoshi Yata, Natsuka Oonishi, Maiko Nakafunai, Eita Nakai, Satoshi Yoshimoto (Fac. Chem. Mate. Bioengineer., Kansai Univ.)

PF-109 Identification and analysis of CRUMPLED LEAF protein interacting proteins in *Arabidopsis thaliana*

Shogo Shibata[1], Aya Murata[1], Yuya Aoki[1], Mai Ujihara[1], Mika Nomoto[2], Yasuomi Tada[2], Yasushi Yoshioka[1] ([1]Grad. Sch. Sci., Nagoya Univ., [2]Gene Res. Center, Nagoya Univ.)

PF-110 Functional analysis of PRORP (Proteinaceous RNaseP) in Chlamydomonas reinhardtii and Marchantia polymorpha

Chieko Sugita[1], Takuya Matsuo[1], Ryuichi Nishihama[2], Takayuki Kohchi[2], Mamoru Sugita[1] ([1]Center for Gene Res., Nagoya Univ., [2]Grad. Sch. Biostudies, Kyoto Univ.)

PF-111 PpPPR_4 is involved in RNA splicing of pre-RNAs in the moss Physcomitrella patens chloroplasts

Seiya Goto[1], Mizuho Ichinose[1,2], Chieko Sugita[1], Mamoru Sugita[1] ([1]Center for Gene Research, Nagoya University, [2]Institute of Transformative Bio-Molecules, Nagoya University)

PF-112 Elucidation of the RNA base recognition code for PPR proteins involved in RNA editing in the moss *Physcomitrella patens*

Takuya Matsuda[1], Mizuho Ichinose[1,2], Mamoru Sugita[1] ([1]Ctr. Gene Res., Nagoya Univ., [2]WPI-ITbM, Nagoya Univ.)

PF-113 Characterization of Plastid ABC Transporters in Arabidopsis

Kenji Nishimura, Yusuke Kato, Wataru Sakamoto (IPSR, Okayama Univ.)

PF-114 Biochemical properties of DPD1,exonuclease involved in organelle DNA degradation in *Arabidopsis thaliana*

Norikazu Ohnishi, Tsuneaki Takami, Wataru Sakamoto (IPSR, Okayama Univ.)

PF-115 Regulators for poly (A) status of mitochondrial mRNA in *Marchantia polymorpha*

Mai Kanazawa[1], Yoko Ikeda[2], Ryuichi Nishihama[3], Shohei Yamaoka[3], Takayuki Kohchi[3], Takashi Hirayama[2] ([1]Grad. Sch. Env. & Life. Sci, Okayama Univ., [2]Inst. Plant Sci. & Res., Okayama Univ., [3]Grad. Sch. Bio., Kyoto Univ.)

PF-116 Organelle DNA degradation mediated by DPD1 affects plant growth

Tsuneaki Takami, Wataru Sakamoto (IPSR., Okayama Univ.)

PF-117 Roles of CONSTANS-LIKE proteins in the retrograde signaling from plastids to the nucleus

Karin Kawajiri[1], Fumiko Yazu[1], Fumi Adachi[1], Fumika Nishida[1], Yasuko Ito-Inaba[1,2], Tomohiro Kakizaki[3], Takehito Inaba[1] ([1]Fac. Agr., Univ. Miyazaki, [2]TT Organization, Univ. Miyazaki, [3]NARO Institute of Vegetable and Tea Science)

PF-118 Myosin XI-F specifically expressed in sink tissues and responsible for cytoplasmic streaming

Yuno Shibuya[1], Zhongrui Duan[1], Takeshi Haraguchi[2], Akihiko Nakano[3,4], Kohji Ito[2], Motoki Tominaga[1] ([1]Fac. Educ. Integrated Arts. Sci., Univ. Waseda, [2]Grad. School Sci., Univ. Chiba, [3]Grad. Sch. Sci., Univ. Tokyo,, [4]RAP, RIKEN)

PF-119 Comparative analysis of tissue-specific expression in different myosin XI members

Nanako Hagino[1], Zhongrui Duan[1], Takeshi Haraguchi[2], Hirokazu Tsukaya[3], Akihiko Nakano[3,4], Kohji Ito[2], Motoki Tominaga[1] ([1]Fac. Educ. Integrated Arts. Sci., Univ. Waseda., [2]Grad. School Sci., Univ. Chiba., [3]Grad. Sch. Sci., Univ. Tokyo., [4]RAP, RIKEN.)

PF-120 Utilization of the theophylline-dependent engineered riboswitches for strict control of plastid gene expression in tobacco

Yoichi Nakahira[1], Atsushi Ogawa[2], Yuzuru Tozawa[3], Takashi Shiina[4] ([1]Coll. Agr., Ibaraki Univ., [2]PROS Ctr., Ehime Univ., [3]Grd. Sch. Sci. Eng., Saitama Univ., [4]Grd. Sch. Life Environ. Sci., Kyoto Pref. Univ.)

PF-121 Characterization of mitochondrial putative Ca2+ regulators in Arabidopsis thaliana

Sota Izumida[1], Saki Yomogihara[1], Akihisa Hamatani[1], Yoko Yamamoto[2], Takashi Shina[1] ([1]Grad. Sch. Life and Env. Sci., Kyoto Pref. Univ., [2]Inst. Plant Sci. Res., Okayama Univ.)

PF-122 Involvement of a RNA-binding protein, NUS1, in the maintenance of chloroplast rRNA at low temperature in *Arabidopsis*

Suzumi Ehara, Koh Iba, Kensuke Kusumi (Dept. Biol., Fac. Sci., Kyushu Univ.)

PF-123 Analysis of Regulatory Mechanism of Cell-type Specific Expression of Chloroplast *ndh* Genes in *Zea mays*

Haruna Yano, Yuya Fukuta, Kota Ishibashi, Yoshiki Nishimura, Toshiharu Shikanai (Grad. Sch. Sci., Univ. Kyoto)

PF-124 Contribution of each cell layer to twisting trait of organ growth

Takehide Kato[1], Tomoko Ichimura[1], Yuki Hirai[1], Yumiko Adachi[1], Sawako Hokin[1], Satoshi Fujita[2], Noriyoshi Yagi[3], Takashi Hashimoto[1] ([1]Nara Institute of Science and Technology, [2]University of Lausanne, [3]Tokyo University of Science)

PF-125 Dynamics of organelles and cytoskeletons during spore germination of *Marchantia polymorpha*

Yuuki Sakai[1], Ryuichi Nishihama[2], Takayuki Kohchi[2], Seiichiro Hasezawa[1], Takumi Higaki[1] ([1]The Univ. Tokyo, GSFS, [2]Grad. Sch. Biostudies, Kyoto Univ.)

PF-126 Stress-induced Ca^{2+} signals in leaf chloroplasts and root plastids.

Miho Kotani, Takanori Iwaki, Takashi Shiina (Grad. Sch. Life and Env. Sci., Kyoto Pref. Univ.)

PF-127 Plastid transformation in grasses

Asuka Nishimura[1,2], Jiro Okuma[2], Yoshitsugu Hirose[2], Fumiaki Hirose[3], Yutaka Tabei[3], Nobuhiro Tsutsumi[1], Yasuhiro Kondo[2] ([1]Graduate School of Agricultural and Life Science, The University of Tokyo, [2]Honda Research Institute Japan Co., Ltd., [3]National Institute of Agrobiological Sciences)

■ Cell wall

PF-128 Analysis Of Dof transcription Factors Regulating Property Of Secondary Cell Walls

Vasagi Ramachandran[1], Misato Ohtani[1,2], Taku Demura[1,2] ([1]Graduate school of Biological Sciences, NAIST, [2]RIKEN,CSRS)

PF-129 Characterization and analysis of suppressor mutants obtained from low calcium sensitive mutant

Mayu Asada, Yusuke Shikanai, Takehiro Kamiya, Toru Fujiwara (Grad. Sch. Agr., Univ. Tokyo)

PF-130 Characterization of the Transcriptomic Profiles of Low-Calcium Sensitive Mutants in *Arabidopsis thaliana*

Yusuke Shikanai[1], Mayu Asada[1], Mutsumi Yamagami[2], Takehiro Kamiya[1], Toru Fujiwara[1] ([1]Grad. Sch. Agri., Univ. Tokyo, [2]Institute of Environmental Sciences)

PF-131 Characterization of Putative Ribulose-5-Phosphate Isomerase Gene in Arabidopsis

Mizuki Noguchi, Masaru Kobayashi, Toru Matoh (Grad. Sch. Agr., Univ. Kyoto)

PF-132 Analysis of *VNS* genes in *Pinus taeda* toward understanding of tracheid differentiation

Nobuhiro Akiyoshi[1], Yoshimi Nakano[1], Yusuke Kunikida[1], Misato Ohtani[1,2], Taku Demura[1,2] ([1]Nara Institute of Science and Technology, [2]RIKEN Center for Sustainable Resource Science)

PF-133 Effect of environmental factors on the gene expression of 25 kDa xylem sap protein abundant in winter poplar

Tsutomu Aohara, Jun Furukawa, Shinobu Satoh (Faculty of Life and Environmental Sciences, University of Tsukuba)

PF-134 Disturbance of cortical microtubule orientation by sulfamethizole leads to abnormal secondary cell wall patterning during xylem vessel cell differentiation

Eri Kamon[1], Edouard Pesquet[2], Arata Yoneda[1], Taku Demura[1] ([1]Graduate School of Biological Sciences, NAIST, [2]Department of Ecology, Environment and Plant Science, Stockholm university)

PF-135 Structure and function of xylan blocks involved in exine formation in Arabidopsis developing pollen grains

Shunsuke Takemura[1], Ayako Hayami[1], Kyoko Esaki[1], Takamasa Suzuki[2,3], Yoshikatsu Sato[4], Tetsuya Higashiyama[3,4,5], Hitoshi Sakakibara[1,6], Sumie Ishiguro[1] ([1]Grad. Sch. of Bio-agr., Nagoya Univ., [2]Biosci. and Biotech., Chubu Univ., [3]ERATO, JST., [4]WPI-ITbM, Nagoya Univ., [5]Grad. Sch. of Sci., Nagoya Univ., [6]RIKEN CSRS.)

PF-136 Screen for regulatory proteins of schizogenous intercellular space formation in *Marchantia polymorpha* by using mass spectrometry and the CRISPR/Cas9 genome editing technology.

Miya Mizutani[1], Kimitsune Ishizaki[1,2], Yoichiro Fukao[3], Masayuki Fujiwara[4], Akihide Masuda[1], Ryuichi Nishikama[1], Takayuki Kohchi[1] ([1]Grad. Sch. Biostudies, Kyoto Univ., [2]Grad. Sch. Sci., Kobe Univ., [3]Coll. Life Sci., Ritsumeikan Univ., [4]Inst. Adv. Biosci., Keio Univ.)

PF-137 Analyses of Early Responses of Arabidopsis Roots to Boron Deprivation

Maako Miyamoto, Masaru Kobayashi, Toru Matoh (Graduate School of Agriculture, Kyoto University)

PF-138 In vivo digestion of sugar chain of arabinogalactan-proteins using a specific enzyme from fungi.

Yoshihisa Yoshimi[1], Mami Yoshimura[1], Raijoh Yakuwa[1], Seiji Shibano[2], Yoshitake Desaki[3], Naoto Shibuya[3], Yoichi Tsumuraya[1], Toshihisa Kotake[1] ([1]Grad. Sch. Sci. & Eng., Saitama Univ., [2]Fac. Sci., Saitama Univ., [3]Fac. Agr., Meiji Univ.)

PF-139 Involvement of Plasmodesmata Callose Binding Protein in tissue reunion of incised stem in Arabidopsis

Sakura Yoshihara[1], Tsutomu Aohara[1], Keita Matsuoka[2], Masashi Asahina[2], Shinobu Satoh[1] ([1]Graduate School of Life and Environmental Sciences, University of Tsukuba, [2]Department of Biosciences, Teikyo University)

PF-140 Deep-imaging of cell wall reconstruction process during cyst nematode induced-syncytium formation

Mina Ohtsu[1], Takuya Suzaki[2], Yoshikatsu Sato[3], Daisuke Kurihara[1,4], Masayoshi Kawaguchi[5], Daisuke Maruyama[3], Tetsuya Higashiyama[1,3,4] ([1]Grad. Sch. Sci., Univ. Nagoya, [2]Gene Research Center, Univ. Tsukuba, [3]WPI-ITbM, Univ. Nagoya, [4]JST ERATO, Univ. Nagoya, [5]Natl. Inst. Basic Biol.)

PF-141 Changes in plant cell wall components during the establishment of parasitic connection between *Cuscuta* and host plants

Akitaka Hozumi[1], Ryusuke Yokoyama[2], Kazuhiko Nishitani[2], Koh Aoki[1] ([1]Grad. Sch. Life Enviro. Sci., Osaka Pref. Univ., [2]Grad. Sch. Life Sci., Tohoku Univ.)

PF-142 Identification of transcription factors that regulate cortical microtubule structure in secondary xylem cells of poplar

Naoki Takata[1], Toru Taniguchi[1,2] ([1]Forest Bio Res. Cent., For. Forest Prod. Res. Inst., [2]Forest Tree Breeding Cent., For. Forest Prod. Res. Inst.)

PF-143 The analysis of low Ca sensitive mutant reveals coordinated formation of apoplastic barriers by Casparian strip and suberin.

Baohai Li[1], Takehiro Kamiya[1], Lothar Kalmbach[2], Mutsumi Yamagami[3], Katsushi Yamaguchi[4], Shuji Shigenobu[4], Shinichiro Sawa[5], John M.C. Danku[6], David E. Salt[6], Niko Geldner[2], Toru Fujiwara[1] ([1]Dept. Agr. Chem., Univ. Tokyo, [2]Dept. Plant Mol. Biol., Univ. Lausanne, [3]Inst. Environ. Sci., [4]NIBB, [5]Grad. Sch. Sci. Tech., Kumamoto Univ., [6]Inst. Biol. Environ. Sci., Univ. Aberdeen)

■ Immunity

PF-144 NADPH oxidases localized in plasma membrane microdomains are related to innate immunity in rice

Minoru Nagano[1], Ko Shimamoto[2], Maki Kawai-Yamada[1] ([1]Grad. Sch. Sci. Eng., Saitama Univ., [2]Grad. Sch. Bio. Sci., NAIST)

PF-145 Two U-box ubiquitin ligases positively contribute to MAMP-responsive MEKK1 - MKK1/MKK2 - MPK4 pathway in *Arabidopsis*

Takahiro Kobayashi[1], Yuta Kubo[1], Junpei Hio[1], Tsuyoshi Mizoguchi[2], Alexander Graf[3], Fuminori Takahashi[4], Kazuo Shinozaki[4], Ken Shirasu[4], Kazuya Ichimura[1] ([1]Faculty of Agriculture, Kagawa University, [2]Department of Natural Sciences, ICU, [3]Sainsbury Lab., JIC, UK, [4]RIKEN CSRS)

PF-146 Functional interplay between NLR protein SMN1 and MEKK1 pathway in *Arabidopsis*

Momoko Takagi[1], Alexander Graf[2], David Greenshields[3], Hiroki Takagi[4], Kazuo Shinozaki[3], Ryohei Terauchi[4], Ken Shirasu[3], Kazuya Ichimura[1] ([1]Graduate School of Agri., Kagawa Univ., [2]Sainsbury Lab., JIC, UK, [3]RIKEN CSRS, [4]Iwate Biotech. Res. Cent.)

PF-147 Loss of function of *SMN1* suppressed constitutive defense phenotypes in MEKK1 pathway mutants

Kohei Hamano[1], Momoko Takagi[1], Alexander Graf[2], David Greenshields[3], Hiroki Takagi[4], Kazuo Shinozaki[3], Ryohei Terauchi[4], Ken Shirasu[3], Kazuya Ichimura[1] ([1]Graduate School of Agri., Kagawa Univ., [2]Sainsbury Lab., JIC, UK, [3]RIKEN CSRS, [4]Iwate Biotechi. Res. Cent.)

PF-148 The mechanisms for plant growth-promoting effect of *Pseudomonas fluorescens*

Mari Ooura[1], Keisuke Okuno[2], Yuya Tanaka[2], Tomonori Nakaoka[2], Takashi Ano[1,2], Masahiro Okanami[1,2] ([1]Grad. Sch. Biol. Ortd. Sci. Technol., Kinki Univ., [2]Fac. Biol. Ortd. Sci. Technol., Kinki Univ.)

■ Bioinformatics

PF-149 AtCAST3.1: Update of web-based tool to analyze transcriptome data with a new feature to search experimental conditions by a group of genes and their expressions

Yusuke Kakei, Yukihisa Shimada (Yokohama city university, Kihara institute for biological research)

PF-150 Plant metabolomics based on GC-MS/MS

Yutaka Yamada[1], Mami Okamoto[1], Junko Takanobu[1], Yuji Sawada[1], Testuya Sakurai[1,2], Masami Hirai[1] ([1]RIKEN Center for Sustainable Resource Science, [2]Kochi University)

PF-151 Correlations between protein disorder and post-translational modifications in angiosperm and alga

Atsushi Kurotani[1], Alexander Tokmakov[2], Yutaka Yamada[1], Yutaka Kuroda[3], Kazuo Shinozaki[1], Tetsuya Sakurai[1,4] ([1]RIKEN CSRS, [2]Res. Cent. for Env. Gen., Kobe Univ., [3]Fac. of Tech., Tokyo Univ. of Agri. and Tech., [4]Kochi University)

PF-152 RNA-seq-based Identification of Reference Genes for Quantitative Expression Analysis in Arabidopsis thaliana and Model Crop Plants

Toru Kudo[1], Yohei Sasaki[1], Shin Terashima[1], Noriko Matsuda-Imai[1], Tomoyuki Takano[1], Misa Saito[1], Maasa Kanno[1], Keita Suwabe[2], Go Suzuki[3], Masao Watanabe[4], Makoto Matsuoka[5], Seiji Takayama[6], Kentaro Yano[1] ([1]Sch. of Agri., Meiji Univ., [2]Grad. Sch. Biores., Mie Univ., [3]Div. Nat. Sci., Osaka Kyoiku Univ., [4]Grad. Sch. Life Sci., Tohoku Univ., [5]Biosci. Biotech. Cent., Nagoya Univ., [6]Grad. Sch. Biol. Sci. Nara Inst. Sci. Tech.)

■ Genome

PF-153 QTL analysis of stay green trait using a recombinant inbred line in sorghum

Fiona Wacera Wahinya[1], Rie Hijiya[1], Hiromi Kanegae[2], Hideki Takanashi[2], Masaru Fujimoto[2], Motoyuki Ishimori[2], Masaaki Kobayashi[4], Kentaro Yano[4], Norikazu Ohnishi[1], Hiroyoshi Iwata[2], Makoto Kusaba[3], Nobuhiro Tsustumi[2], Wataru Sakamoto[1] ([1]Institute of Plant Science and Resources, Okayama University, [2]Graduate School of Agricultural and Life Sciences, The University of Tokyo, [3]Graduate School of Science, Hiroshima University, [4]School of Agriculture, Meiji University)

PF-154 High-density genotyping data of a RIL in sorghum for mapping QTLs in stay green and other traits

Wataru Sakamoto[1], Fiona Wacera[1], Rie Hijiya[1], Hideki Takanashi[2], Masaru Fujimoto[2], Hiromi Kanegae[2], Motoyuki Ishimori[2], Masaaki Kobayashi[3], Kentaro Yano[3], Norikazu Ohnishi[1], Hiroyoshi Iwata[2], Makoto Kusaba[4], Nobuhiro Tsutsumi[2] ([1]Inst. Plant Sci. Res., Okayama Univ., [2]Grad. Sch. Agr. Life Sci., Tokyo Univ., [3]Sch. Agr., Meiji Univ., [4]Grad. Sch. Sci., Hiroshima Univ.)

PF-155 Search for nontranslational functions of aminoacyl-tRNA synthetases in plants

Moeka Kawashima[1], Yusuke Saga[1], Koichi Ito[2], Naoto Kawakami[1], Tetsuo Kushiro[1] ([1]Grad. Sch. Agri., Univ. Meiji, [2]Grad. Sch. Frontier Sciences, Univ. Tokyo)

PF-156 Re-sequencing of recombinant inbred lines of *Lotus japonicus* toward upgrading of genome information

Shusei Sato[1,2], Niraj Shah[3], Mikkel Heide Schierup[4], Shohei Kusakabe[1], Hirakawa Hideki[2], Jens Stougaard[3], Stig Uggerhoj Andersen[3] ([1]Grad. Sch. Lifesci., Tohoku Univ., [2]Kazusa DNA Res. Inst., [3]Dept. Mol. Biol. Genet., Aarhus Univ., [4]Bioinfo. Res. Cent., Aarhus Univ.)

■ Systems biology

PF-157 A new web database CATchUP providing information on genes specifically expressed in certain conditions.

Yukino Nakamura, Toru Kudo, Shin Terashima, Maasa Kanno, Misa Saito, Noriko Matsuda, Satomi Asano, Kentaro Yano (Sch, of Agri., Meiji Univ.)

PF-158 De novo assembly and characterization of insect gall transcriptome in Litsea acuminate

Szu-Hsien Lin[1,2], Meng-Yuan Huang[3], Tin-Han Shih[1], Yung-Ta Chang[2], Chih-Wen Sun[2], Chi-Ming Yang[1] ([1]Biodiversity Research Center, Academia Sinica, Taiwan, [2]Department of Life Science, National Taiwan Normal University, Taiwan, [3]Department of Horticulture and Biotechnology, Chinese Culture University, Taiwan)

PF-159 The effects of various preservation and extraction protocols including freeze-drying for the radish metabolomics

Kohei Nishimura[1,2], Masataka Wakayama[1,3], Tomoyoshi Soga[1,2,3], Masaru Tomita[1,2,3] ([1]Inst. Adv. Bio. Sci., Keio Univ., [2]Dept. Environment & Info. Studies., Keio Univ., [3]Grad. Sch. Media and Governance., Keio Univ.)

PF-160 Time course metabolite changing during the germination of brown rice

Rira Matsuta[1,2], Masataka Wakayama[1,3], Tomoyoshi Soga[1,2,3], Masaru Tomita[1,2,3] ([1]Inst. Adv. Biosci., Keio Univ., [2]Env. Info. Studies, Keio Univ., [3]Grd. Sch. Media Gov., Keio Univ.)

■ Membrane trafficking

PF-161 Analysis of OsTMPs regulating the protein trafficking to chloroplast via secretory pathway

Kazusato Oikawa[1], Takuya Inomata[2], Yuki Nakayama[2], Namiko Ito[2], Ryuichi Ishiyama[2], Tomoko Taniuchi[2], Takesi Takamatsu[2], Aya Koga[1], Kentaro Kaneko[2], Toshiaki Mitsui[1,2] ([1]Dep. Appl. Bio. Chem, Univ. Niigata, [2]Grad. Sch. Scie and Tech, Univ. Niigata)

PF-162 Identification of KNS3/SPOT1 as a Factor for ER Exit of Boric Acid Channels

Shunsuke Nakamura[1], Masataka Uehara[1], Shunsuke Takemura[3], Sumie Ishiguro[3], Takehiro Kamiya[4], Toru Fujiwara[4], Satoshi Naito[1,2], Junpei Takano[1] ([1]Grad. Sch. Agr., Hokkaido Univ., [2]Grad. Sch. Life sci., Hokkaido Univ, [3]Grad. Sch. Bio Agr., Nagoya Univ., [4]Grad. Sch. Agr Life Sci., Tokyo Univ)

PF-163 Investigating vesicular RNA transport in developing rice seeds

Ai Terayama[1], Kota Abe[1], Wakako Sugimoto[1], Toshihiro Kumamaru[3], Thomas Okita[4], Andy Crofts[1,2] ([1]Akita Int. Univ., Int. Liberal Arts Prog., [2]Akita Pref. Univ., Dept. of Biol.Production, [3]Kyushu Univ., Fac. of Agriculture, Dept. of Biosci. and Biotech., [4]Washington St. Univ., Inst. of Biol. Chem.)

PF-164 Functional analysis on cargo-recognition sequences for clathrin coat proteins in *Arabidopsis thaliana*

Shuhei Kohata[1], Shohei Yoshida[2], Erika Matsunami[2], Junji Yamauchi[3,4], Mitsuo Jisaka[1], Tsutomu Nagaya[1], Kazushige Yokota[1], Tsuyoshi Nakagawa[2], Kohji Nishimura[2] ([1]Fac. Life Env. Sci., Shimane Univ., [2]Inter. Cent. Sci. Res., Shimane Univ., [3]Dept. Pharm., Nat. Res. Inst. for Chi. Heal. Dev., [4]Grad. Sc. Med. Dent. Sci., Tokyo Med. Dent. Univ.)

PF-165 Cell Biological Function of *Arabidopsis* PLDζ2

Ryota Shimamura[1], Yukimi Taniguchi Y.[2], Mariko Kato[1], Tomohiko Tsuge[1], Takashi Aoyama[1] ([1]Institute for Chemical Research, Kyoto University, [2]Graduate School of Science and technology, Kwansei Gakuin University)

■ Biomembrane/Ion and solute transport

PF-166 Effect of Cardiolipin on Transport Activity of *Arabidopsis thaliana* Mitochondrial Carrier Proteins

Hiroyuki Inoue[1], Yuzuru Tozawa[2], Akira Nozawa[1] ([1]PROS, Ehime Univ., [2]Grad. Sch. Sci. Eng., Saitama Univ.)

PF-167 Identification and Characterization of Amino Acid Residues Required for Boron-Dependent Vacuolar Trafficking of a Borate Transporter AtBOR1

Yuka Ogino[1], Yuka Miura[2], Shinji Wakuta[1,4], Satoshi Naito[3], Junpei Takano[1] ([1]Grad. Sch. Agr., Univ. Hokkaido, [2]Sch. Agr., Univ. Hokkaido, [3]Grad. Sch. Life Sci., Univ. Hokkaido, [4]YANMAR Co., Ltd.)

PF-168 Phosphate Transporter Candidates in the Marine Diatoms

Yohei Fukuchi, Toshiki Sugiyama, Nanae Kimura, Kensuke Nakajima, Yusuke Matsuda (Department of Bioscience, School of Science and Technology, Kwansei-Gakuin University)

PF-169 Targeting of the cyanobacterial bicarbonate transporter, SbtA, to the inner envelope membrane of chloroplasts in Arabidopsis

Susumu Uehara[1], Fumi Adachi[2], Yasuko Ito-Inaba[2,3], Takehito Inaba[2] ([1]Grad. Sch. Agr., Univ. Miyazaki, [2]Fac. Agr., Univ. Miyazaki, [3]TT Organization, Univ. Miyazaki)

PF-170 Rapid dynamic regulation of transporters is crucial for stable and optimal boron transport in roots

Naoyuki Sotta[1,3], Toru Fujiwara[1], Athanasius F.M. Marée[2], Verônica A. Grieneisen[2] ([1]Grad. Sch. Agr. Life Sci. Univ. Tokyo, [2]CSB, John Innes Centre, [3]JSPS Research Fellow)

PF-171 Enhanced response to trivalent cations of a chimeric ALMT transporter

Takayuki Sasaki[1], Yoshiyuki Tsuchiya[1], Michiyo Ariyoshi[1], Peter Ryan[2], Yoko Yamamoto[1] ([1]Institute of Plant Science and Resources, [2]CSIRO Agriculture)

PF-172 Rice stomatal closure requires guard cell plasma membrane ATP-binding cassette transporter RCN1/OsABCG5

Shuichi Matsuda[1], Sho Takano[2], Moeko Sato[2], Hidetaka Nagasawa[2], Shoko Yoshikawa[2], Yoshihiko Tokuji[2], Kazufumi Yazaki[3], Mikio Nakazono[4], Itsurou Takamure[5], Kiyoaki Kato[2] ([1]Cryobiofrontier Research Center, Iwate University, [2]Obihiro University of Agricultural and Veterinary Medicine, [3]Institute for Sustainable Humanosphere, Kyoto University, [4]Graduate School of Bioagricultural Sciences, Nagoya University, [5]Graduate School of Agriculture, Hokkaido University)

PF-173 LC5 regulates multiple metal transport in rice

Nobuhiro Tanaka[1], Shimpei Uraguchi[2], Yoshihiro Ohmori[1], Akihiro Saito[3], Masataka Kajikawa[4], Toru Fujiwara[1] ([1]Graduate School of Agricultural and Life Sciences, The University of Tokyo, [2]Department of Public Health and Molecular Toxicology, School of Pharmacy, Kitasato University, [3]Department of Applied Biological Chemistry, Tokyo University of Agriculture, [4]Graduate School of Biostudies, Kyoto University)

PF-174 Intracellular trafficking of OsPIP1;1

Eiki Takahashi[1], Tadashi Matumoto[2], Ikuko Iwasaki[1] ([1]Akita Pref. Univ., Grad. Sch. Biores. Sci, [2]NARO NARC)

PF-175 Influence of potassium fertilization on uptake and distribution of stable cesium (^{133}Cs) in plant in two rice cultivars, Takanari and Koshihikari

Mari Murai-Hatano[1], Hidehiro Hayashi[1], Yoko Tominaga[1], Matsunami Maya[1,3], Ishikawa Junko[2], Shigeto Fujimura[1], Kazuki Togami[1], Kenzo Miura[1], Motohiko Kondo[4] ([1]NARO Tohoku Agricultural Research Center, [2]NARO Institute of Crop Science, [3]JSPS Research Fellow, [4]Grad. Sch. Bioagricul. Sci., Univ. Nagoya)

PF-176 Rice aquaporin localizations in root, and the relationship between morphological changes and aquaporin gene expressions.

Hidehiro Hayashi[1], Mari Murai-Hatano[1], Junko Ishikawa-Sakurai[2], Yoko Tominaga[1], Maya Matsunami[1,3] ([1]NARO Tohoku Agricultural Research Center, [2]NARO Institute of Crop Science, [3]JSPS Reserch Fellow)

PF-177 Physiological effects of loss-of-function mutations of enzymes involved in pyrophosphate metabolism depending on nitrogen

Mayu Fukuda[1], Shoji Segami[1], Takaaki Tomoyama[1], Shizuka Gunji[2], Ali Ferjani[2], Masayoshi Maeshima[1] ([1]Grad. Sch. Bioagr. Sci., Nagoya Univ., [2]Depart. Biol., Tokyo Gakugei Univ.)

PF-178 Barley and rice aquaporins transporting hydrogenperoxide

Maki Katsuhara[1], Yoshiki Nakahara[1], Tomoaki Horie[2], Jiye Rhee[3], Mineo Shibasaka[1] ([1]IPSR, Okayama Univ., [2]Facult. Textile Sci. Tech., Shinshu Univ, [3]Leibniz Inst. Plant Genet. Crop Plant Res., Germeny)

PF-179 Seasonal changes in phosphorus metabolites in leaves of the deciduous woody plant, Populus alba

Shoko Iwamura[1], Yuko Kurita[1], Kei'ichi Baba[2], Miwa Ohnishi[1], Keiko Kosuge[1], Kimitsune Ishizaki[1], Hidehiro Fukaki[1], Tetsuro Mimura[1] ([1]Grad. Sci., Univ. Kobe, [2]RISH, Univ. Kyoto)

■ Light harvesting/Pigment

PF-180 Mobility of light-harvesting proteins in *Chlamydomonas reinhardtii* upon the state transition observed with novel cryogenic microspectroscopy

Wakana Ito[1], Kento Washiyama[2], Hiroshi Fukumura[2], Yutaka Shibata[2] ([1]Faculty of Science, Tohoku University, [2]Graduate School of Science, Tohoku University)

PF-181 [Cancelled]

PF-182 Glycolipid compositions in green sulfur bacterial mutants lacking chlorosome envelope proteins

Yusuke Tsukatani[1,2], Tadashi Mizoguchi[3], Hitoshi Tamiaki[3] ([1]Earth-Life Sci. Inst., Tokyo Tech., [2]PRESTO, JST, [3]Grad. Sch. Life Sci., Ritsumeikan Univ.)

PF-183 Ultrafast energy transfer in pigment-protein complexes containing keto-carotenoids

Seiji Akimoto[1], Mamoru Mimuro[2], Akio Murakami[3] ([1]Molecular Photoscience Research Center, Kobe Univ., [2]Grad. Sch. of Human and Environmental Studies, Kyoto Univ., [3]Kobe Univ. Research Center for Inland Seas)

PF-184 Effects of change of amino acid residues by RNA editing on the activity of dark-operative protochlorophyllide oxidoreductase

Hisanori Yamakawa[1], Haruki Yamamoto[2], Yuichi Fujita[3] ([1]RCMS, Univ. Nagoya, [2]Dept. Mol. Cell. Biochem., Univ. Indiana, [3]Grad. Sch. Bioagr., Univ. Nagoya)

PF-185 Molecular Structures And Functional Characterization Of Chlorophylls-*a* Carrying Dehydrogenated Forms Of Phytyl Group In The 17-Propionate Residue Of A Diatom *Chaetoceros Calcitrans*

Tadashi Mizoguchi[1], Megumi Isaji[1], Jiro Harada[2], Nami Yamano[3], Ritsuko Fujii[3,4,5], Hitoshi Tamiaki[1] ([1]Grad. Sch. Life Sci., Ritsumeikan Univ., [2]Kurume Univ. Sch. Med., [3]Grad. Sch. Sci., Osaka City Univ., [4]OCARINA, Osaka City Univ., [5]PRESTO, JST)

PF-186 Ultrafast excitation energy transfer pathways in divinyl chlorophyll *a*/*b*-containing cyanobacterium, *Prochlorococcus marinus*

Fumiya Hamada[1], Akio Murakami[1,2], Seiji Akimoto[1,3] ([1]Grad. Sch. Sci., Kobe Univ., [2]Kobe University Research Center for Inland Seas, [3]Molecular Photoscience Research Center, Kobe University)

PF-187 Analysis of individual vegetative cells and heterocysts of *Anabaena variabilis* by Raman scattering imaging and fluorescence lifetime imaging

Kouto Tamamizu, Shinji Fukuda, Masahide Terazima, Shigeichi Kumazaki (Grad. Sch. Sci., Univ. Kyto)

PF-188 Control of Chlorophyll Degradation by Stay Green in Arabidopsis

Kouhei Ono[1], Yousuke Shimoda[1], Hisashi Ito[1,2], Ayumi Tanaka[1,2] ([1]Inst. Low Temp. Sci., Univ. Hokkaido, [2]CREST JST)

PF-189 Characterization of EngA copurified with the chloroplastic metalloprotease FtsH

Yusuke Kato, Marie Mori, Wataru Sakamoto (IPSR, Okayama University)

PF-190 Chl-binding ability and photoconvertibility of *Chenopodium album* water-soluble chlorophyll-binding protein mutants

Shigekazu Takahashi[1], Akira Uchida[2], Hiroyuki Satoh[2] ([1]Faculty of Life Science, Toyo University, [2]Faculty of Science, Toho University)

■ Electron transport/CO2 assimilation

PF-191 CHLORORESPIRATORY REDUCTION 9 Is An Assembly Factor of Subcomplex A of The Chloroplast NADH Dehydrogenase-Like Complex

Hiroshi Yamamoto[1,2], Xiangyuan Fan[3], Kazuhiko Sugimoto[1], Lianwei Peng[3], Toshiharu Shikanai[1,2] ([1]Grad. Sch. Sci., Kyoto Univ., [2]CREST, JST, [3]Inst. Botany, CAS, China.)

PF-192 Kinetic Studies of $NADP^+$/H Reduction/Oxidation Catalyzed by a Ferredoxin-$NAD(P)^+$ Reductase from the Green Sulfur Bacterium *Chlorobaculum tepidum*

Daisuke Seo, Ken Okado, Takeshi Sakurai (Div. Mat. Sci., Grad. Sch. Nat. Sci. Tec., Kanazawa Univ.)

PF-193 Localization and function of the PsbQ-Like protein 3 (PQL3) in the chloroplast NAD(P)H dehydrogenase-like complex

Yuki Yokoe[1], Wataru Nakamura[2], Shinya Yabuta[1], Fumihiko Sato[1,2], Kentaro Ifuku[1,2] ([1]Graduate School of Biostudies, Kyoto University, [2]Faculty of Agriculture, Kyoto University)

PF-194 Activity measurement of the type-1 reaction center from Heliobacterium modesticaldum

Yasuda Aya[1,2], Mutoh Risa[1], Oh-oka Hirozo[2], Azai Chihiro[3], Kurisu Genji[1,2] ([1]Protein Inst., Univ. Osaka, [2]Grad. Sch. Sci., Univ. Osaka, [3]College of Life Science, Univ. Ritsumeikan)

PF-195 Isolation of novel pyrenoidal components from the marine diatom, *Phaeodactylum tricornutum*

Natsumi Morishima, Sae Kikutani, Yusuke Matsuda (Dept. of Biosci, Sch. Sci. and Tech., Kwansei Gakuin Univ.)

■ New technology

PF-196 Improvement of hygromycin B phosphotransferase.

Hiroyuki Tanaka, Yutaka Kodama (Ctr. Biosci. Res. & Edu., Utsunomiya Univ.)

PF-197 Characterization of a novel gene related to the fast growth of *Synechococcus* sp. NKBG15041c

Takaaki Tanaka[1,2], Yoshihiro Ozeki[1,2], Akiyo Yamada[1,2] ([1]Tokyo University of Agriculture and Technology, [2]JST-CREST)

PF-198 Fixed- route monitoring of the occurrence of herbicide-resistant oilseed rape (Brassica napus L.) along a Japanese roadside

Toru Nishizawa[1,2], Nobuyoshi Nakajima[1], Masanori Tamaoki[1], Mitsuko Aono[1], Akihiro Kubo[1], Hikaru Saji[1] ([1]Center for Environmental Biology and Ecosystem Studies, National Institute for Environmental Studies, [2]Faculty of Education and Regional Studies, University of Fukui)

PF-199 Comparison analysis of promoter activities for high-level transgene expression in *Chrysanthemum*

Mitsuko Kishi-Kaboshi, Ryutaro Aida, Katsutomo Sasaki (NIFS., NARO)

PF-200 Toward Simultaneous Modification of Multiple Alleles on Hexaploid *Chrysanthemum morifolium*; Genome Editing Using CRISPR/Cas9 System

Mitsuko Kishi-Kaboshi, Ryutaro Aida, Katsutomo Sasaki (NIFS., NARO)

PF-201 Detection of low-dose radiation effects by Arabidopsis callus harboring an alternative β-glucuronidase (*GUS*) reporter gene

Shinya Takahashi[1,2], Masanori Tamaoki[3] ([1]ARENA, Univ.Tskuba, [2]T-LSI, Univ.Tsukuba, [3]Natl. Inst. Env. Stud.)

PF-202 Poly(A) signal-like sequences in plant RNA viral genomes that may function on the viral transgenes in plant cells

Takashi Kimura[1], Susumu Takio[2] ([1]Kyushu Okinawa Agric. Res. Cent., NARO, [2]Center for Mar. Env. Stud., Kumamoto Univ.)

■ Environmental response of photosynthesis and respiration

PF-203 Chloroplast calcium-sensing receptor homologue CrCAS is involved in mRNA accumulation of five genes under CO_2-limiting conditions in *Chlamydomonas reinhardtii*

Yuki Niikawa[1], Lianyong Wang[1], Takashi Yamano[1], Yu Kanesaki[2], Hirofumi Yoshikawa[3], Hideya Fukuzawa[1] ([1]Grad. Sch. Biostudy, Univ. Kyoto, [2]Genome Res. Centr. NODAI Res. Inst., Tokyo Univ. Grad. of Agric, [3]Dept. of Biosci., Tokyo Univ. of Agric.)

PF-204 Subcellular localization of CrCAS, a novel regulator of CO_2-concentrating mechanism, based on fluorescence microscopic observation in *Chlamydomonas reinhardtii*

Chihana Toyokawa, Lianyong Wang, Takashi Yamano, Hideya Fukuzawa (Grad. Sch. Biostudies, Univ. Kyoto)

PF-205 Induction of CO_2-concentrating mechanism (CCM) is dependent on chloroplast calcium-sensing receptor homologue CAS but not on cyclic electron flow (CEF) in *Chlamydomonas reinhardtii*

Kosuke Tsuda, Lianyong Wang, Takashi Yamano, Hideya Fukuzawa (Grad. Sch. Biostudy, Univ. Kyoto)

PF-206 Analysis of a novel gene involved in Non-Photochemical Quenching in *Arabidopsis thaliana*

Takatoshi Arizono[1], Shinji Masuda[2] ([1]Grad. Sch. Bioscience and Biotechnology, Tokyo Institute of Technology, [2]Center for Biological Resources and Informatics, Tokyo Institute of Technology)

PF-207 Protective mechanisms against photoinhibition in *Arabidopsis psbo1* mutant

Saki Yasuhara[1], Fumihiko Sato[1,2], Kentaro Ifuku[1,2] ([1]Faculty of Agriculture, Kyoto University, [2]Graduate School of Biostudies, Kyoto University)

PF-208 Response of Chloroplast Translation Factors EF-G and EF-Tu to Oxidative Stress in *Arabidopsis*

Yuka Kumaki[1], Nao Hamakawa[2], Taku Yoneyama[1], Yoshitaka Nishiyama[1] ([1]Grad. Sch. Sci. Eng., Saitama Univ., [2]Dept. Biochem. Mol. Biol., Faculty Sci., Saitama Univ.)

PF-209 Characterization of *LAP1* involved in high-light acclimation

Ryoichi Sato[1,2], Shinichi Takaichi[3], Hiroyuki Ohta[1], Shinji Masuda[4] ([1]Grad. Sch. Biosci. Biotechnol., Tokyo Inst. Technol., [2]JSPS Research Fellow, [3]Department of Biology, Nippon medical shc., [4]Center for Biological Resources and Informatics, Tokyo Inst. Technol.)

PF-210 Seasonal Changes of Photosynthesis in Chlamydomonas sp.JSC4 Grown under Fluctuating Light Environments

Hiroaki Yamasaki[1], Mitsuteru Ishiwara[2], Hiroyuki Taroda[2], Jun Minagawa[1] ([1]National Institute of Basic Biology, [2]DIC Co., Ltd.)

PF-211 Phtosynthetic propertiese of *Nostoc commune* by means of GC/MS

Asuka Kusumoto, Makiko Kosugi, Yuichi Suwa, Hiroki Takahashi, Hiroyuki Koike (Department of Life Sciences, Faculty of Science and Engineering, Chuo University)

PF-212 CO_2 Responsive CCT protein alters the chain-length distribution of starch from leaf sheath in rice by regulating the expression of multiple starch synthesis related enzymes

Ryutaro Morita[1], Naoko Crofts[2], Tomoko Hatanaka[1], Shuji Misoo[1], Naoko Fujita[2], Hiroshi Fukayama[1] ([1]Grad. Sch. of Agri. Sci., Kobe Univ., [2]Dep. Bio. Prod., Akita Pref. Univ.)

PF-213 Identification of the chemical compounds that help prevent thermal damage of electron transport in photosynthesis

Fumiyoshi Myouga, Kazuo Shinozaki (RIKEN CSRS)

PF-214 Random mutagenesis of the nitrogen-fixing cyanobacterium *Leptolyngbya boryana* by a transposon delivery vector

Chie Tomatsu[1], Tohru Tsuchiya[2,3], Yuichi Fujita[4] ([1]Sch. Agr., Univ. Nagoya, [2]Grad. Sch. Gro. Envi., Univ. Kyoto, [3]Grad. Sch. Hum. Envi., Univ. Kyoto, [4]Grad. Sch. Bioagr., Univ. Nagoya)

PF-215 Functional Analysis of Orange Carotenoid Protein in The Protection of Photosystem II against Photoinhibition in *Synechocystis* sp. PCC 6803

Hiroko Takahashi[1], Yuri Kusama[1], Xinxiang Li[2], Yoshitaka Nishiyama[1] ([1]Grad. Sch. Sci & Engi., Saitama Univ., [2]Dep. Biochem. Mol.Biol., Faculty Sci., Saitama Univ.)

■ Nitrogen

PF-216 Interactome analysis of a nuclear localized BTB protein involved in C/N-nutrient signal transduction

Haruna Maeda[1], Yuki Sasaki[1], Yoichiro Fukao[2], Shuichi Yanagisawa[3], Takeo Sato[1], Junji Yamaguchi[1] ([1]Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ., [2]College of Life Sciences, Ritsumeikan Univ., [3]Biotechnology Research Center, Univ. Tokyo)

PF-217 Proteome analysis of novel targets of 14-3-3 proteins in ripening tomato fruit

Yu Lu[1], Xingwen Li[1], Shigetaka Yasuda[1], Yoichiro Fukao[2], Chiaki Matsukura[3], Hiroshi Ezura[3], Takeo Sato[1], Junji Yamaguchi[1] ([1]Fac. Sci. and Grad. Sch. Life. Sci., Hokkaidou Univ., [2]College of Life Science, Ritsumeikan Univ., [3]Fac. Life. Environ. Sci., Univ. Tsukuba)

PF-218 Interacting proteins of nitrate-responsive transcription factors NLP6 and NLP7

Mineko Konishi, Shuichi Yanagisawa (Biotech. Res. Center, Univ. Tokyo)

PF-219 Analyzing the role of auxin signal transduction in nitrogen utilization of Arabidopsis thaliana

Masahide Saito, Noriyuki Konishi, Keiichi Kanno, Soichi Kojima (Grad. Sch. Agric., Tohoku Univ.)

PF-220 Expression and Localization Analysis of ACR11 Gene in Arabidopsis

Yuuki Namiki, Yuuta Kanazawa, Masaharu Yamada, Kenjiro Sugiyama (Grad. Sch. Eng., Kogakuin Univ.)

PF-221 Analyses of the mechanisms of the ammonium tolerance involving P_{II} protein in cyanobacteria

Takayuki Sakamoto[1], Yajun Chang[1,2], Nobuyuki Takatani[1,2], Kazuma Uesaka[1,2], Kunio Ihara[3], Tatsuo Omata[1,2] ([1]Grad. Sch. Bioagr. Sci., Nagoya Univ., [2]CREST, Japan Sci. Tech. Agcy., [3]Ctr. Gene Res., Nagoya Univ.)

PF-222 Characterization of GARP-type transcription factor NBGs implicated in the regulation of nitrogen limitation-responses

Takatoshi Kiba[1], Nobutaka Mitsuda[2], Yuko Takiguchi[2], Masaru Ohme-Takagi[2,3], Youichi Kondou[4], Takeshi Yoshizumi[1], Minami Matsui[1], Hitoshi Sakakibara[1] ([1]RIKEN CSRS, [2]Biopro. Res. Inst., AIST, [3]IEST, Saitama Univ., [4]Fac. Eng., Kanto Gakuin Univ.)

PF-223 Photosynthetic production of ammonium by genetically engineered nitrogen-fixing cyanobacterium *Anabaena* sp. PCC 7120

Akiyoshi Higo[1,2], Atsuko Isu[1,2], Yuki Fukaya[1,2], Toru Hisabori[1,2] ([1]CRL, Tokyo Tech., [2]CREST, JST)

PF-224 Root-type FNR2 detoxifies nitrite in A. thaliana roots

Takushi Hachiya[1], Nanae Ueda[1], Guy Hanke[2], Akira Suzuki[3], Toshiharu Hase[4], Hitoshi Sakakibara[1] ([1]Yokohama Inst., Riken, [2]Univ. Osnabruck, [3]INRA, [4]Univ. Osaka)

■ Sugar/Lipid

PF-225 Analysis of oligo-galactolipids and their biosynthesis in *K. flaccidum*

Tei Watanabe[1], Koichi Hori[1,2], Yuka Madoka[1], Takashi Nobusawa[1,2], Mie Shimojima[1], Hiroyuki Ohta[1,2,3] ([1]Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, [2]CREST, Japan Science and Technology Agency, [3]Earth-Life Science Institute, Tokyo Institute of Technology)

PF-226 Comparative Proteomics Analysis of Euglena gracilis in Response to Aerobic and Anaerobic Conditions

Kaeko Kurihara[1,2], Shun Tamaki[1,2], Takanori Maruta[1,2], Yoshihiro Sawa[1], Takahiro Ishikawa[1,2] ([1]Dept. Appl. Biosci. and Biotech., Fac. Life and Environ. Sci., Shimane Univ., [2]JST/CREST)

PF-227 Effects of light-dark cycles on growth of the mutant of the cyanobacterium *Synechococcus elongatus* PCC 7942 engineered to produce free fatty acids

Kazuhiro Yoshida[1], Miyuki Matsuura[2], Kazuhide Use[2], Akihiro Kato[2], Nobuyuki Takatani[2,6], Masataka Wakayama[3,6], Kazutaka Ikeda[4,6], Kouji Kojima[2,6], Makiko Aichi[5,6], Shin-ichi Maeda[2,6], Tatsuo Omata[2,6] ([1]Sch. Agr., Univ. Nagoya, [2]Grad. Sch. Bioagr., Univ. Nagoya, [3]IAB, Univ. Keio, [4]IMS, Riken, [5]Biosci. and Biotech., Univ. Chubu, [6]JST CREST)

PF-228 Identification of enzymes related to paramylon metabolism under aerobic and anaerobic conditions in Euglena gracilis

Kyo Goto[1], Yuji Tanaka[1,2], Takanori Maruta[1,2], Yoshihiro Sawa[1], Takahiro Ishikawa[1,2] ([1]Fac. Life Env. Sci. Shimane Univ., [2]JST/CREST)

PF-229 Elucidation of the mechanism of TAG synthesis regulation using Arabidopsis suspension cell cultures

Masaya Kobayashi, Akiko Kozaki (Grad. Sch. Biol., Univ. Shizuoka)

PF-230 Analysis of *Chlamydomonas* expressing Oleosin

Takahiro Ishizuka[1], Tomokazu Kurita[1,2], Ikuo Nishida[1] ([1]Grad. Sch. Sci. Engi. Univ. Saitama, [2]JST.CREST)

PF-231 An attempt to improve homologous recombination efficiency and its application to construction of DGTS synthase gene, *BTA1* suppression mutants in *Chlamydomonas reinhardtii*

Tomokazu Kurita[1,3], Takahiro Ishizuka[1], Won-Yong Song[2], Sunghoon Jang[2], Youngsook Lee[2], Ikuo Nishida[1] ([1]Grad. Sch. Sci. Engi. Univ. Saitama, [2]Div. Biol. Biotech., Pohang Univ. Sci. Tech., [3]JST, CREST)

PF-232 Genes for sulfolipid synthesis in a red alga, *Cyanidioschyzon melorae*

Norihiro Sato, Satomi Kobayashi, Motohide Aoki, Isao Kobayashi, Mikio Tsuzuki (Sch. Life Sci., Univ. Pharm. & Life Sci.)

PF-233 Isolation of triacylglycerol-accumulating mutants from a green alga *Chlamydomonas reinhardtii*

Haruka Shinkawa, Marina Ogawa, Masataka Kajikawa, Hideya Fukuzawa (Grad. Sch. Biostudy, Univ. Kyoto)

PF-234 Novel Lipid Droplet-Associated GDSL-Lipase Possesses Sterol Esterase Activity

Chih-Chung Yen[1,4], Chia-Yun Ko[2], Sheau-Shyang Chen[3], Chien-Ta Juan[2], Guang-Yuh Jauh[2,4], Jei-Fu Shaw[1,3,4] ([1]Institute of Genomics and Bioinformatics, National Chung Hsing University, Taiwan, [2]Institute of Plant and Microbial Biology, Academia Sinica, Taiwan, [3]Department of Biological Science & Technology, I-Shou University, Taiwan, [4]Agricultural Biotechnology Center, National Chung Hsing University, Taiwan)

■ Primary metabolism

PF-235 Cysteine biosynthesis in Arabidopsis: functions of the serine acetyltransferase (*SERAT*) and *O*-acetylserine (thiol)lyase (*OASTL*) gene families

Mutsumi Watanabe, Rainer Hoefgen (Max Planck Institute of Molecular Plant Physiology)

PF-236 A Novel Recombinant Chlorophyllase1 from Chlamydomonas reinhardtii for the Production of Chlorophyllide Derivatives

Yi-Li Chou[1], Chia-Yun Ko[2], Chih-Chung Yen[3,4], Long-Fang Chen[2], Jei-Fu Shaw[1,4] ([1]Department of Biological Science and Technology, I-Shou University, Taiwan., [2]Institute of Plant and Microbial Biology, Academia Sinica, Taiwan., [3]Institute of Genomics and Bioinformatics, National Chung Hsing University, Taiwan, [4]Agricultural Biotechnology Center, National Chung Hsing University, Taiwan)

PF-237 Survey of signaling molecules that transduce elevated CO_2 environments in rice plants: effects of soluble sugar addition on leaf blade size

Yonghyun Kim[1], Masae Konno[2], Mitsue Miyao-Tokutomi[1] ([1]Natl. Inst. Agrobiol. Sci., [2]Grad. Sch. Eng., Nagoya Inst. Tech.)

PF-238 The relationship between SnRK1 activity and metabolic adaptation in Fe-deficient barley (*Hordeum vulgare*)

Chiyo Kawamura[1], Tomoe Fujisaku[2], Akihiro Saito[2], Kyoko Higuchi[2] ([1]Agric.Chem,Tokyo Univ. Agric, [2]Appl.Biol.Chem,Tokyo Univ.Agric)

■ Environmental responses/Abiotic stresses

PF-239 Molecular responses of extracellular matrix to cold and sub-zero acclimation in *Arabidopsis*

Daisuke Takahashi, Michal Gorka, Alexander Erban, Alexander Graf, Joachim Kopka, Ellen Zuther, Dirk K. Hincha (Max-Planck-Institute of Molecular Plant Physiology)

PF-240 Comparative studies of low temperature stress in aquatic plants of *Potamogeton*

Keiko Kosuge, Satoko Iida (Grad. Sch. Sci., Univ. Kobe)

PF-241 Proteomic Changes in Soluble and Plasma Membrane Proteins during Seasonal Cold-deacclimation and Acclimation Processes in Poplar Twigs

Jun Kasuga[1], Mitsunori Kayano[1], Daisuke Takahashi[2], Yukio Kawamura[3], Matsuo Uemura[3] ([1]GAMRC, Obihiro Univ., [2]Max-Planck Inst. Mol. Plant Physiol., [3]CRC, Iwate Univ.)

PF-242 Effect of RNAi-mediated Knockdown of Autophagy-related Genes on the Tolerance to Excess Nickel in Tobacco BY-2 Cells

Akihiro Saito, Chihiro Ishii, Minori Tomono, Ryo Nishizaki, Kyoko Higuchi (Appl. Biol. Chem., Tokyo Univ. Agric.)

PF-243 Up-regulation of a catalase gene suppresses chalky grain production by high temperature during the grain-filling stage in rice

Takeshi Yamaguchi, Masaharu Kuroda, Hiromoto Yamakawa, Masaru Nakata (National Agricultural Research Center, NARO)

PF-244 Comparison of superoxide dismutase (SOD) activity between Fe deficient barley and rice

Rei Obata[1], Akihiro Saito[2], Kyoko Higuchi[2] ([1]Agric. Chem, Grad, Tokyo Univ. Agric., [2]Appl. Biol. Chem, Tkyo Univ. Agric.)

PF-245 FoF1 ATPase is involved in acid tolerance in the cyanobacteria *Synechocystis* sp. PCC6803

Mina Agatsuma[1], Rizumu Tasaki[1], Haruna Ishikawa[2], Kento Funamizu[1], Ayumi Matsuhashi[1], Yutaro Ito[3], Junji Uchiyama[2], Yu Kanesaki[4], Hirofumi Yoshikawa[5], Hisataka Ohta[2] ([1]Grad. Sch. of Math. & Sci. Edu., Tokyo Univ. of Sci., [2]Fac. of Sci., Tokyo Univ. of Sci., [3]Dept. of. Biol. Sci. & Tech., Tokyo Univ. of Sci., [4]Genome Reserch Center, Tokyo Univ. of Agr., [5]Dept. of Bio., Tokyo Univ. of Agr.)

PF-246 Ssl2616 is involved in acid stress tolerance in *Synechocystis* sp. PCC6803

Junji Uchiyama[1], Kento Funamizu[2], Rizumu Tasaki[2], Mina Agatsuma[2], Yu Kanesaki[3], Hirofumi Yoshikawa[4], Hisataka Ohta[1,2] ([1]Fac. of Sci.,Tokyo univ. of Sci., [2]Grad. Sch. of Math. and Sci. Edu.Sci., Tokyo univ. of Sci., [3]NGRC., Tokyo univ. of Agr., [4]Dept. of BioSci., Fac. of App. Bio-Sci., Tokyo univ. of Agr.)

PF-247 Interactions between Nitrogen and Copper homeostasis in *Arabidopsis thaliana*

Mélanie Mermod[1], Teruyuki Kurata[2], Takehiro Kamiya[3], Toru Fujiwara[3], Toshiharu Shikanai[1] ([1]Grad. Sch. Sci., Kyoto Univ., [2]Grad. Sch. Agric., Kyushu Univ., [3]Grad. Sch. Agric. Life Sci., Univ. of Tokyo)

PF-248 Functional Analysis of Soybean Na^+/H^+-antiporter *qNaCl3* Under the Salt Stresses

Mariko Shono[1], Tetsuya Yamada[2], Donghe Xu[3] ([1]JIRCAS, TARF, [2]Hokkaido Univ. Res. Facul. Agri., [3]JIRCAS, Biol. Resources)

PF-249 Visualization of sodium ion distribution in *Arabidopsis thaliana* roots using cryo SEM-EDX system.

Kimi Ogasawara[1,2], Yasuko Kaneko[4], Makoto Tokunaga[5], Tetsuya Higashiyama[1,3] ([1]ERATO, Higashiyama Live-Holonics Project, [2]Graduate School of Science, Nagoya University, [3]ITbM., Nagoya Univ., [4]Grad. Sch. Sci., Saitama Univ., [5]Saitama Univ.)

PF-250 A Ca2+-binding protein PCaP1 is involved in root hydrotropism

Natsuki Tanaka[1], Hiroe Kobayashi[2], Hideyuki Takahashi[2], Masayoshi Maeshima[1] ([1]Grad. Sch. Bioagr. Sciences, Nagoya University, [2]Grad. Sch. Life Sciences, Tohoku University)

PF-251 The variation in responses of plant species to high pH nutrient solution

Kyoko Higuchi, Satoru Aaraki, Taira Makishima, Tetsuya Uesugi, Shogo Nakamura, Masayuki Sue (Tokyo Univ. Agri.)

PF-252 Role of SnRK2 in red-light dependent chloroplast movements in Physcomitrella patens

Shoko Kageyama[1], Ryoko Otake[1], Akihisa Shinozawa[1], Takumi Tomoi[2], Tomomichi Fujita[4], Andrew C. Cuming[3] ([1]Dept. Bioscience, Tokyo Uinv. Agric., [2]Grad.Sch.of Life Sci.,Hokkaido Univ, [3]University of Leeds, UK, [4]Fac. of Sci., Hokkaido Univ)

PF-253 Promoter analysis of AtWRKY40 using improved dual luciferase-assay system

Koh Yoshinaga, Daisuke Yasuda, Syunsuke Hashimoto, Kenichi Furukawa, Takahide Sato, Masatoshi Sonoda (Grad. Sch.Hort., Univ. Chiba)

PF-254 Temperature-sensitive and Inactive Mutations of Rice α-Amylase for Improvement of Rice Grain Quality: A New Screening Method by Activity Staining on Filtration Papers

Hiromoto Yamakawa, Rieko Hirai, Yuriko Nakata, Masaru Nakata, Masaharu Kuroda, Takeshi Yamaguchi (NARO Agricultural Research Center)

PF-255 Effects of Enhanced Expression of α-amylase Genes on Rice Grain Quality

Masaru Nakata, Tomomi Miyashita, Makoto Hakata, Masaharu Kuroda, Takeshi Yamaguchi, Hiromoto Yamakawa (NARO Agricultural Research Center)

PF-256 Analysis Of *Arabidopsis Thaliana* Mutants Tolerant To Ca Deficiency

Itsumi Nakamura[1], Kumpei Moriya[1], Mutsumi Yamagami[2], Takehiro Kamiya[3], Toru Fujiwara[3], Kenta Kimura[1], Yusuke Enomoto[1] ([1]Hiroo Gakuen High., [2]Inst. for Env. Sci., [3]Univ. of Tokyo, Agr.)

PF-257 Transcriptome anaylsis of ahg2-1 revealed a unique relation between mitochondrial and cellular functions.

Takashi Hirayama (Okayama Univ. IPSR)

PF-258 Dissecting an opportunistic relationship between parasitic plant and host

Yasunori Ichihashi[1], Takanori Wakatake[1], Akiko Yoshida[2], Noriko Maki[1], Arisa Shibata[1], Junko Kyozuka[2], Ken Shirasu[1] ([1]Riken Center for Sustainable Resource Science, [2]Graduate School of Life Sciences, Tohoku University)

PF-259 Search for genetic loci related to tolerance of the cyanobacterium *Synechococcus elongatus* PCC 7942 to free fatty acids.

Kazuma Uesaka[1,4], Akihiro Kato[1,4], Nobuyuki Takatani[1,4], Shin-ichi Maeda[1,4], Makiko Aichi[2,4], Kunio Ihara[3,4], Tatsuo Omata[1,4] ([1]Grad. Sch. Bio., Univ. Nagoya, [2]Bio., Univ.Chubu, [3]Gene., Univ. Nagoya, [4]JST-CREST)

PF-260 Involvement of reactive carbonyl species in stress-induced production of jasmonic acid in rice

Koji Miyamoto[1], Tsubasa Ishida[1], Yuya Tashiro[1], Akihiko Tsurumi[1], Ryo Kenmoku[1], Tomoko Sakazawa[1], Emi Yumoto[1], Kyomi Shibata[1], Masashi Asahina[1], Takao Yokota[1], Moritoshi Iino[2], Kazunori Okada[3], Hisakazu Yamane[1] ([1]Teikyo Univ., [2]Osaka City Univ., [3]The Univ. of Tokyo)

PF-261 Screening of chemicals which enhance the effect of high temperature on seed germination

Tomoki Kishigawa, Motoki Yamaguchi, Otowa Kameoka, Shizuka Kojo, Seiya Chikamatsu, Naoto Kawakami (Department of Lifesciences, School of Agriculture, Meiji University)

PF-262 The bZIP transcription factor OsTGAP1 is essential for jasmonate-induced production of diterpenoid phytoalexins in rice roots

Yuri Yoshida[1], Koji Miyamoto[2], Hisakazu Yamane[2], Hideaki Nojiri[1], Kazunori Okada[1] ([1]Biotechnology Research Center, The University of Tokyo, [2]Dept. of Bioscience, Teikyo University)

■ Secondary metabolism

PF-263 Arabidopsis MATE-type transporter gene FFT/DTX35 is involved in anthocyanin accumulation in seed coat

Satoshi Kitamura[1], Yutaka Oono[1], Issay Narumi[1,2] ([1]Ion Beam Mutagenesis Research Group, Japan Atomic Energy Agency, [2]Currently in Faculty of Life Science, Toyo University)

Poster [2nd half] 2016.3.20

■ Gravity

PL-001 Auxin polar transport and graviresponse in etiolated maize seedlings

Naoya Hayashi[1], Kensuke Miyamoto[2], Eiji Uheda[3], Junichi Ueda[3], Mariko Oka[4] ([1]Grad. Sch. Agri., Tottori Univ., [2]Fac. Liberal Arts Sci., Osaka Pref. Univ., [3]Grad. Sch. Sci., Osaka Pref. Univ., [4]Fac. Agri., Tottori Univ.)

PL-002 Chloroplast anchoring to the plasma membrane is necessary for gravisensing of the fern *Ceratopteris richardii* gametophytes

Hiroyuki Kamachi, Daisuke Tamaoki, Ichirou Karahara (Grad. Sch. Sci., Univ. Toyama)

■ Ion/Salt/Mineral

PL-003 A *Salicornia europaea* gene (*SeNN43*) encodes a novel short peptide that can improve salt tolerance in plants

Kenta Kainuma[1], Yoshiki Nakahara[2], Maki Katsuhara[2], Mineo Shibasaka[2], Suguru Oguri[1], Hikaru Sakamoto[1] ([1]Fac. Bio-indust., Tokyo Univ. Agri., [2]IPSR, Okayama Univ.)

PL-004 Involvement of proanthocyanidins in accumulation of copper in the fern *Athyrium yokoscense*

Kazuma Fujii, Ayaka Okamoto, Hiroyuki Kamachi (Grad. Sch. Sci., Univ. Toyama)

PL-005 Molecular Mechanisms in Gametic De-differentiation in the Green Alga *Chlamydomonas reinhardtii*

Sumiyo Nakanishi, Rika Sasaki, Mayuko Otsubo, Noriaki Tamura (Dept. Environ. Sci., Fukuoka Women's Univ.)

PL-006 Genome-wide survey of lincRNAs responding to nutrient deficiencies in *Arabidopsis* roots

Sho Nishida[1], Yusuke Kakei[2], Makiha Fukuda[3], Yukihisa Shimada[2], Toru Fujiwara[3] ([1]Grad. Sch. of Biosphere Sci., Hiroshima Univ., [2]Kihara Ins. of Biol. Res., Yokohama City Univ., [3]Grad. Sch. of Agri. and Life Sci., Univ. of Tokyo)

PL-007 Growth repression under salt stress requires MYB3R transcriptional repressors in *Arabidopsis thaliana*

Toru Okumura[1], Takamasa Suzuki[2,3], Tetsuya Higashiyama[3,4], Masaki Ito[1,5] ([1]Grad. Sch. Bioagr. Sci., Nagoya Univ, [2]Coll. Biosci. Biotech., Chubu Univ, [3]ERATO Higashiyama, JST, [4]Grad. Sch. Sci., Nagoya Univ, [5]CREST, JST)

PL-008 Effects of glutathione, applied to roots, on Cd efflux from roots in oilseed rape plants

Shin-ichi Nakamura[1], Nobuo Suzui[2], Yon-Gen Yin[2], Satomi Ishii[2], Naoki Kawachi[2], Hiroki Rai[1], Hiroyuki Hattori[1], Shu Fujimaki[2] ([1]Akita Prefectural Univ., [2]Japan Atomic Energy Agency)

PL-009 Contribution of copper-transporting P-type ATPase to copper tolerance in copper moss *Scopelophila cataractae*.

Toshihisa Nomura[1], Misao Itouga[1], Tetsuya Sakurai[1], Seiichiro Hasezawa[2], Hitoshi Sakakibara[1,3] ([1]RIKEN, CSRS, [2]Grad. Sch. Frontier Sci., Univ. Tokyo, [3]Grad. Sch. Bioagri. Sci., Univ. Nagoya)

PL-010 Diacylglyceryltrimethylhomoserine Plays an Important Role for Adaptation to Phosphate Starvation in *Nannochloropsis* sp. NIES-2145

Hiroki Murakami[1], Takashi Nobusawa[1,2], Koichi Hori[1,2], Mie Shimojima[1], Hiroyuki Ohta[1,2,3] ([1]Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, [2]JST CREST, [3]ELSI, Tokyo Tech)

PL-011 A downstream effector of CIPK protein kinases in modulating Mg^{2+}-sensitivity in Arabidopsis

Junro Mogami[1], Fumiyuki Soma[1], Kazuo Shinozaki[2], Kazuko Yamaguchi-Shinozaki[1] ([1]Grad. Sch. Agr. Life Sci., Univ. Tokyo, [2]Center for Sustainable Resource Science, RIKEN)

PL-012 Analysis of phosphate supply-responsive genes in *Arabidopsis thaliana*

Satomi Kanno[1,2], Kazuya Okada[2], Miwa Ohnishi[2], Tetsuya Ishida[1], Shugo Maekawa[1], Laurent Nussaume[3], Hidehiro Fukaki[2], Tomoko M. Nakanishi[4], Shuichi Yanagisawa[1], Tetsuro Mimura[2] ([1]Biotech. Res. Ctr., The Univ. of Tokyo, [2]Grad. Sch. of Sci., Kobe Univ., [3]CEA Cadarache France, [4]Grad. Sch. Agri. Life Sci., The Univ. of Tokyo)

PL-013 Elucidating the correlation between macronutrient limitation and disease resistance for the improvement of rice yield using FOX (Full-length cDNA Over-eXpresser) gene-hunting system

Hajime Takiguchi[1], Jongpil Hong[1], Heyran Moon[2], Chang-Jin Park[2], Hiroaki Ichikawa[3], Ryoung Shin[1] ([1]Center for Sustainable Resource Science, RIKEN, Yokohama, 230-0045, Japan, [2]Department of Molecular Biology, Sejong University, Seoul, 143-747, Republic of Korea, [3]Division of Genome and Biodiversity Research, National Institute of Agrobiological Sciences, Tsukuba, 305-8602, Japan)

PL-014 Characterization of Aluminum and Proton Tolerance Transcription Factor NtSTOP1 Regulation System in Tobacco

Hiroki Ito[1], Yuriko Kobayashi[1,2], Mutsutomo Tokizawa[1], Yasuomi Tada[3], Yoshiharu Y. Yamamoto[1,2], Hiroyuki Koyama[1,2] ([1]UGS of Agri. Sci., Gifu Univ., [2]App. Bio. Sci., Gifu Univ., [3]Center for Gene Res., Nagoya Univ.)

PL-015 Effect of bismuth on growth of Arabidopsis thaliana and Solanum lycopersicum

Takeshi Nagata, Ryouhei Kurisaki, Takahiro Oshima (Fac. Sci. Eng., Univ. Setsunan)

PL-016 Characterization of an AP2/ERF Transcription Factor That Regulate Response to Phosphate Deficiency in Arabidopsis

Mayuko Nakamura, Chuan-Ming Yeh, Masaru Ohme-Takagi (Grad. Sch. Sci & Eng., Univ. Saitama)

PL-017 Comparison of Leaf Sheath Transcriptome Profiles with Physiological Traits of Bread Wheat Cultivars under Salinity Stress

Fuminori Takahashi[1,2], Joanne Tilbrook[3], Christine Trittermann[3], Bettina Berger[2], Stuart Roy[3], Motoaki Seki[4], Kazuo Shinozaki[1], Mark Tester[2,3,5] ([1]CSRS, RIKEN, [2]The Plant Accelerator, Univ. Adelaide, [3]ACPFG, Univ. Adelaide, [4]CSRS, RIKEN, [5]KAUST)

■ Drought/Water/Osmotic pressure

PL-018 Genome-Wide Identification and Expression Analysis of the CaNAC Family Members in Chickpea cultivars with contrasting drought tolerance during Development, Dehydration and ABA Treatments

Kien Huu Nguyen[1,2], Chien Van Ha[1,2], Yasuko Watanabe[1], Uyen Thi Tran[1], Maryam Nasr Esfahani[3], Dong Van Nguyen[2], Lam-Son Phan Tran[1] ([1]Signaling Pathway Research Unit, RIKEN Center for Sustainable Resource Science, Yokohama, Japan, [2]National Key Laboratory for Plant Cell Technology, Agricultural Genetics Institute, Vietnam Academy of Agricultural Sciences, Hanoi, Vietnam, [3]Department of Biology, Lorestan University, Khorramabad, Iran)

PL-019 Comprehensive transcriptome profiles of submergence response in deepwater rice

Anzu Minami[1], Kenji Yano[1], Keisuke Nagai[1], Madoka Ayano[1], Masanari Nakamori[1], Takeshi Kuroha[1], Masaya Koike[1], Keiko Kuwata[2], Takamasa Suzuki[3,4,5], Motoyuki Ashikari[1], Stefan Reuscher[1] ([1]Biosci. Biotec. Cent., Nagoya Univ., [2]WPI-ITbM, Nagoya Univ., [3]Grad. Sch. Sci., Nagoya Univ., [4]JST, ERATO, [5]College of Bioscience and Biotechnology, Chubu Univ.)

PL-020 Expression and functional analyses of rice two genes for transcription factors, OsMYB55/61 and OsbHLHa up-regulated in response to mild drought stress

Yu Zhao, Daisuke Todaka, Madoka Kudo, Satoshi Kidokoro, Kazuko Yamaguchi-Shinozaki (Grad. Sch. Agr. Life Sci., Univ. Tokyo)

PL-021 Identification of proteins that interact with MIZU-KUSSEI2, a protein required for hydrotropism in *Arabidopsis thaliana*

Natsuko Taguwa[1], Noriyuki Kuya[2], Daisuke Takahashi[3], Yukio Kawamura[4], Matsuo Uemura[4], Yutaka Miyazawa[5] ([1]Grad. Sch. Sci&Eng., Univ. Yamagata, [2]National Institute of Agrobiological Sciences, [3]Max-Planck Institute of Molecular Plant Physiology, [4]Fac. Agr., Univ. Iwate, [5]Grad. Sch. Life Sci., Univ. Tohoku, [6]Fac. Sci., Univ. Yamagata)

PL-022 Virus-induced gene silencing-based functional analysis of *GmNRA1* gene involved in drought tolerance in soybean

Takuya Ogata[1], Yukari Nagatoshi[1], Noriko Yamagishi[2], Nobuyuki Yoshikawa[2], Yasunari Fujita[1,3] ([1]Biol. Resources Post-harvest Div., JIRCAS, [2]Faculty of Agriculture, Iwate Univ., [3]Grad. Sch. Life Environ. Sci., Univ. Tsukuba)

PL-023 Integrative regulation of environmental stress response by Arabidopsis molybdenum cofactor sulfurase ABA3

Shusnuke Watanabe[1], Atsushi Sakamoto[2], Mitsunori Seo[1] ([1]RIKEN CSRS, [2]Grad. Sch. Sci., Hiroshima Univ.)

PL-024 Temporal changes of plant hormone metabolism under drought stress conditions

Kaoru Urano[1], Kyonoshin Maruyama[2], Yusuke Jikumaru[3], Yuji Kamiya[1], Kazuko Yamaguchi-Shinozaki[4], Kazuo Shinozaki[1] ([1]RIKEN/CSRS, [2]JIRCAS, [3]Agilent Technologies,Inc., [4]Grad. Sch. Agri., The Univ. Tokyo)

PL-025 Transcriptome analysis of gene expressions during hydrotropic and gravitropic responses in cucumber roots

Sachiko Miyabayashi[1], Nobuharu Fujii[1], Akie Kobayashi[1], Chiaki Yamazaki[2,3], Yutaka Miyazawa[1,4], Motoshi Kamada[5], Haruo Kasahara[6], Ikuko Osada[6], Toru Shimazu[2], Yasuo Fusejima[2], Akira Higashibata[7], Takashi Yamazaki[7,8], Noriaki Ishioka[7], Hideyuki Takahashi[1] ([1]Grad. Sch. Life Sci., Tohoku Univ, [2]JSF, [3]Kihara Inst. Biol. Res., Yokohama City Univ, [4]Fac. Sci., Yamagata Univ, [5]AES, [6]JAMSS, [7]JAXA, [8]Grad. Sch. Med., Teikyo Univ)

PL-026 Cellular biological analysis of stress-induced abscisic acid production in the endoplasmic reticulum

Yiping Han[1], Shunsuke Watanabe[2], Daichi Kinoshita[1], Hiroshi Takagi[1], Hiroshi Shimada[1], Atsushi Sakamoto[1] ([1]Grad. Sch. Sci., Hiroshima Univ., [2]CSRS, RIKEN)

PL-027 In Planta Functional Analysis of the Drought-responsive GmCKX13 Gene from Soybean

Yasuko Watanabe[1], Chien Van Ha[1,2], Dung Tien Le[2], Rie Nishiyama[1], Uyen Tran[1], Hitoshi Sakakibara[1], Eri Adams[1], Ryoung Shin[1], Lam-Son Phan Tran[1] ([1]Yokohama Inst., Riken, [2]AGI., Hanoi, Vietnam)

PL-028 Studies on the Phosphorylation of an Arabidopsis Nuclear-Cytoplasmic Shuttling Protein, VIP1

Daisuke Tsugama[1], Tetsuo Takano[2] ([1]Res. Fac. Agr., Hokkaido Univ., [2]ANESC, Univ. Tokyo)

PL-029 Genome-wide Association Study to Water-loss Trait of *Arabidopsis* Core Accessions

June-Sik Kim[1], Ryosuke Mega[1], Masanori Okamoto[1,2], Hisashi Tsujimoto[1] ([1]Arid Land Res. Center, Tottori Univ., [2]PRESO, JST)

■ Oxidative stress/Redox regulation

PL-030 Possible involvement of Trx in the iron-sulfer cluster formation process assisted by Nfu in *Anabaena* sp. strain PCC 7120.

Jiro Nomata[1,2], Atsuko Isu[2], Toru Hisabori[1,2] ([1]Chem.Res.Lab, Titech, [2]CREST, JST)

PL-031 Identification of interactors associated with Arabidopsis Nudix hydrolases, AtNUDX6 and 7.

Shoya Nakagawa[1], Takahisa Ogawa[2], Kazuya Yoshimura[3], Shigeru Shigeoka[1,2] ([1]Dept. Adv. Biosci., Grad. Sch. Agr., Kinki Univ., [2]Dept. Adv. Biosci., Fac. Agr., Kinki Univ., [3]Dept. Food Nutr. Sci., Coll. Biosci. Biotech., Chubu Univ.)

PL-032 Real-time monitoring of intracellular redox changes in the photosynthetic organisms using redox sensor proteins.

Kazunori Sugiura[1,2], Akiyoshi Higo[1,2], Toru Hisabori[1,2] ([1]CRL, Tokyo Tech, [2]CREST, JST)

PL-033 Elevated ozone deteriorates grain quality of rice by alteration of starch structure involved in suppression of *SSIIIa*

Hiroko Sawada[1,2], Keita Tsukahara[3], Yoshihisa Kohno[4], Keitaro Suzuki[5], Nobuhiro Nagasawa[6], Masanori Tamaoki[1] ([1]Natl. Inst. Environ. Stud., [2]JSPS, [3]Natl. Food Res. Inst., NARO, [4]Cent. Res. Inst. Elect. Power Ind., [5]Inst. Crop Sci., NARO, [6]Akita Prefectural Univ.)

PL-034 Comprehensive functional analysis of dehydroascorbate reductases in *Arabidopsis*

Masahiro Noshi[1], Risa Hatanaka[2], Masahiro Tamoi[1,2], Takanori Maruta[3], Shigeru Shigeoka[1,2] ([1]Dept. Adv. Biosci., Fac. Agr., Kinki Univ., [2]Dept. Adv. Biosci., Grad. Sch. Agr., Kinki Univ., [3]Dept. Appl. Biosci. and Biotech., Fac. Life and Environ. Sci., Shimane Univ.)

PL-035 Physiological and biochemical analysis of TrxA in the filamentous cyanobacterium Anabaena sp. PCC 7120

Hitomi Wakao[1,2], Kazunori Sugiura[1,2], Akiyoshi Higo[1,2], Atsuko Miyagi[3], Maki Kawai-Yamada[3], Toru Hisabori[1,2] ([1]CRL, Tokyo Tech., [2]CREST, JST, [3]Grad. Sch. Sci. Eng., Univ. Saitama)

PL-036 HY5-dependent Chloroplast Development is Required for Full Expression of Ascorbate Biosynthesis-related *VTC2* gene under Illumination

Saki Shiroma[1], Takanori Maruta[1], Kazuya Yoshimura[2], Yoshihiro Sawa[1], Takahiro Ishikawa[1] ([1]Dept. Life Sci. Biotechnol., Fac. Life Environ. Sci., Shimane Univ., [2]Dept. Food Nutr. Sci., Coll. Biosci. Biotechnol., Chubu Univ.)

PL-037 Induced cell death by chloroplast stress in Arabidopsis leaves

Yasunori Ohta, Hiroshi Suzuki, Hiroshi Hayashi (Dep. Biosci., Fukui Pref. Univ.)

PL-038 Comparative comprehensive analyses of regulatory mechanisms and localization of the ROS-producing enzymes RbohA-J in *Arabidopsis thaliana*

Yoichi Funaki[1], Ayuko Nakauchi[1], Kenji Hashimoto[1], Yuki Oi[1], Yuki Murakami[1], Kyoichiro Mori[1], Tomoko Kawarazaki[1], Ayako Iizuka[1], Sachie Kimura[1], Hidetaka Kaya[1], Nobutaka Kitahata[1,2], Kazuyuki Kuchitsu[1,2] ([1]Dept. of Appl. Biol. Sci., Tokyo Univ. of Science, [2]Imaging Frontier Center, Tokyo Univ. of Science)

PL-039 Effects to Phycobilisome in acid acclimation of *Synechocystis* sp. PCC6803

Kento Funamizu[1], Junji Uchiyama[2], Ayumi Matsuhashi[1], Mina Agatsuma[1], Yutaro Ito[3], Yu Kanesaki[4], Hirofumi Yoshikawa[5], Hisataka Ohta[1,2] ([1]Grad. Sch. of Math. & Sci. Edu., Tokyo Univ. of Sci., [2]Fac. of Sci., Tokyo Univ. of Sci., [3]Dept. of Biol. Sci. & Tech., Tokyo Univ. of Sci., [4]Genome Reserch Center, Tokyo Univ. of Agr., [5]Dept. of Bio., Tokyo Univ. of Agr.)

PL-040 *sll1276* mutant strain displayed acid stress sensitivity in *Synechocystis* sp. PCC6803

Ayumi Matsuhashi[1], Yutaro Ito[2], Mina Agatsuma[1], Kento Funamizu[1], Junji Uchiyama[3], Hisataka Ohta[3] ([1]Grad. Sch. of Math. & Sci. Edu., Tokyo Univ. of Sci., [2]Dept. of. Biol. Sci. & Tech., Tokyo Univ. of Sci., [3]Fac. of Sci., Tokyo Univ. of Sci.)

PL-041 Expression analysis of Sll1558 under acid stress condition in *Synechocystis* sp. PCC6803

Yutaro Ito[1], Ayumi Matsuhashi[2], Mina Agatsuma[2], Takaaki Aihara[2], Kento Funamizu[2], Junji Uchiyama[3], Hiroaki Shimada[1], Hisataka Ohta[2,3] ([1]Dept.of Biol. Sci.& Tech.,Tokyo Univ. of Sci., [2]Grad. Sch. of Math. & Sci.Edu., Tokyo Univ. of Sci., [3]Dept. of Biol., Faculty of Sci., Tokyo Univ. of Sci.)

■ Temperature

PL-042 Protein and gene expression analysis in Koshihikari rice grain under high temperature stress

Takeshi Shiraya[1], Toru Sato[1], Satoshi Azuma[1], Toshiaki Mitsui[2,3] ([1]Niigata Crop Res. Center, [2]Grad.Sch.Sci.& Tech., Niigata Univ, [3]Dept. Applied Biol.Chem., Niigata Univ)

PL-043 Enhancement of heat stress tolerance in rice by overexpression of *Arabidopsis* transcriptional regulator *DPB3-1*

Hikaru Sato[1], Daisuke Todaka[2], Madoka Kudo[2], Junya Mizoi[2], Satoshi Kidokoro[2], Yu Zhao[2], Kazuo Shinozaki[1], Kazuko Yamaguchi-Shinozaki[2] ([1]RIKEN CSRS, [2]Grad. Sch. Agr. Life Sci., Univ. Tokyo)

PL-044 Molecular mechanism of plant growth regulation under high temperature

Shinya Koizumi[1], Satoshi Kidokoro[1], Naohiko Ohama[1], Masatoshi Nakajima[1], Kazuo Shinozaki[2], Kazuko Yamaguchi-Shinozaki[1] ([1]Grad. Sch. Agr. Life Sci., Univ. Tokyo, [2]Center for Sustainable Resource Science, RIKEN)

PL-045 Isolation and Characterization of Potato (*Solanum tuberosum* L.) *cold responsive ERF-like gene*

Tsukasa Endo[1], Takayoshi Shimazaki[2], Kazuo N. Watanabe[2], Akira Kikuchi[2] ([1]Grad. Sch. Life & Env. Sci., Univ. Tsukuba, [2]Gene Research Center, Univ. Tsukuba)

PL-046 PIF4 as a negative regulator for cold tolerance to control function of ICE1

Hiroki Okuda[1], Rieko Nozawa[1], Tsuyoshi Furumoto[2], Kenji Miura[1] ([1]Faculty of Life and Environmental Sciences, University of Tsukuba, [2]Faculty of Agriculture, Ryukoku University)

PL-047 Analysis of temperature-sensing mechanism in *Saintpaulia*

Yuuki Narita[1], Miwa Ohnishi[1], Noriaki Kadohama[1], Yoshihiro Suzuki[2], Hidetoshi Iida[3], Kimitsune Ishizaki[1], Hidehiro Fukaki[1], Tetsuro Mimura[1] ([1]Graduate School of Science, Kobe Univ., [2]Faculty of Science, Kanagawa Univ., [3]Department of Biology, Tokyo Gakugei Univ.)

PL-048 Low-Temperature Tolerance via Carbohydrate Metabolism in rice

Nobutaka Hosonuma, Susumu Oda, Aya Tomoda, Mika Teranishi, Atsushi Higashitani (Grad. Sch. life Sci, Tohoku Univ)

PL-049 Functional Analysis of 70 kDa Heat Shock Proteins in *Arabidopsis*.

Huimei Zhao[1], Naohiko Ohama[1], Shinya Koizumi[1], Kazuya Kusakabe[1], Junya Mizoi[1], Satoshi Kidokoro[1], Kazuo Shinozaki[2], Kazuko Yamaguchi-Shinozaki[1] ([1]Grad. Sch. Agr. Life Sci., Univ. Tokyo, [2]CSRC. RIKEN)

PL-050 A Role of Autophagy in Vegetative and Reproductive Growth under High-temperature Condition in *Arabidopsis thaliana*

Zhenhua Shao[1], Masanori Izumi[1,2], Atsushi Higashitani[1] ([1]Grad. Sch. Life Sci., Tohoku Univ., [2]Front. Res. Inst. Interdiscipl. Sci., Tohoku Univ.)

PL-051 Impact of allantoin accumulation on heat shock tolerance in Arabidopsis

Shoma Tanaka[1], Shunsuke Watanabe[2], Hiroshi Takagi[1], Yiping Han[1], Hiroshi Shimada[1], Atsushi Sakamoto[1] ([1]Grad. Sch. Sci., Hiroshima Univ, [2]CSRS, RIKEN)

PL-052 Functional analysis of AtVOZ2 under heat stress conditions

Misaki Koguchi, Kanako Yamasaki, Masahiko Sato (Graduate School of Life and Environmental Sciences, Kyoto Prefectural University)

PL-053 Functional analysis of plastid ribosome binding protein PSPR1

Daiki Suzuki, Hirokuni Ando, Chizuru Harada, Shunsuke Sakai, Yuki Koyama, Miho Koura, Yasuhiko Sekine (Grad. Sch. Sci., Univ. Rikkyo)

PL-054 Calmodulin-like protein, an interactor of ICE1, for cold signaling and tolerance

Kenji Miura, Hayato Shiba, Machiko Nakazawa, Hiroki Okuda (Graduate School of Life and Environmental Sciences, University of Tsukuba)

PL-055 Functional redundancy of aquaporins during cold acclimation and freeze tolerance

Arifa Rahman[1], Yukio Kawamura[2], Masayoshi Maeshima[3], Abidur Rahman[2], Matsuo Uemura[2] ([1]United Graduate School of Agricultural Sciences, Iwate University, [2]Cryobiofrontier Research Center, Faculty of Agriculture, Iwate University, [3]Laboratory of Cell Dynamics, Graduate School of Bioagricultural Sciences, Nagoya University)

PL-056 Analysis of an *Arabidopsis* protein, aHiTAP1, containing a PHD finger domain

Yuri Yokoyama[1], Shin-ichiro Kidou[1,2] ([1]Grad. Sch. of Nat. Sci., Nagoya City Univ., [2]Research Center for Biological Diversity, Nagoya City Univ.)

PL-057 Analysis of a novel cold induced gene encoding a small protein in barley

Mengchao Ying[1], Shin-ichiro Kidou[1,2] ([1]Grad. Sch. of Nat. Sci., Nagoya City Univ., [2]Research Center for Biological Diversity, Nagoya City Univ.)

■ Environmental responses/Abiotic stresses

PL-058 Continuous light illumination induces circadian rhythm disorder and physiological injury in tomato.

Chie Moriya, Koji Goto (Research Inst. Bio. Sci. Okayama Pref.)

PL-059 The possible relationship between touch stimulus and defense gene expression in Arabidopsis

Seiya Yamaoka, Yoko Ishizaki, Koji Shimotani, Shisei Tanaka, Takashi Shiina (Grad. Sch. Life and Env. Sci., Kyoto Pref. Univ)

PL-060 [Cancelled]

PL-061 Screening of Molecular and Genetic Factors Regulating Stomatal Aperture

Shimpei Inoue[1], Yosuke Toda[1], Ayato Sato[2], Toshinori Kinoshita[1,2] ([1]Grad. Sch. Sci., Nagoya Univ., [2]WPI-ITbM, Nagoya Univ.)

PL-062 Effects of suppression of the phytoene synthase gene on cell concentration and carotenoid synthesis in *Euglena gracilis*

Mika Soshino[1], Shota Kato[2], Shinichi Takaichi[3], Takahiro Ishikawa[4], Masashi Asahina[1,2], Senji Takahashi[1,2], Tomoko Shinomura[1,2] ([1]Grad.Sci.Eng.,Teikyo Univ., [2]Sch. Sci.Eng.,Teikyo Univ., [3]Dept.Biol.,Nippon Medical Sch., [4]Fac.Life Environ. Sci.)

PL-063 Function analysis of novel NAC transcription factors in DNA damage responce

Nobuya Ohno[1], Nobuo Ogita[1], Shogo Sawabe[1], Naoki Takahashi[1], Masaaki Umeda[1,2] ([1]Grad. Sch. Biol. Sci., NAIST, [2]JST, CREST)

PL-064 Phosphoinositide-specific phospholipase C2, AtPLC2, in phosphoinositide metabolism and the endoplasmic reticulum stress response

Kazue Kanehara[1,2], Chao-Yuan Yu[1], Yueh Cho[1], Wei-Fun Cheong[3], Federico Torta[3], Guanghou Shui[3], Markus Wenk[3], Yuki Nakamura[1] ([1]Institute of Plant and Microbial Biology, Academia Sinica, [2]Muroran Institute of Technology, [3]National University of Singapore)

PL-065 Chemical Biology Approach to Dissect Root Morphology during Mechanical Stimulation in *Arabidopsis thaliana*

Takashi Okamoto[1], Yoshiteru Noutoshi[2] ([1]Grad. Sch. Sci. Tech, Okayama Univ, [2]Grad. Sch. Env. Life Sci., Okayama Univ.)

■ Immunity

PL-066 Functional analysis of a leucine-rich repeat receptor kinase in plant immunity and nutrient response in Arabidopsis

Xingwen Li[1], Shigetaka Yasuda[1], Yu Lu[1], Yuko Nomura[2], Hirofumi Nakagami[2], Takeo Sato[1], Junji Yamaguchi[1] ([1]Fac. Sci. and Grad. Sch. Life Sci., Hokkaido Univ., [2]CSRS.,RIKEN)

PL-067 RNA-seq based transcriptome analysis of MAPK-WRKY pathway responsive genes to explore cell death regulatory networks

Hiroaki Adachi[1], Masanao Sato[2], Hirofumi Yoshioka[1] ([1]Grad. Sch. Bioagr. Sci., Univ. Nagoya, [2]Inst. Advanced Biosci., Univ. Keio)

PL-068 Peroxisomal β-Oxidation Genes Are Induced by Wounding in Correlation with Salicylic Acid Accumulation in WIPK/SIPK-Suppressed Plants

Shinpei Katou[1], Ichiro Mitsuhara[2], Shigemi Seo[2] ([1]Fac. Agr., Shinshu Univ, [2]Natl. Inst. Agrobiol. Sci.)

PL-069 Characterization of novel chemical compounds that activate or suppress plant defense responses

Masataka Nakano[1], Nobutaka Kitahata[2,3], Takeshi Kitahata[2], Ayumi Yoshida[2], Mayu Suetsugu[2], Takamitsu Kurusu[3,4], Kazuyuki Hiratsuka[5], Tadao Asami[6], Kazuyuki Kuchitsu[1,2,3] ([1]Res. Inst. Sci. & Tech. Tokyo Univ. of Sci., [2]Dept. Appl. Biol. Sci., Tokyo Univ. of Sci., [3]Imagimg Frontier Center, Tokyo Univ. of Sci., [4]Dept. Biosci. & Biotech., Tokyo Univ. of Tech., [5]Grad. Sch. Env. & Info. Sci., Yokohama Natl. Univ., [6]Grad. Sch. Agri. & Life Sci., Univ. of Tokyo)

PL-070 Identification and functional analysis of phosphorylation sites in Arabidopsis CERK1

Kenkichi Suto, Maruya Suzuki, Masatoshi Shibuya, Hikaru Shimada, Noriko Motoyama, Shohei Takahashi, Issei Yoshida, Saki Matsui, Masato Nakashima, Mihoko Ohnishi, Keiji Kito, Yoshitake Desaki, Hanae Kaku, Naoto Shibuya (Dept. Life Sci., School Agric., Meiji Univ.)

PL-071 Evaluation of membrane traffic components involved in the MAMP-induced callose deposition in Arabidopsis.

Kohei Yashima[1], Masaki Kohari[1], Takashi Ueda[2], Ikuko Hara-Nishimura[3], Yoshitake Desaki[1], Hanae Kaku[1], Naoto Shibuya[1] ([1]Dept. Life Sci., School Agric., Meiji Univ., [2]Dept. Biol. Sci., Univ. Tokyo, [3]Dept. Botany, Kyoto Univ.)

PL-072 An E3 ubiquitin ligase, PUB4, regulates immune signaling through the interaction with Arabidopsis CERK1

Shohei Takahashi[1], Haruki Koizumi[1], Takaki Miura[1], Kohei Yashima[1], Yuko Ishibashi[1], Keiji Kito[1], Mari Narusaka[2], Yoshihiro Narusaka[2], Yoshitake Desaki[1], Hanae Kaku[1], Naoto Shibuya[1] ([1]Dept. Life Sci., School Agric., Meiji Univ., [2]RIBS, Okayama)

PL-073 Structure - biological function relationship of rice chitin receptor CEBiP

Subaru Shirasaka[1], Wataru Kurihara[1], Masahiro Hayafune[1], Yoko Nishizawa[2], Naoto Shibuya[1], Hanae Kaku[1] ([1]Department of Life Sciences, School of Agriculture, Meiji University, [2]National Institute of Agrobiological Sciences)

PL-074 The possible involvement of cyclic electron flow (cef) in the regulation of defense gene expression in arabidopsis

Shisei Tanaka, Koji Shimotani, Seiya Yamaoka, Yoko Ishizaki, Takashi Shiina (Grad. Sch. Life and Env. Sci., Kyoto Pref. Univ)

PL-075 Identification of chimeric repressors involved in programmed cell death and innate immunity in Arabidopsis

Hiroki Takabayashi[1], Kanae Ichida[2], Mitsuda Nobutaka[3], Masaru Takagi[4], Ysichi Tada[1], Takamitsu Kurusu[1,5] ([1]Sch. Biosci. Biotech, Tokyo Univ. Tech., [2]Grad. Sch. Bionics, Tokyo Univ. Tech., [3]Bioproduction Research Institute, NAIST,, [4]Inst. Env. Sci. Tech, Saitama Univ., [5]Imaging Frontier Center, Tokyo Univ. Sci.)

PL-076 Recognition system for EFa50 that is EF-Tu epitope site of rice

Takehito Furukawa[1], Keigo Takeoka[2], Hiroyuki Hirai[1], Fang-Sik Che[1,2] ([1]Dept. of Biosci., Nagahama Inst. of Bio-Sci. and Tech., [2]Grad. Sch. of Biosci., Nagahama Inst. of Bio-Sci. and Tech.)

PL-077 Analyzing the interrelationship between the two layers of defense responses using a mutant cryptogein in tobacco BY-2 cells.

Shigeru Hanamata[1,2], Kie Takeuchi[1], Tomoki Ohshima[1], Masaaki Okada[1], Takamitsu Kurusu[2,3], Nobutaka Kitahata[1,2], Kazuyuki Kuchitsu[1,2] ([1]Dept. of Appl. Biol. Sci., Tokyo Univ. of Science, [2]Imaging Frontier Center, Tokyo Univ. of Science, [3]Sch. Biosci. Biotech., Tokyo Univ. of Technology)

PL-078 The functional analysis of RRS1 on the immune response of *Arabidopsis* dual resistance proteins RPS4/RRS1

Mari Narusaka, Yoshihiro Narusaka (RIBS Okayama)

PL-079 Development of Novel Plant Activators Using a High Throughput Screening System

Yoshihiro Narusaka[1], Yasuyuki Yamaji[2], Mari Narusaka[1] ([1]RIBS Okayama, [2]Grad. Sch. Agr. Life Sci., Univ. Tokyo)

PL-080 Analysis Of Transcriptional Regulation Of *OsPR7* And *OsPR8* Genes By Transcription Factor OsNTF1 In Rice

Hiroyuki Hirai[1], Yuta Uno[1], Fumiya Horiie[1], Eri Okuyama[1], Takuya Kunieda[1], Hideo Nakashita[2], Fang-Sik Che[1] ([1]Graduate School of Biosciences, Nagahama Institute of Bio-Science and Technology, [2]Biotech.,Fukui Pref. Univ.)

PL-081 The core effector candidate gene, *CCE1* is conserved in plant pathogenic *Colletotrichum* fungi and induces cell death

Ayako Tsushima[1,2], Mari Narusaka[3], Pamela Gan[1], Naoyoshi Kumakura[1], Shuta Asai[1], Yasuhiro Kadota[1], Yoshitaka Takano[4], Yoshihiro Narusaka[3], Ken Shirasu[1,2] ([1]CSRS RIKEN, [2]Grad. Sch. Sci., Univ. Tokyo, [3]RIBS Okayama, [4]Grad. Sch. Agric., Kyoto Univ.)

PL-082 Identification and characterization of small-molecule inhibitors to plant immune responses

Nobuaki Ishihama[1], Yoshiteru Noutoshi[2], Seung-won Choi[1], Ivana Saska[1], Yuko Nomura[1], Hirofumi Nakagami[1], Yasumitsu Kondoh[1], Hiroyuki Osada[1], Ken Shirasu[1] ([1]RIKEN CSRS, [2]Grad. Sch. Env. Life Sci., Okayama Univ.)

PL-083 Hunting virulent effectors in plant pathogenic fungi Colletotrichum species using comparative genomics

Naoyoshi Kumakura[1], Pamela Gan[1], Awake Tsushima[1,2], Shuta Asai[1], Yasuhiro Kadota[1], Mari Narusaka[3], Yoshihiro Narusaka[3], Yoshitaka Takano[4], Ken Shirasu[1] ([1]CSRS RIKEN, [2]Grad. Sch. Sci., Univ. Tokyo, [3]RIBS Okayama, [4]Grad. Sch. Agric., Kyoto Univ.)

PL-084 Analysis of transcription factors involved in immune response in rice

Kazuko Morino, Mayumi Kimizu (NARO Agricultural Research Center)

PL-085 Elucidation of regulation mechanism of R protein Pit-1 and Pit-2

Kazuya Ishikawa, Yuying Li, Yoji Kawano (Shanghai Center for Plant Stress Biology)

PL-086 Effects of Photosynthesis Inhibitor DBMIB on Gene Expression Patterns in Arabidopsis

Takanori Iwaki, Kanako Yamasaki, Yoko Ishizaki, Koji Shimotani, Takashi Shiina (Grad.Sch.Life and Env. Sci., Kyoto Pref. Univ.)

■ Symbiosis

PL-087 Molecular analysis of plant growth promoting effect by rhizobacteria MRB3 in Arabidopsis thaliana

Shiori Isaka[1,2], Yoshimi Oshima[2], Hideyuki Tamaki[2], Nobutaka Mitsuda[2] ([1]Tokyo College of Biotechnology, [2]Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology)

PL-088 Analysis of host dependent spore formation in Arbuscular mycorrhizal fungi

Hiromu Kameoka[1,3], Taro Maeda[1,3], Naoya Takeda[1,2,3], Katsushi Yamaguchi[4], Shuji Shigenobu[2,4], Masatoshi Kawaguchi[1,2,3] ([1]NIBB Symbiotic System, [2]SOKENDAI, [3]JST ACCEL, [4]NIBB Functional Genomics Facility)

PL-089 Identification of a novel CLE peptide that negatively regulates nodulation

Hanna Nishida[1,2], Yoshihiro Handa[2], Sachiko Tanaka[2], Takuya Suzaki[3], Masayoshi Kawaguchi[1,2] ([1]SOKENDAI, [2]NIBB, [3]Univ of Tsukuba)

PL-090 Genome sequencing analysis of AM fungi *Rhizophagus irregularis*

Yuuki Kobayashi[1,2], Taro Maeda[1,2], Takahiro Bino[3], Katsushi Yamaguchi[3], Shuji Shigenobu[3,4], Masayoshi Kawaguchi[1,2,4] ([1]Division of Symbiotic systems, NIBB, [2]JST ACCEL, [3]Functional Genomics Facility, NIBB, [4]SOKENDAI)

PL-091 Effects of Inoculation of ACC deaminase-producing Endophyte on the Volatiles in Carrot Leaves

Yoshinari Ohwaki[1], Hiroaki Matsuoka[1], Junko Terakado-Tonooka[1,2], Fukuyo Tanaka[1] ([1]NARO Agricultural Research Center, [2]Univ. Saga)

PL-092 Symbiotic ability of Mesorhizobium loti carrying flavohemoglobin gene

Kota Niihara, Shinya Migita, Kenichi Kucho, Toshiki Uchiumi (Gradu. Sch. Sci and Eng., Kagoshima. Univ)

PL-093 Isolation Of Lichenized Cyanobacteria From *Peltigera polydactylon* And Study On Its Photosynthetic Activity

Tomoki Sato[1], Raku Hojo[1], Masayuki Komura[2], Kojiro Hara[1], Masashi Komine[1], Yoshikazu Yamamoto[1], Shigeru Itoh[3], Ikuko Iwasaki[1] ([1]Akita Pref. Univ., [2]Nagoya City Univ. Med., [3]Cent.For Gene Res.,Nagoya Univ.)

■ Plant-microbe interaction

PL-094 Analysis of plant attractant of root knot nematode, Meloidogyne incognita

Morihiro Ota[1], Haruna Yoshimura[1], Hayato Ishikawa[2], Masatugu Hashiguti[3], Ryou Akashi[3], Takashi Ishida[2], Shinichiro Sawa[2] ([1]Sci.,Univ.kumamoto, [2]Grad. Sch. Sci., Univ. kumamoto, [3]Grad. Sch. Agri., Univ. Miyazaki)

PL-095 Multiple roles of jasmonate-induced volatiles in rice defense response

Shiduku Taniguchi[1], Yumi Hosokawa-Shinonaga[2], Keiichiro Tanaka[2], Seika Miyoshi[2], Shoko Yamada[2], Yuya Uji[2], Kazuya Akimitsu[1,2], Kenji Gomi[1,2] ([1]United Grad. Sch. Agric. Sci., Ehime Univ., [2]Fac. of Agr., Kagawa Univ.)

PL-096 Role of OsMYC2 in jasmonate-induced resistance to rice bacterial blight in rice

Yuya Uji[1], Shiduku Taniguchi[2], Daisuke Tamaoki[1], Hodaka Shisido[1], Shoko Yamada[1], Kazuya Akimitsu[1,2], Kenji Gomi[1,2] ([1]Fac. of Agr., Kagawa Univ., [2]United Grad. Sch. Agric. Sci., Ehime Univ.)

PL-097 Interaction between plant and nematode through WOX transcription factors

Yumi Kanemaru, Thi Ngan Bui, Satoru Nakagami, Yasuka Yamaguchi, Takashi Ishida, Shinichiro Sawa (Grad. Sch. Sci., Univ. Kumamoto)

PL-098 Phytol, an acyclic diterpene alcohol, induces resistance to root-knot nematode in Arabidopsis and tomato through activation of the host defense

Taketo Fujimoto[1], Hiroshi Abe[2], Takayuki Mizukubo[3], Shigemi Seo[4] ([1]NARO HARC, [2]RIKEN BRC, [3]NARO HARC, [4]NIAS)

PL-099 Herbivory induced phenolamide biosynthesis in rice

Kimiaki Tanabe, Yuko Hojo, Tomonori Sinya, Ivan Galis (Institute of Plant Science and Resources, Okayama University)

PL-100 Role Of The Flavonoid Phytoalexin Sakuranetin In Rice Defense Responses Against Biotic Stresses

Akihiro Ishida[1,4], Satoshi Ogawa[1], Yoko Nishizawa[2], Eiichi Minami[2], Hisakazu Yamane[3], Gen-ichiro Arimura[4], Hideaki Nojiri[1], Kazunori Okada[1] ([1]Biotechnology Research Center, The Univ. of Tokyo, [2]National Institute of Agrobiological Sciences, [3]Teikyo Univ., [4]Tokyo Univ. of Science)

PL-101 Analysis of mechanisms of action of loliolide, a novel plant activator, in plant resistance to herbivores

Yusuke Nakai[1], Mika Murata[2], Soichi Kugimiya[3], Atsushi Mochizuki[3], Ichiro Mitsuhara[1], Shigemi Seo[1] ([1]NIAS, [2]NARO NIVTS, [3]NIAES)

PL-102 Seasonal replication of *Turnip mosaic virus* and its effect on host transcriptome under a natural environment

Mie N. Honjo[1], Atsushi J. Nagano[1,2,3], Tetsuhiro Kawagoe[1], Hiroshi Kudoh[1] ([1]CER, Kyoto Univ., [2]Fac. Agr., Ryukoku Univ., [3]JST, PRESTO)

PL-103 Determining how myrmecophytic species *Callicarpa saccata* develops domatia

Emma Sarath[1], Hirokazu Tsukaya[1,2] ([1]The University of Tokyo, [2]OIIB, NINS)

■ Epigenetic regulation

PL-104 Analysis of epigenetic factor involved in de novo shoot regeneration in Arabidopsis thaliana

Hiroya Ishihara[1], Kaoru Sugimoto[1], Takuya Sakamoto[1], Taku Sasaki[2], Motoaki Seki[2], Elliot Meyelowitz[3], Sachihiro Matsunaga[1,3] ([1]Dept. Appli. Sci., Fac. Sci. Tech., Tokyo Univ. Sci., [2]CSRS, Riken, [3]Biol, Caltech)

PL-105 Epigenetic control of heat acclimation by JUMONJI in *Arabidopsis*

Hikaru Hirai, Satoshi Matsubara, Nobutoshi Yamaguchi, Toshiro Ito (NAIST)

PL-106 Characterization of Mp*ROS1X*, an X-chromosomal homolog of *REPRESSOR OF SILENCING 1*, in the liverwort *Marchantia polymorpha*

Taisuke Togawa[1], Daijiro Harada[1], Shigeyuki Tsukamoto[2], Kimitsune Ishizaki[2], Masaki Niwa[3], Takashi Araki[3], Katsushi Yamaguchi[4], Shuji Shigenobu[4], Takayuki Kohchi[3], Katsuyuki T. Yamato[1] ([1]Fac. Biol.-Orient. Sci. Tech., Kinki Univ., [2]Grad. Sch. Sci., Kobe Univ., [3]Grad. Sch. Biostudies, Kyoto Univ., [4]Natl. Inst. Basic Biol.)

■ Transcriptional and post-transcriptional regulation

PL-107 Translation repression of *rps16* mRNA in tobacco chloroplasts is caused by the translation of upstream ORF

Masayuki Nakamura, Masahiro Sugiura (Center for Gene Research)

PL-108 Functional analysis of the chloroplast localized deadenylase AtCCR4c

Masaki Miyajima[1], Yuya Suzuki[1], Yukako Chiba[1,2] ([1]Grad. Sch. of Life Sci., Univ. Hokkaido, [2]JST PRESTO)

PL-109 Identification of Transcription Factors Involved in Utilization of Organic Phosphorus in Arabidopsis

Chuan-Ming Yeh[1], Nobutaka Mitsuda[2], Masaru Ohme-Takagi[1,2] ([1]Grad. Sch. Sci. & Eng., Saitama Univ., [2]Bioprod. Res. Inst., Natl. Inst. Adv. Ind. Sci. & Technol. (AIST))

PL-110 Analysis on the relationship between the two LysR-type transcriptional factors RbcR and CcmR in *Synechococcus elongatus* PCC7942

Lulu Pan[1], Kiyoshi Onai[2], Takumi Natsume[1], Tatsuo Omata[1] ([1]Grad. Sch. Bioagr. Sci. Nagoya Univ., [2]Ctr. Gene Res. Nagoya Univ.)

PL-111 Functional analysis of a dark-responsive R1-type MYB transcription factor MYB2 in a unicellular red alga *Cyanidioschyzon merolae*

Yasuko Kawase[1], Sousuke Imamura[1,2], Kan Tanaka[1,2] ([1]CRL, Tokyo Tech, [2]CREST, JST)

PL-112 Functional Analysis of NSR1/MYR2 in Arabidopsis

Yoshimi Nakano[1], Yuki Naito[1,2], Toshitsugu Nakano[1,3], Namie Ohtsuki[1,4], Kaoru Suzuki[1] ([1]BPRI, AIST, [2]NIMS, [3]VNUA, [4]NIAS)

PL-113 Epigenetic analysis of the promoter acquisition process of inserted reporter genes by Ex-TRIP method in *Arabidopsis* seedlings

Naoto Takada, Takayuki Hata, Makoto Tachikawa, Mitsuhiro Matsuo, Soichirou Satoh, Junichi Obokata (Graduate School of Life and Env. Sci., Kyoto Prefectural Univ.)

PL-114 Activation of integrated coding sequences is independent of the endogenous transcriptional activity and epigenetic states

Takayuki Hata, Naoto Takada, Makoto Tachikawa, Mitsuhiro Matsuo, Soichirou Satoh, Junichi Obokata (Graduate School of Life and Env. Sci., Kyoto Prefectural Univ.)

PL-115 Imaging Analysis in roles of mRNA decay at early plant development

Kazuki Motomura[1], Daisuke Kurihara[2,3], Daisuke Maruyama[1], Yuichiro Watanabe[4], Tetsuya Higashiyama[1,2,3] ([1]WPI-ITbM, Nagoya Univ., [2]Grad. Sch. Sci., Nagoya Univ., [3]ERATO, JST, [4]Grad. Sch. of Arts and Sci. The Univ. of Tokyo)

PL-116 Coordinated transcriptional regulation of isopentenyl diphosphate biosynthetic pathway enzymes in plastids by Arabidopsis response regulator 14

Masashi Shindo[1], Hirokazu Hashikawa[2], Yusuke Takabayashi[2], Kazuto Mannen[2], Seiji Takahasi[2], Toru Nakayama[2] ([1]Sch. Eng., Univ. Tohoku, [2]Grad. Sch. Eng., Univ. Tohoku)

PL-117 Utilization of the translational enhancer for the recombinant protein production in plants

Tomohiro Imamura, Hiromi Aoki, Hiroaki Kusano, Hiroaki Shimada (Tokyo University of Science)

PL-118 Transcriptional Regulation and Improvement of Stress Tolerance Induced by 5-Amino Levulinic Acid

Kengo Kanamaru[1], Chen Duan[1], Takahiko Tanaka[2], Takuma Nakakita[2], Masaru Saitou[3], Takanori Fujimoto[3], Tomohide Uno[1], Hiroshi Yamagata[1] ([1]Grad. Sch. Agri., Kobe Univ., [2]Fac. Agri., Kobe Univ., [3]Res. & Dev. Center, COSMO OIL Co., Ltd.)

■ Protein modification and degradation

PL-119 Expression analysis of the genes required for sumoylation in Marchantia polymorpha.

Yumiko Katsumata, Hiroyoshi Kubo (Grad. Sch. Sci., Univ. Shinshu)

PL-120 OsHrd3 is required for maintaining the quality of ER-derived protein bodies in rice endosperm

Masaru Ohta[1,2], Fumio Takaiwa[2] ([1]Plant Genome Research Unit, NIAS, [2]Genetically Modified Organism Research Center, NIAS)

PL-121 Elucidation of the tissue specific expression and the subcellular localization of *Arabidopsis* CBL5

Kousuke Takebayashi[1], Shunya Saito[1], Toshihiko Utsumi[2], Koko Moriya[2], Megumi Kato[1], Yoko Sato[1], Jun Muto[1], Naoki Ochi[1], Kenji Hashimoto[3], Katrin Held[3], Jörg Kudla[3], Minoru Ueda[4], Ryusuke Yokoyama[5], Kazuhiko Nishitani[5], Shin Hamamoto[1], Nobuyuki Uozumi[1] ([1]Grad. Sch. Eng., Univ. Tohoku, [2]Grad. Sch. Med., Yamaguchi Univ., [3]Inst. Biol. Biotech., Univ. Munster, [4]Grad. Sch. Sci., Univ. Tohoku, [5]Grad. Sch. Life Sci., Univ. Tohoku)

PL-122 A putative methyltransferase physically interacts with magnesium transporter MRS2-2 and is required for magnesium homeostasis in *Arabidopsis*

Zhihang Feng, Hiroshi Nagao, Takehiro Kamiya, Baohai Li, Toru Fujiwara (Gra. Sch. Agr., Univ. Tokyo)

PL-123 Partial Purification and Characterization of AtMC4-type Metacaspase from Broccoli Flower Buds.

Atsushi Minami, Yasuharu Mayama (Natl. Inst. Tech., Tsuruoka)

■ Photosystem

PL-124 A Low-temperature Fluorescence Analysis in the Photosynthetic Reaction Center of Heliobacteria

Hirozo Oh-oka[1], Risa Kojima[1], Chihiro Azai[2], Risa Mutoh[3], Genji Kurisu[3], Shigeru Itoh[4] ([1]Grad. Sch. Sci., Osaka Univ., [2]Coll. Life Sci., Ritsumeikan Univ., [3]Inst. Protein Res., Osaka Univ., [4]Cent. Gene Res., Nagoya Univ.)

PL-125 Crystal structure of herbicide-bound PsbA3-only photosystem II

Takahiro Kuma[1], Fusamichi Akita[2], Natsumi Ugai[2], Michihiro Suga[1,2], Miwa Sugiura[3], Masako Iwai[4], Masahiko Ikeuchi[4], Jian-Ren Shen[1,2] ([1]Macromolecule Structure Laboratory, Department of biology, Faculty of science, Okayama University, [2]Photosynthesis Research Center, Graduate School of Natural Science and Technology, Okayama University, [3]Proteo-science Center, Ehime University, [4]Graduate School of Arts and Science, The University of Tokyo)

PL-126 Influence of Structural Modifications of the Cytb_{559} in the Photosystem II Complex on Photoinhibition

Makoto Nakamura[1], Alain Boussac[2], Miwa Sugiura[1,3,4] ([1]Grad. Sch. Sci., Ehime Univ., [2]CEA Saclay, [3]PROS, Ehime Univ., [4]JST-PRESTO)

PL-127 A mechanism of photosystem-I photoinhibition by short-pulsed fluctuating light and its suppression by far-red light illumination

Masaru Kono[1], Masaharu Kitashima[2], Yoshihiro Suzuki[2], Kazuhito Inoue[2], Ichiro Terashima[1] ([1]Grad. Sch. Sci., Univ. Tokyo, [2]Grad. Sch. Sci., Kanagawa Univ.)

PL-128 Fluorescence Spectroscopy Of Single Photosystem I At Liquid Nitrogen Temperatures

Ting Du[1], Ryo Nagao[2], Takumi Noguchi[2], Hiroshi Fukumura[1], Yutaka Shibata[1] ([1]Tohoku University, [2]Nagoya University)

PL-129 Growth light conditions and mechanisms that make Alocasia odora resistant to PSI photoinhibition induced by fluctuating light

Mitsutoshi Matsuo[1], Masaru Kono[1], Kintake Sonoike[2], Ichiro Terashima[1] ([1]Department of Biological Sciences, Graduate School of Science, The University of Tokyo, [2]Faculty of Education and Integrated Arts and Sciences, Waseda University)

PL-130 Chloroplast functions inside plant 3D space visualized by fluorescence lifetime imaging microscopy with systematically changed excitation laser power

Shinji Fukuda[1], Saki Yasuhara[2], Kentaro Ifuku[2], Takashi Shiina[3], Kanako Yamasaki[3], Masahide Terazima[1], Fumihiko Sato[2], Shigeichi Kumazaki[1] ([1]Grad. Sch. Sci., Univ. Kyoto, [2]Grad. Sch. Biostudies, Univ. Kyoto, [3]Grad. Sch. Life. Env., Univ. Kyoto Pref.)

PL-131 Effects of electron acceptor quinones on the durability of oxygen evolution activity of photosystem II

Yusuke Ikeda[1], Tomoyasu Noji[2], Keisuke Kawakami[2], Nobuo Kamiya[1,2] ([1]Sci, Univ.Osaka city, [2]OCARINA)

PL-132 The photo-reduction activity of methyl viologen and fluorescence lifetime of LHCII immobilized inside nanoporous glass plate

Tomoyasu Noji[1], Mikihiko Tada[2], Masaharu Kondo[2], Tetsuro Jin[3], Mamoru Nango[1], Nobuo Kamiya[1], Takehisa Dewa[2] ([1]OCARINA, Osaka city Univ., [2]Grad. Sch. Eng., Nagoya Inst. Tech., [3]AIST)

PL-133 [Cancelled]

PL-134 Thylakoids of *pgr5* of *Arabidopsis thaliana* are partially uncoupled?

Ichiro Terashima[1,2], Masaru Kono[1] ([1]School of Science, The University of Tokyo, [2]CREST)

PL-135 Structural basis for energy transfer pathways in the plant PSI-LHCI supercomplex

Michihiro Suga[1], Xiaochun Qin[1,2], Tingyun Kuang[2], Jian-Ren Shen[1,2] ([1]Graduate School of Natural Science and Technology, [2]Key Laboratory of Photobiology, Institute of Botany, CAS, Beijing, China)

PL-136 Single-cell characterization of heterocystous cyanobacterium Rivularia by fluorescence lifetime and spectral imaging microscopy

Shuho Nozue[1], Mitsunori Katayama[2], Kouto Tamamizu[1], Shinji Fukuda[1], Masahide Terazima[1], Shigeichi Kumazaki[1] ([1]Grad. Sch. Sci., Univ. Kyoto, [2]CIT, Nihon Univ.)

PL-137 Changes in primary processes of photosynthesis in a cyanobacterium cultivated under different CO_2 concentrations.

Shiho Ikeda[1], Shimpei Aikawa[2], Akihiko Kondo[2], Seiji Akimoto[1,3] ([1]Grad. Sch. Sci., Kobe Univ., [2]Grad. Sch. Eng., Kobe Univ., [3]Molecular Photoscience Research Center, Kobe Univ.)

PL-138 ATR-FTIR analysis of the long-range interaction between the Mn cluster and the primary quinone Q_A in photosystem II

Yuki Kato, Rina Ishii, Takumi Noguchi (Grad. Sch. Sci., Nagoya Univ.)

PL-139 The characteristics of functional photosystems in mature leaves that support leaf longevity in *Arabidopsis thaliana*

Ryouta Saruta[1], Shinji Fukuda[2], Hatsumi Nozue[1], Shigeichi Kumazaki[2], Masayuki Nozue[1] ([1]Fac. of Textile Sci. and Tech., Shinshu Univ., [2]Grad. Sch. Sci., Kyoto Univ.)

PL-140 Position of the extrinsic subunit PsbP in photosystem II studied by PELDOR

Mizue Asada[1], Taishi Nishimura[2], Fumihiko Sato[2], Kentaro Ifuku[2], Hiroyuki Mino[1] ([1]Grad. Sch. Sci., Nagoya Univ., [2]Grad. Sch. Bio., Kyoto Univ.)

PL-141 How Do NDH Linker Proteins Interact With PSI?

Takuto Otani, Hiroshi Yamamoto, Toshiharu Shikanai (Grad. Sch. Sci., Univ. Kyoto)

PL-142 Functional complementation and purification of photosystem II with His-tagged PsbP protein in *Chlamydomonas reinhardtii*

Taishi Nishimura, Fumihiko Sato, Kentaro Ifuku (Graduate School of Biostudies, Kyoto University)

■ Photosynthesis

PL-143 Higher rates of diel photosynthesis of Kenaf could be supported by its stomatal responses to fluctuated light condition.

Hikaru Kawaguchi[1], Kouitirou Sawagami[2], Shoma Suzuki[1], Yoshihiro Suzuki[1] ([1]Dep. Biological Sci., Grad. Sch. Sci., Univ. Kanagawa, [2]Nikko Botanical Garden., Dep. Biological Sci., Grad. Sch. Sci., Univ. Tokyo)

PL-144 Some schemes for improvement in activity and for cost reduction of photobiological hydrogen production by cyanobacteria and purple bacteria

Hidehiro Sakurai[1], Hajime Masukawa[2], Takeshi Sato[3], Hikaru Hanamoto[3], Masaharu Kitashima[3], Sakiko Nagashima[3,4], Kenji VP Nagashima[1], Evgeny Shastik[5], Tatyana Laurinavichene[5], Anatoly Tyagankov[5], Kazuhito Inoue[1,3] ([1]Res. Inst. Photobiol. H2 Production, Kanagawa Univ., [2]OCARINA, Osaka City Univ., [3]Grad. Sch. Sci., Kanagawa Univ., [4]Fac. ULA, Tokyo Metropolitan Univ., [5]IBBP, RAS, Russia)

PL-145 Mutants with increased heterocyst frequencies in *Anabaena* sp. PCC 7120 enhance photobiological hydrogen production

Hajime Masukawa[1], Hidehiro Sakurai[2], Kazuhito Inoue[2,3] ([1]OCARINA, Osaka City Univ., [2]Res. Instit. for Photobiol. Hydrogen Prod., Kanagawa Univ., [3]Dept. Biol. Sci., Kanagawa Univ.)

■ Rhythm

PL-146 The correlation between critical day-lengths and circadian periods in Japanese short-day duckweeds

Tomoaki Muranaka, Tokitaka Oyama (Dept. of Bot., Grad. Sch. of Sci., Kyoto Univ.)

PL-147 Spatiotemporal transcriptional activity analyses of canonical constitutive *CaMV35S* and *ZmUBQ* promoters in the monocot *Lemna minor* using *LUCIFERASE* bioluminescence reporter

Shogo Ito, Yoko Utsumi, Tokitaka Oyama (Department of Botany, Guraduate school of Science, Kyoto University)

PL-148 Gene expression regulation mechanisms of cyanobacterial circadian clock

Yohko Kitayama, Saki Ohta, Michio Homma, Takao Kondo (Div. Biol. Sci., Dep. Sci., Nagoya Uni.)

PL-149 A single-cell bioluminescence imaging system for monitoring cellular circadian rhythms in a detached leaf of *Arabidopsis*

Masaaki Okada, Tokitaka Oyama (Grad. Sch. Sci., Kyoto Univ.)

PL-150 Analysis on the variation of sequences and functions of a clock protein, KaiB, in cyanobacteria

Tokitaka Oyama, Hiroyuki Asano, Noriaki Kitagawa, Shuhei Hirota (Dept Bot, Grad Sch Sci, Kyoto Univ)

■ New technology

PL-151 Attempts to develop a screening method for cyanobacterial strains with enhanced production and excretion of free fatty acids using a fungus as a syntrophic partner

Ryoma Tsujimoto, Kyohei Hayamizu, Tatsuo Omata (Graduate School of Bioagricultural Sciences, Nagoya Univ.)

PL-152 Base preference of 'T' at the 6th position of the SaCas9 PAM (5'-NNGRRT-3') sequence in rice

Masafumi Mikami[1,2], Hidetaka Kaya[2], Akira Endo[2], Masaki Endo[2], Seiichi Toki[1,2,3] ([1]Gra. Sch. Nanobiol., Yokohama City Univ., [2]Natl. Inst. Agrobiol. Sci., [3]Kihara. Inst. Biol. Res., Yokohama City Univ.)

PL-153 Genome editing using small Cas9 derived from *Staphylococcus aureus* in plants

Hidetaka Kaya[1], Masafumi Mikami[1,2], Akira Endo[1], Masaki Endo[1], Seiichi Toki[1,2,3] ([1]Plant Genome Eng., NIAS, [2]Grad. Sch. Nanobio., Yokohama City Univ., [3]Kihara Inst. Biol. Res., Yokohama City Univ.)

PL-154 Establishment of reversible transgenesis via *piggyBac* transposon

Ayako Nishizawa-Yokoi[1], Seiichi Toki[1,2] ([1]Plant Genome Eng. Res. Unit, Nat. Inst. Agrobiol. Sci., [2]Kihara Inst. Biol. Res., Yokohama City Univ.)

PL-155 Construction of the designed TALEN gene using the Emerald Gateway TALEN kit for the rice genome editing and its evaluation

Hitomi Onodera[1], Miho Kihira[1], Hiromi Aoki[1], Takaaki Horie[1], Noriaki Kawano[2], Kayo Yoshimatsu[2], Kazunari Kondo[3], Hikaru Matsuzaki[1], Ayako Itagaki[1], Hiroaki Kusano[1], Hiroaki Shimada[1] ([1]Dept. Biol. Sci. & Tech., Tokyo Univ. Sci., [2]NIBIOHN, [3]NIHS)

PL-156 Use of CRISPR/Cas9 system for flower color modification in model plants

Masahiro Nishihara, Keisuke Tasaki, Atsumi Higuchi, Kohei Fujita, Yoshimi Kurokawa, Hideyuki Takahashi, Nobuhiro Sasaki (Iwate Biotech. Res. Cent.)

PL-157 Truncation of the C-terminal calmodulin binding domain in the rice glutamate decarboxylase (GAD1) by CRISPR/Cas9 system

Kazuhito Akama[1], Masako Kanesaki[1], Masashi Mikami[2,3], Masaki Endo[2], Seiichi Toki[2,3,4] ([1]Dept. Biol. Sci., Shimane Univ., [2]Plant Genome Engineering Research Unit, Agrogenomics Research Center, NIAS, [3]Graduate School of Nanobioscience, Yokohama City Univ., [4]Kihara Institute for Biological Research, Yokohama City Univ.)

PL-158 Development of Micrografting Device to Enhance Studies of Shoot-Root Communications

Michitaka Notaguchi[1,2], Naoki Yanagisawa[1,2], Shuka Ikematsu[3], Hideyuki Arata[1,2], Tetsuya Higashiyama[1,2,3] ([1]Grad. Sch. Sci., Nagoya Univ., [2]JST ERATO, Higashiyama Live-Holonics Project, [3]ITbM, Nagoya Univ.)

PL-159 Artificial crossing method and development of population genotyping technique based on amplicon sequence in *Brachypodium distachyon*

Yoshihiko Onda[1,2], Minami Shimizu[1], Kotaro Takahagi[3], Fumiko Kato[1], Risa Nakayama[1], Keiichi Mochida[1,2] ([1]RIKEN CSRS, [2]YCU KIBR, [3]YCU Grad. Sch.Nano.)

PL-160 A simple and efficient seamless DNA cloning method using cell lysates from laboratory *Escherichia coli* strains and its application to SLiP site-directed mutagenesis.

Ken Motohashi, Yuki Okegawa (Fac. of Life Sci., Kyoto Sangyo Univ.)

PL-161 Cryopreservation of Duckweed (*Lemna minor*) by D cryo-plate Method

Daisuke Tanaka[1], Tokitaka Oyama[2] ([1]Genetic Resources Conservation Research Unit, Genetic Resources Center, National Institute of Agrobiological Sciences, [2]Department of Botany, Graduate School of Science, Kyoto University)

PL-162 Establishment of a Novel System for the Isolation of Useful Genes Functioning in Most Land Plants Using *Marchantia polymorpha* and *Arabidopsis thaliana*

Takuya Terasawa[1], Ryota Nihei[1], Miyuki Kobayashi[1], Takeshi Yoshizumi[2], Minami Matsui[2], Youichi Kondou[1] ([1]Kanto-Gakuin Univ., [2]RIKEN CSRS.)

PL-163 Investigation of the effectiveness of neurodegenerative disease therapeutic agent, 4-PBA, on root hair

Takahiro Sato, Shota Hirose, Hirokazu Iida, Youichi Kondou (Kanto Gakuin Univ.)

PL-164 Examination of optimal conditions for homologous recombination in an oil-producing alga *Nannochloropsis* NIES-2145

Shinsuke Shimizu[1], Takashi Nobusawa[1,2], Koichi Hori[1,2], Hiroyuki Ohta[1,2,3] ([1]Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, [2]JST CREST, [3]Earth-Life Science Institute, Tokyo Institute of Technology)

PL-165 Genetic engineering for enhanced alkane production in the model cyanobacterium *Synechococcus elongatus* PCC 7942

Hiroki Kaneko, Hirohumi Fukuda, Munehiko Asayama, Yoichi Nakahira (Coll. Agr., Ibaraki Univ.)

PL-166 Analysis of the biological effect caused by the heavy ion-beam irradiation to perennial plants

Nobuhiro Sasaki[1], Emiko Chiba[1], Nobue Hoshi[2], Tomonori Asakawa[2], Kurokawa Yoshimi[1], Yamada Eri[1], Atsumi Higuchi[1], Masachika Okamura[3], Yoshiya Furusawa[4], Takashi Shimokawa[4], Masahiro Nishihara[1] ([1]Iwate Biotechnology Research Center, [2]Iwate Agricultural Research Center, [3]Kirin Company, [4]National Institute of Radiological Sciences)

PL-167 Effect of FPX on callus induction, regeneration and transformation in Brachypodium

Yasuyo Himuro[1], Kanako Ishiyama[2], Fuminori Takahashi[1], Shota Tanaka[1], Takeshi Nakano[1], Masatomo Kobayashi[2], Kazuo Shinozaki[1] ([1]CSRS, RIKEN, [2]BRC, RIKEN)

■ Cell cycle/Cell division

PL-168 Condensin II has a role in the chromatin dynamics during interphase

Tomoe Yamashita[1], Takuya Sakamoto[1], Yuki Sakamoto[1], Yuta Sato[1], Akihiro Matsui[2], Jong-Myong Kim[2], Motoaki Seki[2], Sachihiro Matsunaga[1] ([1]Dep. App. Biol. Sci., Fac. Sci. Tech., Tokyo Univ. Sci., [2]CSRS, RIKEN)

PL-169 ESOFB2 is specifically expressed in cellularized endosperm cells and interacts with *Orysa*;KRP4 cyclin-dependent kinase inhibitor

Teruki Sugiyama, Natsumi Fujiwara, Masanori Mizutani, Shuichi Matsuda, Ken-ichi Tsutsumi, Yasushi Saitoh (Cryobiofrontier Research Center, Faculty of Agriculture, Iwate University)

PL-170 The analysis of Arabidopsis PP2C-like protein phosphatases that interacts with NACK1 kinesin

Rie Owada[1], Mikako Nakata[1], Rie Nakano[2], Yasunori Machida[2], Michiko Sasabe[1] ([1]Facl. of Agri. Life Sci., Hirosaki Univ., [2]Grad. Sch. of Sci., Nagoya Univ.)

PL-171 Putative DNA/RNA helicase EMB2765 is essential for cell division and involves tolerance of excess-boron stress in *Arabidopsis*

Ke Li, Takehiro Kamiya, Toru Fujiwara (Grad. Sch. Agr., Univ. Tokyo)

PL-172 Control of the cell cycle in two distinct cell files of the root epidermis

Teruki Sugiyama[1], Hirotomo Takatsuka[1], Masaaki Umeda[1,2] ([1]Graduate School of Biological Sciences, Nara Institute of Science and Technology, [2]JST, CREST)

PL-173 Expression and functional analyses of a novel F-box protein gene, ESOFB1 during early phases of rice seed development

Tomoka Asakura, Natsumi Fujiwara, Michiko Hara, Shuichi Matsuda, Masanori Mizutani, Yasushi Saitoh (Cryobiofrontier Research Center)

PL-174 Division of shape-standardized tobacco cells reveals a limit to the occurrence of single-criterion-based selection of the plane of symmetric division

Tetsuhiro Asada (Grad. Sch. Sci., Univ. Osaka)

PL-175 Analysis of nuclear body in DNA damage response of Arabidopsis

Takeshi Hirakawa, Sachihiro Matsunaga (Dept. Applied Bio. Sci., Fac. Sci. Tech., Tokyo Univ. Sci.)

PL-176 Light-Regulation of Asexual Reproduction in *Pediastrum duplex*

Narumi Miyamoto[1], Shota Kato[2], Tomoko Shinomura[1,2] ([1]Grad. Sci. Eng., Teikyo Univ., [2]Sch. Sci. Eng., Teikyo Univ.)

■ Development/Differentiation

PL-177 Characterization of SLM1 gene in *Trifolium repens*

Honami Ohashi, Kaori Segawa, Shuichi Matsuda, Yasushi Saitoh (Cryobiofrontier Research Center, Faculty of Agriculture, Iwate University)

PL-178 Transcription factors that may regulate phloem companion-cell development

Miki Zaizen[1], Sawa Kume[1], Ye Zhang[1], Nobutaka Mitsuda[2], Takeshi Yoshizumi[3], Yoichi Kondo[3], Masaru Ohme-Takagi[2,4], Minami Matsui[3], Tatsuo Kakimoto[1] ([1]Grad. Sch. Sci., Univ. Osaka, [2]AIST, [3]Plant Science Center, Yokohama Inst., RIKEN, [4]IEST., Univ. Saitama)

PL-179 The activity of *ATML1*, a master gene for epidermal cell fate, is controlled by multiple layers of regulatory mechanisms

Hiroyuki Iida, Ayaka Yoshida, Nozomi Takada, Shinobu Takada (Department of Biology, Graduate School of Science, Osaka University)

PL-180 An epigenetic recombinant inbred line with high shoot regeneration efficiency

Tatsumi Hirasawa[1], Hanae Ohta[1], Akiko Yamamoto[2], Takamasa Suzuki[3,4], Tetsuya Higashiyama[4,5,6], Shin Takeda[2], Tsukaho Hattori[2], Taisuke Nishimura[1,2] ([1]Nagaoka Univ. of Tech., [2]Biosci. and Biotech. Center, Nagoya Univ., [3]Chubu Univ., [4]JST ERATO, [5]Grad. Sch. of Sci., Nagoya Univ., [6]WPI-ITbM)

■ Nucleus

PL-181 Interaction Analysis of CRWN Proteins in *A. thaliana*

Yuta Sato, Yuki Sakamoto, Sachihiro Matsunaga (Dept. Appli. Sci., Fac. Sci. Tech., Tokyo Univ. Sci.)

PL-182 Are CRWNs nuclear lamina proteins ?

Yuki Sakamoto[1], Mayuko Sato[2], Yuta Sato[1], Kiminori Toyooka[2], Shingo Takagi[3], Sachihiro Matsunaga[1] ([1]Dept. Appli. Sci., Fac. Sci. Tech., Tokyo Univ. Sci., [2]RIKEN CSRS, [3]Grad. Sch. Sci., Osaka Univ.)

■ Secondary metabolism

PL-183 Cloning and Characterization of Flavonoid 3'-Hydroxylase in *Eruca vesicaria*

Mayuko Otsubo, Ai Tasaki, Yan Zhang, Noriaki Tamura (Grad. Sch. Human Environ. Sci., Fukuoka Women's Univ.)

PL-184 Isolation and Functional Characterization of Two Carotene Isomerase (Z-ISO and CrtH) Genes from *Arthrospira platensis*

Kenjiro Sugiyama[1], Koh Takahashi[1], Hideyuki Suzuki[2], Shinichi Takaichi[3], Masaharu Yamada[1] ([1]Sch. of Adv. Eng., Kogakuin Univ., [2]Kazusa DNA Res. Inst., [3]Dept. Biol., Nippon Medical School)

PL-185 Geranyltransferases for flavonoids isolated from Macaranga tanarius

Yoshiaki Date[1], Ryo Shimizu[1], Yoko Maeda[1], Ryosuke Munakata[1], Akifumi Sugiyama[1], Shigenori Kumazawa[2], Shuichi Fukumoto[3], Kazufumi Yazaki[1] ([1]RISH., Kyoto Univ., [2]Univ. Shizuoka, [3]POKKA SAPPORO Food & Beverage Ltd.)

PL-186 Functional Analysis of UGD-glucose 6-dehydrogenases of Licorice

Ayumi Kawasaki, Keita Tamura, Hikaru Seki, Toshiya Muranaka (Grad. Sch. Eng., Osaka Univ.)

PL-187 Molecular cloning and characterization of AP2/ERF transcription factors possibly involved in camptothecin biosynthesis in *Ophiorrhiza pumila*

Nirin Udomsom[1], Amit Rai[1], Miki Tokoro[1], Ryosuke Imai[1], Kazuki Saito[1,2], Mami Yamazaki[1] ([1]Grad. Pharm. Sci. Chiba Univ., [2]RIKEN CSRS)

PL-188 Isolation and characterization of squalene epoxidase genes from *Botryococcus braunii*, race B

Chungyau Tsou[1,3], Hidenobu Uchida[1,3], Yusuke Fukunaga[1,3], Victor M.E. Ferriols[1], Satoshi Kagiwada[2,3], Shigeki Matsunaga[1,3], Shigeru Okada[1,3] ([1]Grad. Sch. Agr., Univ. Tokyo, [2]Dept. Biol. Sci., Nara Women's Univ., [3]JST CREST)

PL-189 Molecular cloning and biochemical characterization of prenyltransferases involved in isoflavonoid phytoalexin biosynthesis in *Phaseolus vulgaris*

Keisuke Yoneyama, Kai Uchida, Toshio Aoki, Tomoyoshi Akashi (Dept. Biol. Appl. Sci., Nihon Univ.)

PL-190 Where came from carotenoids and their biosynthetic pathways in cyanobacteria?

Shinichi Takaichi (Department of Biology, Nippon Medical School)

PL-191 Identification of a Novel Gene, *AsFMO2*, Potentially Encoding *S*-oxygenating Enzyme for the Biosynthesis of *S*-alk(en)ylcysteine Sulfoxides in Garlic

Naoko Mori[1], Naoko Yoshimoto[1], Misato Onuma[1], Hideyuki Suzuki[2], Yukihiro Kodera[3], Tadamitsu Tsuneyoshi[3], Kazuki Saito[1] ([1]Grad. Sch. Pharm. Sci., Chiba Univ., [2]Kazusa DNA Research Institute, [3]Wakunaga Pharmaceutical Co., Ltd.)

PL-192 Terpenoid indole alkaloids accumulated in *Catharanthus roseus* idioblast and laticifer cells

Kotaro Yamamoto[1], Miwa Ohnishi[1], Katsutoshi Takahashi[2], Hajime Mizuno[3], Tsuyoshi Esaki[4], Kimitsune Ishizaki[1], Mami Yamazaki[5], Hidehiro Fukaki[1], Tsutomu Masujima[4], Tetsuro Mimura[1] ([1]Department of Biology, Graduate School of Science, Kobe University, [2]Research Institute of Instrumentation Frontier, National Institute of Advanced Industrial Science and Technology, [3]School of Pharmaceutical Sciences, University of Shizuoka, [4]Quantitative Biology Center, RIKEN, [5]Graduate School of Pharmaceutical Science, Chiba University)

PL-193 [Cancelled]

PL-194 Identification of β-amyrin 28-oxidase in *Glycyrrhiza uralensis*

Keita Tamura[1], Hikaru Seki[1], Hideyuki Suzuki[2], Mareshige Kojoma[3], Toshiya Muranaka[1] ([1]Grad. Sch. Eng., Osaka Univ., [2]Kazusa DNA Res. Inst., [3]Fac. Pharm. Sci, Health Sci. Univ. Hokkaido)

PL-195 Proteome analysis toward complete understanding of shikonin biosynthetic pathway in *Lithospermum erythrorhizon.*

Yukimi Nakagawa[1], Kojiro Takanashi[2], Syunsuke Aburaya[3], Wataru Aoki[3], Mitsuyoshi Ueda[3], Kazufumi Yazaki[1] ([1]Research Institute for Sustainable Humanosphere, Kyoto Univ., [2]Institute of Mountain Science, Shinshu Univ., [3]Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.)

PL-196 Protein-protein interaction analyses of rubber particle-bound proteins from *Hevea brasiliensis*

Toshiyuki Waki[1], Satoshi Yamashita[1], Haruhiko Yamaguchi[2], Yuichi Aoki[1], Ayuta Funaki[1], Fumihiro Yanbe[1], Yukino Miyagi-Inoue[2], Kazuhisa Fushihara[2], Toru Nakayama[1], Seiji Takahashi[1] ([1]Grad. Sch. Eng., Univ. Tohoku, [2]Sumitomo Rubber Industries)

■ Membrane trafficking

PL-197 Functional analysis of Arabidopsis CaLB1

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PL-198 Functional Analysis of OsLACS9 at Chloroplasts Envelope Membrane

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PL-199 Functional analysis of a nitrogen responsive small G protein CmRAB5 in a unicellular red alga Cyanidioschyzon merolae

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PL-200 A genetic screen for molecular components that are involved in plasma membrane localization of a cuticle-related transporter

Satomi Tai, Tatsuo Kakimoto, Hirokazu Tanaka (Grad. Sch. Sci., Osaka Univ.)

■ Light harvesting Pigment/Photosystem

PL-201 Photoprotection vs Photoinhibition of Photosystem II in Transplastomic Lettuce (*Lactuca sativa*) Dominantly Accumulating Astaxanthin

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PL-202 Structure and function of the carbonyl-carotenoid binding light-harvesting complex II

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