General Presentations

Program of Poster Presentations

- Poster viewings and discussions will be held on-site. You can also view the posters online.

- During the online poster viewing period (March 14, 9:00 a.m.–March 19, 5:00 p.m.), you may also use the comments box on the abstract page of your poster posted on the ORSAM portal (the web-based abstract submission system). Please respond to questions in the comment box in a timely manner.

- Schedule

	Day 1 (March 17)	Day 2 (March 18)
Presentation No. / place	1P01–1P88 / 3rd floor 1Q01–1Q69 / 5th floor	2P01–2P90 / 3rd floor 2Q01–2Q69 / 5th floor
Mounting	March 17 9:00–12:00	March 18 10:30–12:00
Discussion	March 17 Odd numbers 17:15–18:00 Even numbers 18:00–18:45	March 18 Odd numbers 13:20–14:05 Even numbers 14:05–14:50
Removal	March 18 9:00–10:30	March 18 13:30–16:00

The presenters should be in front of their posters during the discussion time.
Any posters remaining after removal time will be removed by the Meeting Committee.

■ Photosynthesis

1P01 Function of red-shift FCP in Diatom *Phaeodactylum tricornutum* under Irradiation of Different Spectral Lights

Masakazu Toyoshima, Ginga Shimakawa, Yusuke Matsuda (Dept. Biosci., Sch. Biol. Environ. Sci., Kwansei-Gakuin Univ.)

1P02 A light factor-dependent/inhibition growth of *yellow* Chlamydomonas

Okviyoandra Akhyar[1], Soichiro Seki[2], Kazuhiro Yoshida[3], Chiyo Takagi[4], Yasuhiro Kamei[4], Ritsuko Fujii[1,2,3] ([1]Research Center for Artificial Photosynthesis (ReCAP), Osaka Metropolitan University, japan, [2]Graduate School of Science, Osaka City University, Japan, [3]Graduate School of Science, Osaka Metropolitan University, Japan, [4]Spectrography and Bioimaging Facility, National Institute for Basic Biology, Okazaki, Japan)

1P03 Characterization of a deletion mutant of *isiA1* in *Anabaena* sp. PCC 7120

Ryo Nagao[1], Haruya Ogawa[2], Jian-Ren Shen[2], Shigeki Ehira[3] ([1]Faculty of Agriculture, Shizuoka University, [2]RIIS, Okayama University, [3]Department of Biological Sciences, Tokyo Metropolitan University)

1P04 Effect of iron deficient or excess condition on primary photosynthetic processes of green alga, evaluated by global analysis

Nozomi Sakai[1], Miyu Furutani[1], Shimpei Aikawa[2], Seiji Akimoto[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]JIRCAS)

1P05 Purification and characterization of the BciD enzyme for formylation of C7 in bacteriochlorophyll *e*, purified from the green sulfur bacterium *Chlorobaculum limnaeum*

Jiro Harada, Ken Yamamoto (Kurume Univ. Sch. Med.)

1P06 Analysis of the regulatory mechanism of Chl *a*/*d* ratio in the marine cyanobacterium *Acaryochloris marina*

Sorachi Katayama[1], Yuki Tsuzuki[2], Yuichi Fujita[2], Haruki Yamamoto[2] ([1]School of Agricultural Sciences, Nagoya University, [2]Graduate School of Bioagricultural Sciences, Nagoya University)

1P07 Isolation and characterization of photosystem I and photosystem II complexes from cyanobacteria which express a His-tagged CP47

Mayuko Oshiumi[1], Toshiyuki Shinoda[1], Mitsunori Katayama[3], Tatsuya Tomo[4], Naoki Mizusawa[1,2] ([1]Fac. Biosci. Appl. Chem., Hosei Univ., [2]Res. Micro-Nano Tech., Hosei Univ., [3]Coll. Ind. Tech, Nihon Univ., [4]Grad. Sch. Sci., Tokyo Univ. Sci.)

1P08 Development of oligonucleotide probe for single-molecule spectroscopic analysis of *de-novo* synthesized D1 protein

Ibuki Soshino[1], Takumi Hoshi[1], Shen Ye[2], Yutaka Shibata[2] ([1]Fac. Sci., Tohoku Univ., [2]Grad. Sch. Sci., Tohoku Univ.)

1P09 Discovery of a novel thylakoid membrane-bound protein that is involved in the construction of thylakoid membrane and photosystem complex in cyanobacteria

Yoshiki Shirotori[1], Kimie Atsuzawa[2], Egi Tritya Apdila[3], Yasuko Kaneko[2], Koichiro Awai[3], Shigeki Ehira[1] ([1]Graduate school of Science, Tokyo Metropolitan University, [2]Graduate School of Science and Engineering, Saitama University, [3]Graduate School of Science and Technology, Shizuoka University)

1P10 Promoter analysis of the NPQ-related gene *PSBS* in *Arabidopsis thaliana*

Madoka Sakurai[1], Haruka Yamaki[1], Krishna K. Niyogi[2,3,4,5], Yoshitaka Nishiyama[6], Hiroko Takahashi[6] ([1]Department of Molecular Biology and Biochemistry, Saitama University, [2]Howard Hughes Medical Institute, University of California, Berkeley, [3]Department of Plant and Microbial Biology, University of California, Berkeley, [4]Innovative Genomics Institute, University of California, Berkeley, [5]Molecular Biophysics and Integrated Bioimaging Division, Lawrence Berkeley National Laboratory, [6]Graduate School of Science and Engineering, Saitama University)

1P11 Excitation relaxation processes of photosystem in the microsecond region

Miyu Furutani, Seiji Akimoto (Grad. Sch. Sci., Kobe Univ.)

1P12 Investigation of Factors Causing Differences in Chilling Stress Tolerance among Cucumber Cultivars

Shintaro Harimoto[1], Ko Takeuchi[2], Yufen Che[3], Kentaro Ifuku[2] ([1]Fac. Agri., Kyoto Univ., [2]Grad. Sch. Agri., Kyoto Univ., [3]Grad. Sch. Biostudies, Kyoto Univ.)

1P13 Comparison of energy transfer processes between two *Acaryochloris marina* strains in response to different light qualities

Zhe Wang[1], Miyu Furutani[1], Ryo Nagao[2], Yoshifumi Ueno[3], Reona Toyofuku[4], Tatsuya Tomo[3,4], Seiji Akimoto[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]Fac. Agric., Shizuoka Univ., [3]Inst. Arts Sci., Tokyo Univ. Sci., [4]Grad. Sch. Sci., Tokyo Univ. Sci.)

1P14 Conformational changes induced by detachment and reconstruction of extrinsic proteins in photosystem II complex

Yoshiki Nakajima[1], Koji Kato[1], Jian-Ren Shen[1], Ryo Nagao[2] ([1]Res. Inst. Interdiscip. Sci., Univ. Okayama, [2]Grad. Sch. Integr. Sci. Technol., Univ. Shizuoka)

1P15 Comparison of protein composition on thylakoid membranes under iron-sufficient and deficient conditions between two barley cultivars 'Sarab-1' and 'Ehimehadaka-1'

Tomoki Shigematsu, Akihiro Saito, Yusuke Shikanai, Kyoko Higuchi (Grad. Sch. Appl. Biosci., Tokyo Univ. Agri.)

1P16 Characterization of putative PSI-PSII megacomplexes separated by Clear Native-PAGE from Fe-deficient barley leaves
Akihiro Saito, Kai Nakano, Ryoko Yamada, Yusuke Shikanai, Kyoko Higuchi (Facl. Appl. Biosci., Tokyo Univ. Agri.)

1P17 Low-temperature fluorescence emission spectra of PSI were blue-shifted in various barley varieties grown under iron-deficient conditions
Takehiro Kobayashi, Akihiro Saito, Yusuke Shikanai, Kyoko Higuchi (Grad. Sch. Appl. Biosci., Tokyo Univ. Agri.)

1P18 Role of PROTON GRADIENT REGULATION 5 (PGR5) in determining photosynthetic electron transport and CO_2 assimilation rates under a fluctuating light condition in *Arabidopsis thaliana*
Keiichiro Tanigawa[1], Masaru Kono[2], Ichiro Terashima[1], Toshiharu Shikanai[3], Wataru Yamori[1] ([1]Grad. Sch. Agri., Univ. Tokyo, [2]Dept. Sci., Fac. Sci., Kanagawa Univ., [3]Grad. Sch. Sci., Biol. Sci., Kyoto Univ.)

1P19 Effect of lighting regime on the growth rate of the simplex plant *Wolffia globosa*
Reona Abe, Yoshihiro Suzuki (Grad. Sch. Sci., Univ. Kanagawa)

1P20 Cryo-EM structure of *Cyanophora* PSI tetramer
Koji Kato[1], Ryo Nagao[2], Fusamichi Akita[1], Naoyuki Miyazaki[3], Jian-Ren Shen[1] ([1]RIIS, Okayama Univ., [2]Faculty of Agriculture, Shizuoka Univ., [3]TARA, Univ. of Tsukuba)

■ Primary metabolism

1P21 Functional analysis of the homeobox-type transcription factor HB52 in root nitrogen responses in Arabidopsis
Erina Akioka, Yasuhito Sakuraba, Shuichi Yanagisawa (Agro-Biotech. Res. Center, Grad. Sch. Agri. Life Sci., Univ. Tokyo)

1P22 Genetic and biochemical analyses of the SnRK1β3 subunit functions in Arabidopsis
Akio Kubo[1], Miho Sanagi[2,3], Filip Rolland[4], Junpei Takagi[2], Takeo Sato[2] ([1]Grad. Sch. Life Sci., Hokkaido Univ., [2]Fac. Sci., Hokkaido Univ., [3]CRIS, Hokkaido Univ., [4]Biology Department, KU Leuven)

1P23 Rice Seed Germination and Glutamine Metabolism
Soichi Kojima (Grad. Sch. Agr., Tohoku Univ.)

1P24 Evaluation of photobiological hydrogen production activity of genetically engineered heterocyst-forming cyanobacteria under simulated outdoor conditions using an artificial solar irradiation system
Takeshi Sato[1,2], Kento Fukuhara[1], Taichi Yamada[1], Masaharu Kitashima[3], Hidehiro Sakurai[2], Kazuhito Inoue[2,3] ([1]Dept. Biol. Sci., Kanagawa Univ., [2]Res. Inst. Integr. Sci., Kanagawa Univ., [3]Dept. Biochem. Biotech., Kanagawa Univ.)

1P25 The creation of mutant strains that selectively express the vanadium nitrogenase in heterocyst-forming cyanobacteria, and its possible usefulness in photobiological H_2 production
Daisuke Bando[1], Takeshi Sato[1,2], Shoko You[1], Takahiro Matsuda[1], Hidehiro Sakurai[2], Kazuhito Inoue[1,2,3] ([1]Dept. Biol. Sci., Grad. Sch. Sci., Kanagawa Univ., [2]Res. Inst. Integr. Sci., Kanagawa Univ., [3]Dept. Biochem. Biotech., Kanagawa Univ.)

1P26 Efforts for the isolation of the pinitol biosynthetic enzyme genes from Japanese cedar sugi
Tomohiro Igasaki, Tokuko Ujino-Ihara (Molec. Gen. Genet., FFPRI)

1P27 Functional analysis of wax ester synthesis regulation kinase in *Euglena gracilis*
Yui Kuramae[1], Yousuke Komai[1], Takahisa Ogawa[1], Takanori Maruta[1], Shigeru Shigeoka[2], Takahiro Ishikawa[1] ([1]Grad. Sch. Nat. Sci. Technol., Shimane Univ., [2]Exp. Farm, Kindai Univ.)

1P28 Involvement of GARP-type transcription factor HHO6 in the regulation of phosphate deficiency responses in Arabidopsis
Ryoji Saiki, Yasuhito Sakuraba, Syuichi Yanagisawa (Agro-Biotech. Res. Center, Grad. Sch. Agri. Life Sci., Univ. Tokyo)

■ Biomembrane/Ion and solute transport

1P29 Production of High Iron and Zinc *Akitakomatchi* rice by genome editing of *OsVIT1* or *OsYSL9* transporter
Katsumi Takahashi, Aung May Sann, Hiroki Rai, Takehiko Matsumoto, Hiroshi Masuda (Akita Pref. Univ.)

1P30 Breeding of high iron and zinc rice varieties which are suitable to cultivate in Akita, ~The results of F_4 and F_5 generations~
Ai Ito[1], Ryuichi Takahashi[2], Takaki Matsumoto[1], Aung May Sann[1], Katsumi Takahashi[1], Hiroki Rai[1], Takehiko Matsumoto[1], Hiroshi Masuda[1] ([1]Akita Pref. Univ., [2]Akita Pref. Agri. exp. stat.)

1P31 Phosphorylation And Dephosphorylation Regulate Polar Localization Of A Borate Transporter AtBOR1
Rintaro Yoshida[1], Keita Muro[1], Yudai Shimizu[2], Keisuke Ohashi[3], Yuka Ogino[3], Chiaki Hori[4], Koji Kasai[5], Taich Takasuka[3], Toru Fujiwara[5], Junpei Takano[1,2] ([1]Grad. Sch. Agric., Univ. Osaka Metro., [2]Grad. Sch. Life Environ. Sci., Univ. Osaka Pref., [3]Res. Fac. Agric., Univ. Hokkaido, [4]Fac. Eng., Univ. Hokkaido, [5]Grad. Sch. Agric. Life Sci., Univ. Tokyo)

1P32 Functional characterization of the vacuolar membrane phosphate transporter VPT in a non-vascular plant *Marchantia polymorpha*

Masahiro Hayashida[1], Shiori Sato[1], Hinatamaru Fukumura[1], Yuuki Sakai[1], Tetsuro Mimura[2], Yuki Kondo[1], Hidehiro Fukaki[1], Kimitsune Ishizaki[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]KUAS, Fac. Bioenviron. Sci.)

1P33 Analysis of the evolutionary process of membrane transport proteins

Tatsuya Hiei, Kaisei Hayashi, Tatsuo Omata, Yoichi Nakanishi, Sumie Ishiguro, Shin-ichi Maeda (Bio-Agr., Nagoya Univ.)

1P34 Phosphate Transporters upregulated under phosphate-deficient conditions in the diatom *Chaetoceros gracilis*

Nao Tajima[1], Minoru Kumazawa[1], Shoko Tsuji[1], Minenosuke Matsutani[2], Masaru Kobayashi[1], Satoru Watanabe[3], Akio Kuroda[4], Ryuichi Hirota[4], Kentaro Ifuku[1] ([1]Grad. Sch. Agri., Kyoto Univ., [2]NODAI Genome Res. Center, Tokyo Univ. Agri., [3]Grad. Sch. Life Sci., Tokyo Univ. Agri., [4]Grad. Sch. Integ. Sci. Life, Hiroshima Univ.)

1P35 Functional characterization of flavin transporters in plants

Rui Shibata[1], Hikari Kuwata[2], Takanori Maruta[1,2], Takahiro Ishikawa[1,2], Takahisa Ogawa[1,2] ([1]Dept. Life Sci., Fac. Life Environ. Sci., Shimane Univ., [2]Grad. Sch. Nat. Sci. Technol., Shimane Univ.)

1P36 Functional group characteristics of the root cell wall surface of grass plants

Mirei Ogawa[1], Misaki Kawamura[1], Tomoko Hatanaka[1], Noriharu Ae[2], Satoru Hobara[1] ([1]RGU. Environmental Sciences, [2]Ryukoku Univ.)

1P37 Taxonomical distribution of acylplastoquinones in photosynthetic organisms

Ryo Ito, Mizuki Endo, Motohide Aoki, Minori Ookubo, Shoko Fujiwara, Norihiro Sato (Tokyo Uni., Pharm. Life Sci.)

1P38 Sphingolipid profiles in the leaves of several plants of Amaranthaceae by LC-MS/MS

Hirokazu Tokimizu[1], Hiroyuki Imai[1], Toshiki Ishikawa[2] ([1]Biology Dept., Konan Univ., [2]Grad. Sch. Sci. Eng., Saitama Univ.)

■ Membrane trafficking

1P39 Localization analysis of Arabidopsis RABH1b using BY-2 cells

Nao Genda[1], Yoko Ito[3], Emi Ito[3], Tomohiro Uemura[1,2] ([1]Undergrad. Sch. Sci., Biol., Ochanomizu Univ., [2]Grad. Sch. Humanities and Sciences, Ochanomizu Univ., [3]IHLS., Ochanomizu Univ.)

1P40 Functional analysis of *Arabidopsis thaliana* SNARE protein, Novel Plant SNAREs, in pollen tube extension

Hatsune Hayashi[1], Yoko Ito[3], Emi Ito[3], Tomohiro Uemura[1,2,3] ([1]Undergrad. Sch. Sci., Biol., Ochanomizu Univ., [2]Grad. Sch. Humanities and Sciences, Ochanomizu Univ., [3]IHLS., Ochanomizu Univ.)

1P41 Functional analysis of RABH1 GTPase in pathogen response

Haruka Iwashita[1], Chihiro Ohori[2], Yoko Ito[3], Emi Ito[3], Akihiko Nakano[4], Takashi Ueda[5,6], Tomohiro Uemura[1,2] ([1]Faculty of Science, Ochanomizu Univ., [2]Graduate School of Humanities and Sciences, Ochanomizu Univ., [3]Institute for Human Life Innovation, Ochanomizu Univ., [4]Live Cell Super-Resolution Imaging Research Team, RIKEN Center for Advanced Photonics., [5]Division of Cellular Dynamics, National Institute for Basic Biology., [6]The Department of Basic Biology, SOKENDAI.)

1P42 Analysis of Growth Arrest Phenotype of *kam2* Seedlings on Sucrose-free Solid Medium

Chika Hohokawa[1], Hiroki Yagi[2], Shoji Segami[3,4], Atsushi J. Nagano[5,6], Yasuko Koumoto[1], Kentaro Tamura[7], Yoshito Oka[1], Tomonao Matsushita[1], Tomoo Shimada[1] ([1]Grad. Sch. Sci., Kyoto Univ., [2]Grad. Sch. Nat. Sci., Konan Univ., [3]NIBB, [4]Sch. Life Sci. SOKENDAI, [5]Fac. Agri., Ryukoku Univ., [6]IAB, Keio Univ., [7]Dept. Env. Life Sci., Univ. Shizuoka)

1P43 The dynamics of organelles during under the micrografting

Nao Nakamigawa[1], Chika Otake[1], Yoko Ito[2], Emi Ito[2], Tomohiro Uemura[1,2,3] ([1]Undergrad. Sch. Sci., Biol., Ochanomizu Univ., [2]IHLS., Ochanomizu Univ., [3]Grad. Sch. Humanities and Sciences, Ochanomizu Univ.)

■ Organelles/Cytoskeleton

1P44 Transcriptome study in suppression of early senescence in *atg5* autophagy mutant by *dpd1* lacking organellar nuclease

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

1P45 Cytosolic heme metabolism by alternative localization of heme oxygenase 1 in plant cells

Yingxi Chen[1], Kohji Nishimura[2], Mutsutomo Tokizawa[3], Yoshiharu Y. Yamamoto[3], Yoshito Oka[4], Tomonao Matsushita[4], Kousuke Hanada[5], Kazumasa Shirai[5], Shoji Mano[6,7], Takayuki Shimizu[1], Tatsuru Masuda[1] ([1]Grad. Sch. Arts Sci., Univ. Tokyo, [2]Fac. Life Envi. Sci., Univ. Shimane, [3]U. Grad. Sch. Agr., Univ. Gifu, [4]Grad. Sch. Sci., Univ. Kyoto, [5]Dept. Biosci. Bioinform., Kyushu Inst. Tech., [6]Dept. Evol. Biol. Biodivers., NIBB, [7]Sch. Life Sci., SOKENDAI)

1P46 Relationship between chloroplast stringent response and plant biomass

Yuto Omata, Takanari Nemoto, Shinji Masuda (Dept. Sci. & Tech., Tokyo Inst. Tech.)

1P47 Phenotypic and Transcriptomic characterization of the rice mutant defective in organelle exonuclease DPD1

Md Faridul Islam[1], Hiroshi Yamatani[2], Tsuneaki Takami[1], Makoto Kusaba[3], Wataru Sakamoto[1] ([1]Institute of Plant Science and Resources, Okayama University, Kurashiki, Japan., [2]Takasaki Advanced Radiation Research Institute, National Institutes for Quantum and Radiological Science and Technology., [3]Graduate School of Integrated Sciences for Life, Hiroshima University.)

1P48 The Roles of Plastid Osmoregulation in Stomatal Movement and Root Gravitropism

Atsushi Togaki, Tikako Tanaka, Kanako Yamasaki, Yoko Ishizaki, Takashi Shiina (Fac. Agric., Setsunan. Univ)

1P49 Characterization of the Role of Chloroplast Localized Mechanosensitive Channel MSL2 in Chloroplast Ca^{2+} Regulation

Honoka Takeuchi, Kanako Yamasaki, Chikako Tanaka, Yoko Ishizaki, Takashi Shiina (Fac. Agric., Setsunan. Univ.)

1P50 Physiological role of RNA editing for *psbE* gene in *Arabidopsis thaliana*

Makoto Yoshitaka[1], Mitsuhiro Matsuo[1], Soichirou Satoh[2], Junichi Obokata[1] ([1]Div. Applied Bio Sci., Fac. Agric., Setsunan. Univ., [2]Div. Applied Life Sci., Grad. Sch. Life Environ. Sci., Kyoto Prefect. univ.)

1P51 Characterization of an Arabidopsis double mutant, which defects both transcription and division systems of chloroplasts

Kyoka Sato, Jingyan Xu, Daiki Hayashi, Tomohide Uno, Kengo Kanamaru (Grad. Sch. Agri., Kobe Univ.)

1P52 Suppressor screen of Arabidopsis *egy1* mutant to understand the EGY1 function in chloroplasts

Yang Hee Kim, Yusuke Kato (Fac. Agric., Setsunan. Univ.)

1P53 Functional analysis of RETICULATA RELATED 3 and 4 in *Arabidopsis thaliana*

Takumi Ito, Hayate Machino, Ryusei Inoue, Kenji Nishimura, Yuri Munekage (Grad. Sch. Sci. Tech., Kwansei Gakuin univ.)

1P54 The kinesin-14 MpKCBP is involved in the retrograde transport of plastids during rhizoid growth of Marchantia polymorpha

Yusaku Yoneda, Hiroyasu Motose (Grad. Sch. Environm., Life, Nat. Sci. & Tech., Okayama Uni.)

1P55 Is phosphatidylglycerol essential for etioplast?

Manato Kawamukai[1], Akiko Yoshihara[2], Keiko Kobayashi[3], Noriko Nagata[3], Koichi Kobayashi[2] ([1]Sch. Sci., Osaka Pref. Univ., [2]Grad. Sch. Sci., Osaka Metro. Univ., [3]Fac. Sci., Japan Women's Univ.)

1P56 Mapping of plant organellar RNA binding proteins by targeted RNA editing

Ziling Weng, Mizuki Takenaka (Kyoto University)

1P57 PCIS1 is a PPR protein co-expressed mitochondrial intron splicing factor necessary for three *nad* gene splicing events

Brody Frink[1], Matthias Burger[2], Maya Yarkoni[3], Sofi Shevtsov-Tal[3], Hagit Zer[3], Shohei Yamaoka[4], Oren Ostersetzer-Biran[3], Mizuki Takenaka[1] ([1]Department of Botany, Graduate School of Science, Kyoto University, [2]Molekulare Botanik, Universität Ulm, [3]Department of Plant and Environmental Sciences, The Alexander Silberman Institute of Life Sciences, The Hebrew University of Jerusalem, [4]Graduate School of Biostudies, Kyoto University)

1P58 Characterization of the plant mitochondrial editosome by TurboID approach

Deborah Schatz, Mizuki Takenaka (Grad. Sch. Sci., Kyoyo Univ.)

1P59 The role of ATG9, a sole transmembrane autophagy related protein, in plant autophagy

Ryoya Tadaki[1], Satoshi Kurosaki[1], Kazuya Inoue[1], Daiki Shinozaki[2], Kohki Yoshimoto[1] ([1]Grad. Sch. Agri., Meiji Univ., [2]OSRI, Meiji Univ.)

1P60 Deep learning-based image restoration for fluorescent 4D imaging of cytoskeletal dynamics in dividing tobacco BY-2 cells

Suzuka Kikuchi[1], Takumi Kotaka[2], Takumi Higaki[1] ([1]Fac. Adv. Sci. and Tech., Kumamoto Univ., [2]Fac. Sci., Kumamoto Univ.)

1P61 NEK6 provides tissue-specific growth anisotropy through its actin-dependent polar localization in *Arabidopsis thaliana*

Yumeko Nomura, Hiroyasu Motose (Dep. Biol., Fac. Sci., Okayama Uni.)

1P62 MpTRAF1 interacts with MpNEK1 to regulate rhizoid growth in *Marchantia polymorpha*

Momoka Mizuta[1], Hikari Mase[2], Hirofumi Nakagami[3], Hiroyasu Motose[1,2] ([1]Dep. Biol., Fac. Sci., Okayama Uni., [2]Grad. Sch. Environm., Life, Nat. Sci. & Tech., Okayama Uni., [3]MPIPBR)

1P63 Analysis of the dynamics of plant cell nuclei under dark conditions

Kota Tsuchida[1], Shingo Takagi[2], Yuki Sakamoto[2] ([1]Dept. Integr. Biosci., Grad. Sch. Front. Sci., Univ. Tokyo, [2]Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ.)

■ Cell wall

1P64 Maintenance of Methyl Esterified Pectin Level in Pollen Mother Cell Stages is Required for Microspore Development

Kazuya Hasegawa[2], Ai Ichikawa[1], Haruki Takeuchi[1], Atsuko Nakamura[1], Hiroaki Iwai[1] ([1]Inst. Life Env. Sci., Univ. Tsukuba, [2]Shizuoka Pref. Res. Inst. Agric. Forest., Tea Res. Ctr.)

1P65 Generation of *nst/snd* double-, triple-, and quadruple-knockout hybrid aspens using CRISPR-Cas9 system

Naoki Takata (Forest Bio Res. Cent., For. Forest Prod. Res. Inst.)

1P66 Observation of sieve plates in terms of evolution

Mizuho Morita[1], Riichi Oguchi[2], Masako Dannoura[3] ([1]Fac. Agri., Kyoto Univ., [2]Grad. Sci., OMU., [3]Grad. Agri., Kyoto Univ.)

1P67 Accumulation of cell wall-bound *p*-coumaric acid during light-induced increase in the adhesive strength between epidermal and inner tissues in pea epicotyls

Yuma Shimizu[1], Kazuyuki Wakabayashi[1], Kensuke Miyamoto[2], Kouichi Soga[1] ([1]Grad. Sch. Sci., Osaka Metro. Univ., [2]Fac. Liberal Arts, Sci., Global Edu., Osaka Metro. Univ.)

1P68 An attempt to express useful enzymes on the frustule using a marine diatom

Shusuke Sato, Hikari Hayashi, Ginga Shimakawa, Hiroaki Matsui, Yusuke Matsuda (Dept. Biosci., Sch. Sci. Tech., Kwansei Gakuin Univ.)

■ Systems biology

1P69 De novo genome assembly of *Oxalis corniculata* and segregation analysis of leaf color phenotype related to anthocyanin

Hideaki Iimura[1], Mitsuhiko Sato[1], Yuya Fukano[2], Shinji Kikuchi[3], Kenta Shirasawa[1] ([1]Plant Genetics and Genomics, Kazusa DNA Res. Inst., [2]Advanced Horticultural Engineering, Grad. Sch. Hort., Univ. Chiba, [3]Plant Sciences, Grad. Sch. Hort., Univ. Chiba)

1P70 [Cancelled]

1P71 Wolfberry Genome Database (WGDB): integrated genomic datasets for molecular biology study

Wen-Chieh Tsai[1], You-Long Cao[2], You-Yi Chen[3], Yu-You Hsiao[4], Wei-Sheng Wu[5] ([1]Institute of Tropical Plant Sciences and Microbiology, National Cheng Kung University, Tainan City 701, Taiwan, [2]National Wolfberry Engineering Research Center, Ningxia Academy of Agriculture and Forestry Sciences, Yinchuan, 750002, China, [3]Department of Agronomy, National Chiayi University, Chaiyi 600, Taiwan, [4]Orchid Research and Development Center, National Cheng Kung University, Tainan City 701, Taiwan, [5]Department of Electrical Engineering, National Cheng Kung University, Taiwan)

■ New technology

1P72 Plastid targeted forms of restriction endonucleases induce the reorganization of plastid genome architecture by enhancing the rate of its genome rearrangement

Hiroki Sugimoto, Minoru Hirano, Hidenori Tanaka, Tomoko Tanaka, Ritsuko Kitagawa-Yogo, Nobuhiko Muramoto, Norihiro Mitsukawa (Toyota Central R&D Labs, Inc.)

1P73 Development of a User-Friendly System That Facilitates Targeted Knockout/Elimination Using CRISPR/Cas9 for Highly Duplicated Genes in *Arabidopsis* Sexual Reproduction

Hidenori Takeuchi[1,2], Shiori Nagahara[1,3] ([1]ITbM, Nagoya Univ., [2]Inst. Adv. Res., Nagoya Univ., [3]Grad. Sch. Sci., Kyoto Univ.)

1P74 Development of *in planta* genome editing method by transient expression of genome editing enzymes in tomato

Misaki Kobayashi[1], Na Renhu[1], Shu Takahashi[1], Martina Bianca Fuhrmann-Aoyagi[1], Kenji Miura[1,2] ([1]Grad. Sci. Life & Earth Sci., Univ. Tsukuba, [2]Tsukuba-Plant Innovation Research Center)

1P75 High-efficiency precise gene editing using Prime Editing with paired epegRNAs in rice

Ayako Nishizawa-Yokoi[1], Keiko Iida[1], Akiko Mori[1], Seiichi Toki[1,2,3] ([1]Inst. Agrobiol. Sci., NARO, [2]Grad. Sch. Nanobiosci., Yokohama City Univ., [3]Fac. Agric., Ryukoku Univ.)

1P76 Highly Efficient Genome Editing In Rice Using Type I-D CRISPR-Cas

Shota Muromoto[1], Hiromichi Ae[2], Kazuya Marui[2], Naoki Wada[2], Keishi Osakabe[2], Yuriko Osakabe[1] ([1]Sch. of Life Sci. & Tech., Tokyo Tech., [2]Grad. Sch. of Tech., Ind. & Soc. Sci., Tokushima Univ.)

1P77 CRISPR-Cas9-Mediated Modification of *GmPPD* Soybean Genes via Agroinfiltration

Martina Bianca Fuhrmann-Aoyagi[1], Saki Igarashi[1], Na Renhu[1], Misaki Kobayashi[1], Hiroshi Ezura[1,2], Kenji Miura[1,2] ([1]Graduate School of Science and Technology, University of Tsukuba, [2]Tsukuba-Plant Innovation Research Center)

1P78 Is the High Frequency of T-DNA Cleavage in 'Princettia' (*Euphorbia pulcherrima* x *Euphorbia cornastra*) Caused in a Sequence-specific?
Koya Ito[1], Reiko Kogishi[1], Sayaka Shindo[1], Rina Shimo[1], Yukiko Shimbo[1], Maki Ohtsubo[1], Keisuke Matsui[2], Kenichi Suzuki[2], Koichi Tomomatsu[2], Norihiro Ohtsubo[1] ([1]Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ., [2]Suntory Flowers, Ltd.)

1P79 Novel luminescent reporters to visualize gene and protein expression in cyanobacteria
Yoichi Nakanishi, Shin-ichi Maeda, Tatsuo Omata (Grad. Sch. Bioagr. Sci., Nagoya Univ.)

1P80 Establishment of a novel quantitative analysis method for spermatozoid movement patterns of *Marchantia polymorpha*
Naoki Minamino, Takumi Higaki (FAST, Kumamoto Univ.)

1P81 Distribution analysis of galanthamine, a plant alkaloid, by MS imaging
Kaoru Nakagawa[1], Tetsuo Iida[1], Shuichi Shimma[2], Manami Kobayashi[1] ([1]Shimadzu Corp., [2]Grad. Sch. Eng., Osaka Univ.)

1P82 Effect of plasma irradiation to the seeds of *Sorghum bicolor*
Yuki Yanagawa[1,2], Yuko Makita[2,3], Takamasa Okumura[4], Tomoko Kuriyama[2], Masaharu Kawauchi[2], Minami Matsui[2], Kazunori Koga[4] ([1]Grad. Sch. Hort., Chiba Univ., [2]RIKEN CSRS, [3]Eng., Maebashi Inst. Tech., [4]ISEE, Kyushu Univ.)

1P83 Development of new vector series for detection of protein-protein interaction in living plant cells: towards application to novel chemical compound discovery
Shohei Yamaoka, Yuki Tomita, Takashi Araki (Grad. Sch. Biostudies, Kyoto Univ.)

1P84 Development of pENTR-NeCo Vectors for Preparation of Negative Control Constructs in Gateway Cloning
Taiki Kuzuhara[1,2], Kota Monden[1,2], Takushi Hachiya[1,2], Tsuyoshi Nakagawa[1,2] ([1]Interdisciplinary Center for Science Research Shimane University, [2]Graduate school of Natural Science and Technology, Shimane University)

1P85 Development of a rice transformation system capable of various gene constructions
Neo Araya[1], Sae Sato-Shimizu[2], Yutaka Sato[2], Takushi Hachiya[1], Tsuyoshi Nakagawa[1] ([1]Interdisciplinary Center for Science Research, Shimane University, [2]National Institute of Genetics)

1P86 Modification of theophylline-dependent synthetic riboswitch for production of useful substances in cyanobacteria
Miku Fujiwara[1], Mayuko Ohshima[2], Yoichi Nakahira[2] ([1]Grad. Sch. Agr., Ibaraki univ., [2]Coll. Agr., Ibaraki univ.)

1P87 Development of Nitrogen Supply Method for Plants Using a Plasma-generated N_2O_5 from atmospheric air
Taro Yamanashi, Shouki Takeshi, Shota Sasaki, Keisuke Takashima, Toshiro Kaneko, Yasuhiro Ishimaru, Nobuyuki Uozumi (Grad. Sch. Eng., Univ. Tohoku)

1P88 Evaluation of Transient Protein Expression in Japanese Soybean Varieties
Saki Igarashi[1], Martina Bianca Fuhrmann-Aoyagi[2], Na Renhu[2], Misaki Kobayashi[2], Kenji Miura[2,3] ([1]Sch. Lif. Env, Univ. Tsukuba, [2]Grad. Sch. Sci. Tech, Univ. Tsukuba, [3]Tsukuba-Plant Innovation Research Center)

■ Development/Morphogenesis

1Q01 Functional analysis of *Rboh* genes in the moss *Physcomitrium patens*
Takumi Tomoi[1,2], Ikumi Kajikawa[1], Yuka Yoshida[3], Shoki Fujii[1], Yosuke Tamada[1,3,4,5] ([1]Sch. Eng., Utsunomiya Univ., [2]Ctr. Innov. Spt., Utsunomiya Univ., [3]Grad. Sch. Reg. Dev. Creat., Utsunomiya Univ., [4]CORE, Utsunomiya Univ., [5]REAL, Utsunomiya Univ.)

1Q02 Comparison of gene expression atlas obtained from single nucleus RNA-seq analysis and promoter reporter line analysis in Arabidopsis hypocotyl
Linus Lassen[1], Hui Cao[1], Dongbo Shi[1,2,3] ([1]IBB, Uni. Potsdam, Germany, [2]RIKEN CSRS, [3]JST PRESTO)

1Q03 Functional analysis of α-Tubulin in stem cell formation of the moss *Physcomitrium patens*
Towa Sarai[1], Yuki Shimizu[2], Ryoji Odanaka[2], Ikumi Kajikawa[2], Yukiko Kabeya[3], Mitsuyasu Hasebe[3,4], Takumi Tomoi[2,5], Yosuke Tamada[1,2,6,7] ([1]Grad. Sch. Reg. Dev. Creat., Utsunomiya Univ., [2]Sch. Eng., Utsunomiya Univ., [3]Div. Evol. Biol., NIBB, [4]SOKENDAI, [5]Innov. Dept., Ctr. Innov. Spt., Utsunomiya Univ., [6]CORE, Utsunomiya Univ., [7]REAL, Utsunomiya University)

1Q04 Investigation of the mechanism of wound-induced adventitious shoot formation in *Drosera rotundifolia*
Yosuke Sasai[1,2], Shoji Segami[4,5], Hatsune Morinaka[2], Akira Iwase[2,3], Mitsuyasu Hasebe[4,5], Keiko Sugimoto[1,2] ([1]Univ. Tokyo, Dep. Biol. Sci., [2]CSRS, RIKEN, [3]JST PRESTO, [4]NIBB, [5]SOKENDAI)

1Q05 CDK inhibitor-mediated regulation of stemness in *Arabidopsis* root cap
Paktraporn Mekloy, Ye Zhang, Masaaki Umeda (Grad. Sch. Sci. & Tech., Nara Institute of Science and Technology)

1Q06 Sucrose signaling contributes to the maintenance of vascular cambium by inhibiting cell differentiation
Aoi Narutaki[1], Shunji Shimadzu[1,2], Tomoyuki Furuya[3], Hidehiro Fukaki[1], Kimitsune Ishizaki[1], Yuki Kondo[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]Grad. Sch. Sci., Univ. of Tokyo, [3]Col. Sch. Sci., Ritsumeikan Univ.)

1Q07 Functional analysis of the circadian clock-related gene GI in the regulation of vascular cell differentiation

Mayu Sakata[1], Takuma Arano[2], Shunji Shimadzu[1,2], Hidehiro Fukaki[1], Kimitsune Ishizaki[1], Yuki Kondo[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]Grad. Sch. Sci., Univ. of Tokyo)

1Q08 Physiological Role of Upstream ORF-Mediated Post-Transcriptional Regulation of *LONESOME HIGHWAY* in Arabidopsis

Taihei Karino[1], Shunichi Umehara[1], Kaori Kimata[1], Yuta Hiragori[1], Noriya Hayashi[2], Satoshi Naito[1,2], Hitoshi Onouchi[1] ([1]Grad. Sch. Agr. Hokkaido Univ., [2]Grad. Sch. Life Sci. Hokkaido Univ.)

1Q09 Functional estimation of *Marchantia polymorpha* orthologs of the causal genes of rice adaxial-abaxial bipolar leaf mutants

Kaito Chiba[1], Takumi Tezuka[3], Nobuhiro Nagasawa[1], Satoshi Naramoto[2], Namiko Satoh-Nagasawa[1] ([1]Fac. Biores. Sci., Akita Pref, [2]Fac. Sci., Univ. Hokkaido, [3]Sch. life sci., SOKENDAI)

1Q10 N-6 methyladenosine (m6A) is required for DNA damage repair in plants ?

Ryosuke Matsuo, Akihito Mamiya, Kentaro Iwata, Ryoko Muraoka, Yuki Kondo, Kimitsune Ishizaki, Hidehiro Fukaki (Dept. of Biol., Grad. Sch. of Sci., Kobe Univ.)

1Q11 Transcriptome Analysis of Hormone-free Somatic Embryo/Adventitious Shoot Induction in Arabidopsis thaliana

Miho Ikeda[1], Ryo Nishijima[1], Takuya Ikoma[1], Yosuke Takeuchi[2], Nobutaka Mitsuda[3], Jun Nakayama[2], Tsubasa Yamagata[2] ([1]Bioscience and Biotechnology, Fukui Prefectural University, [2]Graduate School of Science and Engineering, Saitama University, [3]Bioproduction Research Institute, AIST)

■ Environmental response A/Physiological responses

1Q12 Screening of EMS mutagenized rice for nutritropism defects

Kiyoshi Yamazaki[1], Yasutaka Miyazaki[2], Takehiro Kamiya[1], Toru Fujiwara[1] ([1]Grad. Sch. Agric. Life Sci., Univ. Tokyo, [2]Tokyo Biotechnol. Coll.)

1Q13 Wild rice introgression lines showed improved response to nitrogen deficiency

Bright Adu, Yoshihiro Ohmori, Toru Fujiwara, Haymarn Soe Myint (Lab of Plant Nutrition, Grad Sch of Agric. Life Sciences, Univ. Tokyo)

1Q14 Improving Nitrogen Use Efficiency: Foliar Urea Uptake and Optimization for Sustainable Agriculture

Raj Kishan Agrahari, Toru Fujiwara, Takehiro Kamiya (Dep. of Applied Bio. Chem., UTokyo, Japan)

1Q15 Effects of N & P availability on shoot : root ratio

Anh Huy Nguyen[1], Louis J. Irving[2] ([1]University of Tsukuba, Degree Programs in Life and Earth Sciences, Graduate School of Science and Technology, [2]University of Tsukuba, Institute of Life and Environmental Sciences)

1Q16 Relationships between cell wall polysaccharides and Al accumulation in tea plants

Mio Asahina[1], Hiroto Yamashita[2,3], Shiori Yonezawa[1], Yuhei Hirono[3,4], Takashi Ikka[2,3,5] ([1]Grad. Sch. Agi., Univ. Shizuoka, [2]Fac. Agr., Univ Shizuoka, [3]Inst. Tea Sci., Univ. Shizuoka, [4]NIFTS, NARO, [5]Res. Inst. Green Sci. Tech., Univ. Shizuoka)

1Q17 Phenotypes of ribosomal protein mutants in response to nitrogen deficiency in *Arabidopsis thaliana*

Shuying Li, Hirofumi Fukuda, Naoyuki Sotta, Dichao Ma, Toru Fujiwara (Dep. Appl Bio Chem., GSALS., Univ. Tokyo)

1Q18 Identification of expressed biomarkers to explain the nitrogen nutritional status in tea plants

Hikaru Asano[1], Yamashita Hiroto[2,3], Atsushi J. Nagano[4,5], Yuhei Hirono[3,6], Takashi Ikka[2,3,7] ([1]Grad. Sch. Agr., Shizuoka Univ., [2]Fac. Agr., Shizuoka Univ., [3]Shizuoka Univ. Res. Inst., [4]Fac. Agr., Ryukoku Univ., [5]Inst. Adv. Biosci., Keio Univ., [6]Inst. Fruit Tree Tea Sci., NARO, [7]Shizuoka Univ. Res. Inst. Green Sci. Tech.)

1Q19 Crosstalk between Sulfur and Phosphorus under Phosphorus Deficiency in Rice

Ikue Yamada, Hayato Maruyama, Toshihiro Watanabe, Takuro Shinano (Grad. Sch. Agr., Univ. Hokkaido)

1Q20 Analysis of the novel stomatal opening compounds

Airi Oh[1], Riku Kimura[1], Yuki Hayashi[1], Ayato Sato[2], Yohei Takahashi[1,2], Toshinori Kinoshita[1,2] ([1]Grad. Sch. Sci. Nagoya Univ., [2]ITbM, Nagoya Univ.)

1Q21 Studies on the Mechanisms of the Autonomous Leaflet Rotation of *Desmodium motorium*

Yukimi Kubo[1], Ryoko Goto[2], Yoko Ishizaki[1], Takashi Shiina[1] ([1]Fac. Agric., Setsunan. Univ., [2]Fac. Life & Env. Sci., Kyoto Pref. Univ.)

1Q22 Effect of atmospheric NO_2 on plant growth under elevated CO_2 condition

Misa Takahashi, Ryota Saito, Atsushi Sakamoto (Grad. Sch. Int. Sci. Life, Hiroshima Univ.)

1Q23 Physiological Responses of Lacquer trees in Traditional Japanese Lacquer Harvesting

Chinatsu Yoshida[1], Hiroshi Suga[2], Yuuta Nishatani[3], Kosuke Yamauchi[4], Takashi Shiina[1], Yoko Ishizaki[1] ([1]Faculty of Agriculture, Setsunan University, [2]Department of Life and Environmental Sciences, Prefectural University of Hiroshima, [3]Division of Forest and Biomaterials Science, Graduate School of Agriculture, Kyoto University, [4]NPO Tamba-Urushi)

■ Environmental response B/Environmental stresses

1Q24 Unveiling Arsenic Tolerance Genes in Rice: A Genome-wide Association Study

Soshi Nakamura, Toru Fujiwara, Takehiro Kamiya (Grad. Sch. Agr., Univ. Tokyo)

1Q25 Searching for QTLs that Determine the Difference in Salt Stress Tolerance between Male and Female Accessions of the Liverwort *Marchantia polymorpha*

Ryosuke Kumano[1], Kimitsune Ishizaki[2], Hideo Matsumura[3], Tomoaki Horie[1] ([1]Grad. Sch. Div. Appl. Biol., Univ. Shinshu, [2]Grad. Sch. Sci., Univ. Kobe, [3]Gene Research Center, Univ. Shinshu)

1Q26 Screening for biuret-tolerant mutants of *Arabidopsis thaliana*

Akihide Takatsuji[1], Ren Kurose[2], Kumiko Ochiai[2], Toru Matoh[2,3], Kentaro Ifuku[2] ([1]Agri, Univ. Kyoto, [2]Grad. Sch. Agri., Univ. Kyoto, [3]KARI)

1Q27 Seasonal changes in tolerance to heat and freezing stress and responsiveness of gene expression in the evergreen herbaceous perennial *Arabidopsis halleri*

Genki Yumoto[1], Shoko Tsuji[2], Mie N. Honjo[1], Hiroshi Kudoh[1] ([1]CER, Kyoto Univ., [2]Grad. Sch. Agric., Kyoto Univ.)

1Q28 Sensitized expression of *LEARNED HEAT MEMORY 1* through histone modification confers thermotolerance in *Arabidopsis thaliana*

Xuejing Wang (Nara Institute of Science and Technology)

1Q29 Functional analysis of growth inhibition by ethanol treatment in plants

Rion Hazama[1], Akihiro Matsui[2], Atsushi J. Nagano[3], Motoaki Seki[2], Kaori Sako[1,2] ([1]Dep. Adv. Biosci., Kindai Univ., [2]CSRS, RIKEN, [3]Fac. Agri., Ryukoku Univ.)

1Q30 Functional analysis of AtTRB3 involved in the salt stress tolerance by low-concentration ethanol

Kouta Urushihara[1], Akihiro Matsui[2], Maho Tanaka[2], Sumire Fujiwara[3], Nobutaka Mitsuda[3], Masaru Takagi[3], Atsushi J. Nagano[4,5], Masahiro Tamoi[1], Motoaki Seki[2], Kaori Sako[1,2] ([1]Kindai Univ., [2]RIKEN, CSRS, [3]AIST, Bioprod. Res. Inst., [4]Fac. Agri., Ryukoku Univ., [5]Inst. Adv. Biosci., Keio Univ.)

1Q31 Analysis for molecular functions of plant progesterone and plant progesterone receptor candidate

Yuka Kinugasa[1], Ayumi Yamagami[1], Rira Daibo[1], Ayaka Uebayashi[2,3], Setsuko Shimada[2], Mayumi Iino[2], Takahito Nomura[4], Masaaki Sakuta[3], Tadao Asami[5], Takao Yokota[6], Takeshi Nakano[1] ([1]Grad. Sch. Biostudies., Univ. Kyoto, [2]CSRS, RIKEN, [3]Grad. Sch. Humanities and Sci., Univ. Ochanomizu, [4]Ctr. Bio., Univ. Utsunomiya, [5]Grad. Sch. Agr., Univ. Tokyo, [6]Dept. Bio., Univ. Teikyo)

1Q32 Identification of an Ion Channel Aquaporin IcAQP and Investigation of its Physiological Functions in Rice

Yunosuke Mito[1], Sen Tran[2,3], Aya Onishi[2], Shuntaro Ono[2], Maki Katsuhara[2], Tomoaki Horie[1] ([1]Grad. Sch., Div. Appl Biol., Shinshu Univ., [2]IPSR, Okayama Univ., [3]Hue Uni. Agri. Forest.)

1Q33 Isolation of the salt stress tolerance genes of Mongolian plant *Chloris virgata*

Hirotaka Ogawa[1], Shintaro Kawabata[1], Byambajav Bolortuya[2], Ganbayar Namuunaa[1], Ayumi Yamagami[1], Bekh-Ochir Davaapurev[2], Komaki Inouse[3], Asaka Kanatani[3], Keiichi Mochida[3], Tadao Asami[4], Javzan Batkhuu[2], Takeshi Nakano[1] ([1]Grad. Sch. Biostudies., Kyoto Univ., [2]National University of Mongolia, [3]CSRS., RIKEN, [4]Grad. Sch. Agri. Life Sci., Univ. Tokyo)

1Q34 Effects on reproductive growth of tomato under Ca-deficient to re-application conditions

Kiei Soyama[1], Clarissa F. Frederica[1], Ayaka Mukai[1], Louis J. Irving[2], Hiroaki Iwai[2] ([1]Grad. Sch. Sci. and Tech., Univ. Tsukuba, [2]Institute of Life and Environ. Sci., Univ. Tsukuba)

1Q35 Study on the *Arabidopsis* shoot growth improvement under 2-D clinostat

Yunshu Wang[1], Marcel Beier[1,2], Yoshihiro Ohmori[3], Motoyuki Ishimori[4], Toru Fujiwara[1] ([1]Dep. Appl. Biol. Chem., Grad. Sch. Agri. Life Sci., The University of Tokyo, [2]Inst. Adv. Higher Edu, Hokkaido University, [3]Agri. Bioinformatics Research Unit, Grad. Sch. Agri. Life Sci., The University of Tokyo, [4]Dep. Agri. Envi. Biology, Grad. Sch. Agri. Life Sci., The University of Tokyo)

1Q36 Analysis of the long-distance transport of Fra a 1.01 belonging to PR-10 family in Strawberry

Masanori Tatei[1], Haruna Uchida[1], Kanako Takebe[1], Ryohei Koyama[1], Misaki Ishibashi[2], Yuichi Uno[1] ([1]Grad. Sch. Agr. Sci., Kobe Univ., [2]Grad. Sch. Agr., Kyoto Univ.)

1Q37 Initial cellular responses and effects on growth of cold atmospheric pressure plasma irradiation in *Marchantia polymorpha*
Shoko Tsuboyama[1], Takamasa Okumura[2], Kazunori Koga[2], Masaharu Shiratani[2], Kazuyuki Kuchitsu[1] ([1]Dept. Appl. Biol. Sci., Tokyo Univ. of Sci., [2]ISEE, Kyushu Univ.)

■ Plant-organism interaction A

1Q38 Comprehensive identification of *Pseudomonas syringae* pv. *tabaci* 6605 type III effectors' targets in *Nicotiana benthamiana*
Kana Kuroe[1], Kanata Akashige[1], Sachi Kashihara[1], Takafumi Nishimura[1], Yoshiteru Noutoshi[1], Mikihiro Yamamoto[1], Kazuhiro Toyoda[1], Hirofumi Nakagami[2], Hidenori Matsui[1] ([1]Okayama University, [2]MPIPZ)

1Q39 Establishment of an assay system toward identifying an attractant against clover cyst nematode, *Heterodera trifolii*
Fairooz Atqiya Labiba[1], Satoko Yoshida[1], Mina Ohtsu[1,2] ([1]Bio. Sci., NAIST, [2]JST Sakigake)

1Q40 Control of root fungal infection under phosphate deficiency in *Arabidopsis thaliana*
Taiga Ishihara, Shigetaka Yasuda, Natsuki Tsuchida, Yusuke Saijo (Grad. Sch. Sci and Tech., NAIST)

1Q41 Preparation of biotinylated oligochitin ligand for characterization of LysM receptors
Wendi Jiang, Shingo Maruyama, Hanae Kaku (Dept. Life Sciences, Sch. Agriculture, Univ. Meiji)

1Q42 Dissection of the cell death pathway mediated by rice NB-LRR type receptor Xa1 that recognizes *Xanthomonas oryzae* TAL effectors
Ayaka Yoshihisa[1], Satomi Yoshimura[1], Motoki Shimizu[2], Masatsugu Toyota[3], Koji Yamaguchi[1], Tsutomu Kawasaki[1] ([1]Grad. Sch. Agr., Univ. Kindai, [2]Iwate. Biotech. Res. Cen, [3]Fac. Sci., Univ. Saitama)

1Q43 Indirect defense in rice: role of silicon in rice volatile production under herbivory stress
Dandy Ahamefula Osibe[1,2], Yuko Hojo[1], Tomonori Shinya[1], Ivan Galis[1] ([1]Inst. Plant Sci. & Res., Okayama Univ., [2]Dept. Plant Sci. & Biotech., Univ. Nigeria Nsukka Nigeria)

1Q44 Toward dissection of defense-related humidity sensing and signaling in *Arabidopsis thaliana*
Arullthevan Rajendram[1], Shigetaka Yasuda[1], Shioriko Ueda[1], Akihisa Shinozawa[2,3], Izumi Yotsui[2], Yusuke Saijo[1] ([1]Grad. Sch. Sci and Tech., NAIST, [2]Dep. Biosci., Tokyo Univ. Agric., [3]NGRC, Tokyo Univ. Agric.)

1Q45 Towards revealing the regulatory mechanism underlying the characteristic *WRKY33* activation pattern in Arabidopsis immunity
Yachi Jinno[1], Keigo Tokunaga[3], Mizuki Iwamoto[2], Eriko Betsuyaku[3], Shigeyuki Betsuyaku[3] ([1]Grad. Sch. Agr., Ryukoku Univ., [2]Grad. Sch. Life & Env. Sci., Univ. Tsukuba, [3]Fac. Agr., Ryukoku Univ.)

1Q46 Semi-automated system for quantitative analysis of insect feeding behavior on leaves
Naoyuki Sotta, Toru Fujiwara (Grad. Sch. Agric. Life Sci. Univ. Tokyo)

1Q47 Analysis of the NPR1 complex involved in SA-responsive immune response
Tomomi Ohata[1], Chiaki Yamaguchi[1], Susumu Uehara[2], Saki Noda[1], Yoshikatsu Matsubayashi[1], Mika Nomoto[1,2], Yasuomi Tada[1,2] ([1]Graduate School of Science, Nagoya University, [2]The Center for Gene Research, Nagoya University)

1Q48 ZIP3 is a novel transcriptional regulator of rice immunity targeted by pathogen effector
Soichiro Toyota, Taiju Nishimura, Tomoki Yamada, Satomi Yoshimura, Tsutomu Kawasaki, Koji Yamaguchi (Grad. Sch. Agr., Univ. Kindai)

■ Plant-organism interaction B

1Q49 Studying Ciliate *Tetrahymena utriculariae* and algae *Micractinium tetrahymenae* and *Chlorella* spp., as a model system to understand the molecular mechanisms of endosymbiosis
Li Wen Chu (Institute of Molecular Biology, Academia Sinica)

1Q50 Mechanisms of growth promotion and withering induction effects of *Pseudomonas* sp. strain Y132 on duckweed
Tomoya Nozaki[1], Shogo Ito[2], Makoto Kashima[3], Tokitaka Oyama[2], Takashi Ano[1], Masahiro Okanami[1] ([1]Grad. Sch. BOST., Univ. Kindai, [2]Grad. Sch. Sci., Univ. Kyoto, [3]Fac. Sci., Univ. Toho)

1Q51 The novel motif of SYMRK/DMI2 plays an important role in AM and RN symbioses
Kana Miyata[1,2], Moe Hosotani[2], Mirei Furuta[2], Yuka Asai[2], Ryo Takaoka[2], Tsubasa Wada[1], Ryota Fujieda[1], Hanae Kaku[2] ([1]Life Sci., Toyo Univ., [2]Sch. Agri., Meiji Univ.)

1Q52 The role of PB1 domain of NIN transcription factor
Momona Noda[1], Momoyo Ito[1], Takuya Suzaki[1,2] ([1]Fac. Life. Sci., Univ. Tsukuba, [2]T-PIRC, Univ. Tsukuba)

1Q53 The Function of NRT3.1 in the Nitrate Response in *Lotus japonicus*
Michi Ochiai[1], Momona Noda[1], Momoyo Ito[1], Takuya Suzaki[1,2] ([1]Fac. Life. Sci., Univ. Tsukuba, [2]T-PIRC, Univ. Tsukuba)

1Q54 Functional analysis of *PINK4* gene and regulation of rhizobial symbiosis after the establishment of endosymbiosis in *Lotus japonicus*

Haruka Arashida[1,2], Tomomi Nakagawa[1], Shun Hashimoto[2], Masaru Bamba[2], Mustamin Yusdar[2], Hisayuki Mitsui[2], Kazuhiko Saeki[1], Masayoshi Kawaguchi[1], Shusei Sato[2] ([1]NIBB, [2]Grad. Sch. of Life Sci. Tohoku univ.)

1Q55 Understanding the tripartite beneficial relationship between plant, fungus and bacteria

Koji Tokunaga, Utami Yuniar Devi, Nhi Nguyen Tan Anh, Kei Hiruma (Grad. Sch. Art. Sci., Univ. Tokyo)

1Q56 Comprehensive exploration of interactions between rice and rhizosphere microbiota using multi-omics analysis

Shinichi Yamazaki[1], Toshio Yomamoto[2], Makoto Hayashi[3], Yasunori Ichihashi[1] ([1]RIKEN, BRC, [2]NARO, [3]RIKEN, CSRS)

1Q57 A synthetic community of root-inhabiting bacteria promoting seedling growth in paddy rice

Yushin Suzuki[1], Shota Kido[1], Masahiro Nagayasu[1], Yukari Hayashi[1], Takumi Murakami[2], Satoshi Hattori[3], Kanako Inoue[1], Yusuke Saijo[1] ([1]Grad. Sch. Sci and Tech., NAIST, [2]Sch. Life Sci. and Tech., Tokyo Tech, [3]Fac. Agr., Yamagata Univ)

1Q58 Cellular dynamics of root invasion and infection by mutualistic bacteria in rice

Yudai Takeguchi, Kanako Inoue, Masaki Nishimura, Masahiro Nagayasu, Yushin Suzuki, Yukari Hayashi, Shota Kido, Yusuke Saijo (Grad. Sch. Sci and Tech., NAIST)

1Q59 Search For Transcription Factor Genes Required For The Root Nodule Symbiosis Via Gene Regulatory Network Inference

Tsuneo Hakoyama, Kai Battenberg, Makoto Hayashi (Riken CSRS)

1Q60 Genetic studies in a novel root-inhabiting growth-promoting bacterium of rice

Yukari Hayashi, Yushin Suzuki, Yudai Takeguchi, Masako Fuji, Kanako Inoue, Yusuke Saijo (Grad. Sch. Sci and Tech., NAIST)

1Q61 The lateral haustoria of root hemi-parasitic plant *Striga hermonthica* (Orobanchaceae)

Xin Li, Satoko Yoshida (Bio. Sci., NAIST)

1Q62 Towards establishment of *Agrobacterium*-mediated transformation system for the insect gall-forming plant *Rhus chinensis*

Ayaka Nuruki[1], Hiroto Fujii[2], Norihiro Ohtsubo[2] ([1]Sch. Life Environ. Sci., Kyoto Pref. Univ., [2]Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ.)

1Q63 Exploration of Phosphorus Concentration Dependent Regulatory Mechanisms of Beneficial Relationships between *Arabidopsis thaliana* and *Colletotrichum tofieldiae* with a Focus on Plant Immunity and Nutrient Exchange

Daisuke Watanabe[1], Ryohei Sugita[2], Masaki Okumura[3], Ai Kaiho-Soma[4], Keitaro Tanoi[4], Kei Hiruma[1] ([1]Grad. Sch. of Arts and Sci., Univ. Tokyo, [2]Radioisotope, Nagoya Univ., [3]Kihara Inst. Biol. Res., Yokohama City Univ., [4]Grad. Sch. of Agri. and Life Sci., Univ. Tokyo)

1Q64 Beneficial interactions with plant growth-promoting bacteria via the common symbiosis regulator CCaMK in paddy rice

Shota Kido[1], Masako Fuji[1], Minenosuke Matsutani[2], Kanako Inoue[1], Asahi Adachi[1], Miki Yokote[1], Yusuke Saijo[1] ([1]NAIST, [2]Tokyo Univ. Agr.)

1Q65 Evolutionary roles of immune gene contraction in parasitic plant lineages

Takaya Tominaga, Satoko Yoshida (Grad. Sch. Sci. and Tech., NAIST)

1Q66 Evaluation of the Effects of a Plant Growth-Promoting Bacterium, *Pseudomonas fulva* Ps6, on the Gene Expression Profile of Duckweed, *Lemna japonica* during Co-culturing

Yugo Tsuda[1], Nanami Kitayama[1], Maki Ohtsubo[1], Shogo Ito[1], Masaaki Morikawa[2], Tokitaka Oyama[1] ([1]Grad. Sch. Sci., Kyoto Univ., [2]Grad. Sch. Env. Sci., Hokkaido Univ.)

1Q67 Latent and persistent infection with a novel virus on pepper (*Capsicum annuum*)

Midori Tabara[1], Toshiyuki Fukuhara[2], Atsushi Takeda[1,3] ([1]R-GIRO, Ritsumeikan Univ., [2]Grad. Agri., Tokyo Univ. Agri. Tech., [3]Grad. Life Sci., Ritsumeikan Univ.)

■ Bioresources

1Q68 Variation of acyl-CoA:diacylglycerol acyltransferase 1 in plant species

Tomoko Hatanaka, Daisuke Sasayama, Hirosi Fukayama, Tetsushi Azuma (Kobe University)

1Q69 Update of Exp-Plant, the RIKEN BRC catalog database of Arabidopsis mutant lines

Satoshi Iuchi, Masatomo Kobayashi (RIKEN Bioresource Research Center Experimental Plant Division)

■ Photosynthesis

2P01 Exploring the Interplay of Redox Regulation with Electron Transport Efficiency during the Photosynthetic Induction Phase

Keisuke Yoshida[1], Toru Hisabori[1,2] ([1]CLS, Tokyo Tech, [2]IRFI, Tokyo Tech)

2P02 The possible role of chloroplast/plastid in cone thermogenesis of the gymnosperm cycad, *Cycas revoluta*

Momoka Hisamatsu[1], Fumika Matsuoka[1], Minami Motogi[1], Toui Mizuno[1], Mitsuhiko Sato[2], Takehito Inaba[1], Yasuko Inaba[1,3] ([1]Fac. Agr., Univ. Miyazaki, [2]Kazusa DNA Res. Inst., [3]Grad. Sch. Life Sci., Tohoku Univ.)

2P03 Imaging analysis of phloem paths and unloading destinations of photosynthates in soybeans using radioisotope-labeled carbons and fluorescent marker

Ai Soma, Yuko Kurita, Natsuko I. Kobayashi, Keitaro Tanoi, Tomoko M. Nakanishi (Graduate School of Agricultural and Life Sciences, The University of Tokyo)

2P04 Identification of a mitochondrial pyruvate transporter in *Panicum miliaceum*

Ayumi Sato[1], Susumu Mitsuyama[2], Shin Kore-eda[3] ([1]Dept. Biochem. Mol. Biol., Saitama Univ., [2]Grad. Sch. Agric. Life Sci., Univ. Tokyo, [3]Grad. Sch. Sci. and Eng., Saitama Univ.)

2P05 Occurrence and function of Rhesus factors in marine diatoms

Hiroaki Matsui (Grad. Life Sci., KG Univ.)

2P06 The effect of sulfide on the regulation of photosynthetic apparatus during chloroplast biogenesis in *Arabidopsis thaliana*

Takayuki Shimizu[1], Zurina Osuman[2], Tatsuru Masuda[2] ([1]Div. Nat. Sci., Nara Women's Univ., [2]Grad. Sch. Art Sci., Univ. Tokyo)

2P07 Site-directed mutagenesis, purification and structural analysis of VIPP1, an ESCRT-III super family protein involved in thylakoid membrane remodeling

Sarah Wanjiru Gachie, Sakamoto Wataru (Institute of Plant Sciences and Resources, Okayama University, Japan)

2P08 Functional analysis of Trx-like protein CDSP32 in chloroplast redox regulation

Minh Chau Tran[1,2], Keisuke Yoshida[1,2] ([1]CLS, IIR, Tokyo Tech, [2]School of Life Science and Technology, Tokyo Tech)

2P09 Characterization of the proteins interacting with VIPP1 involved in thylakoid membrane remodeling in Arabidopsis chloroplasts

Di Li[1], Shin-ichiro Ozawa[1], Michael Hippler[2], Wataru Sakamoto[1] ([1]Graduate School of Environmental and Life Science, Okayama University, [2]Institute of Plant Biology and Biotechnology, University of Münster)

2P10 Characterization of phosphatidylglycerol-less mutant in a cyanobacterium *Synechocystis* sp. PCC 6803

Megumi Haga, Tatsunori Hiyoshi, Rinsei Negishi, Norihiro Sato (Tokyo Uni. of phar. & life sci.)

2P11 Exploration of Chlorophyll *d* Biosynthetic Enzymes in The Marine Cyanobacterium *Acaryochloris*

Takahiro Arase[1], Hitoshi Mori[1,2], Yuichi Fujita[1], Haruki Yamamoto[1] ([1]Grad. Sch. Bioagr., Univ. Nagoya, [2]Inst. Glyco. Res., Univ. Nagoya)

2P12 Reaction of xanthophylls and it's role in photoprotection

Joshua Ikechukwu Egede (Alfa university college, Subang Jaya)

2P13 A novel nitrogenase-like enzyme involved in the sulfonate degradation reaction to utilize isethionate as a sulfur source in the photosynthetic bacterium *Rhodobacter capsulatus*

Yoshiki Morimoto, Kazuma Uesaka, Yuichi Fujita, Haruki Yamamoto (Grad. Sch. Bioagr. Sci., Nagoya Univ.)

2P14 Excitation energy transfer dynamics among antenna pigments in the *ΔpshX*-reaction center of heliobacteria

Risa Kojima[1], Masatoshi Kida[2], Kevin E. Redding[3], Daisuke Kosumi[4], Hirozo Oh-oka[5] ([1]Col. Life Sci., Ritsumeikan Univ., [2]Grad. Sch. Sci. & Tech., Kumamoto Univ., [3]Sch. Mol. Sci., Arizona State Univ., [4]IINa, Kumamoto Univ., [5]CELAS, Osaka Univ.)

■ Specialized (secondary) metabolism

2P15 Functional analysis of transcription factors whose expression is induced by $CuCl_2$ treatment in pea (*Pisum sativum* L.)

Kai Uchida[1], Masami Y. Hirai[1,2] ([1]RIKEN CSRS, [2]Grad. Sch. Bioagr. Sci., Nagoya Univ.)

2P16 Study on biosynthetic mechanism of *cis*-type phenylpropenes in *Acorus calamus*

Takao Koeduka[1], Kouki Aono[1], Shiro Suzuki[2], Bunta Watanabe[3], Ulziibat Bolortuya[4], Atsushi Okazawa[5] ([1]Yamaguchi Univ., [2]Gifu Univ., [3]Jikei Univ. Sch. of Med., [4]Mongolian Acad. of Sci., [5]Osaka Metro. Univ.)

2P17 Identification of an *S*-oxygenase for the biosynthesis of marasmin in traditional medicinal plant *Tulbaghia violacea*

Naoko Yoshimoto[1,2], Jichen Wang[1], Hideyuki Suzuki[3], Nanako Nakashima[4], Mariko Kitajima[1,2], Hiromitsu Takayama[1,2], Kazuki Saito[1,2], Mami Yamazaki[1,2] ([1]Grad. Sch. Pharm. Sci., Chiba Univ., [2]Plant Mol. Sci. Cent., Chiba Univ., [3]Kazusa DNA Res. Inst., [4]Grad. Sch. Sci. Technol., Kumamoto Univ.)

2P18 Comparative Analysis of Shikonin and Alkannin Acyltransferases in Boraginaceae Plants

Haruka Oshikiri[1], Hao Li[2], Misaki Manabe[1], Hirobumi Yamamoto[3], Kazufumi Yazaki[2], Kojiro Takanashi[1,4] ([1]Grad. Sch. Sci. & Tech., Shinshu Univ., [2]RISH, Kyoto Univ., [3]Fac. Life Sci., Toyo Univ., [4]Fac. Sci., Shinshu Univ.)

2P19 Analysis of high-order glycosyltransferases involved in phenylethanoid glycosides biosynthesis in sesame cultured cells

Yushiro Fuji[1,2], Hiroshi Matsufuji[2], Masami Y. Hirai[1] ([1]RIKEN CSRS, [2]Grad. Sch. Bio. Sci., Univ. Nihon)

2P20 Analysis of biosynthesis mechanism of hatching factors for potato cyst nematodes

Ryota Akiyama[1], Kosuke Shimizu[1], Atsuhiko Kushida[2], Keiji Tanino[3], Yukihiro Sugimoto[1], Masaharu Mizutani[1] ([1]Grad. Sch. Agri., Univ. Kobe, [2]HARC/NARO, [3]Grad. Sch. Sci., Univ. Hokkaido)

2P21 A feedback mechanism of polyamine biosynthesis via translational regulation by non-AUG-initiated upstream ORFs and an RNA secondary structure in Arabidopsis

Yuta Hiragori[1], Miharu Yasumuro[2], Taihei Karino[1], Atsushi Kaido[1], Yasuko Sakihama[1], Yuya Goto[1], Yui Yamashita[1], Satoshi Naito[1], Hitoshi Onouchi[1] ([1]Grad. Sch. Agr. Hokkaido Univ., [2]Sch. Agr. Hokkaido Univ.)

2P22 Metabolomic analysis of tissue-specificity of specialized metabolites in *Pueraria lobata*

Zhixuan Huang[1], Aoi Shimeno[2], Isao Takenaka[2], Sadahiro Hamasaki[2], Shinichiro Komaki[1], Mutsumi Watanabe[1], Takayuki Tohge[1] ([1]Grad. Sch. Sci., Tech., NAIST, [2]Bull. Nara Agr. Res. Cen.)

2P23 Cross-cultivar metabolomic comparison of Japanese tea for construction of polyphenolic biosynthetic pathway

Uta Ando[1], Aoi Shimeno[2], Isao Takenaka[2], Sadahiro Hamasaki[2], Mutsumi Watanabe[1], Takayuki Tohge[1] ([1]Grad. Sch. Sci., Tech., NAIST, [2]Bull. Nara Agr. Res. Cen.)

2P24 Exploration of the Marchantins biosynthetic pathway genes in *M. polymorpha*

Miki Mizuta[1], Tamao Inoue[1], Kimitsune Ishizaki[2], Kojiro Takanashi[3], Masaharu Mizutani[1] ([1]Grad. Sch. Agri., Univ. Kobe, [2]Grad. Sch. Sci., Univ. Kobe, [3]Grad. Sch. Sci. and Tech., Univ. Shinshu)

2P25 Analysis of production of Arabidopsis thaliana accession-specific flavonoids

Tomoka Ueda, Shinichiro Komaki, Mutsumi Watanabe, Takayuki Tohge (Grad. Sch. Sci., Tech., NAIST)

2P26 Expression analysis of ABCC transporters and MATE transporters in *Gentiana triflora*

Nobukazu Shitan[1], Erina Obari[1], Takuji Ichino[1], Yukina Fukushima[1], Wakako Masuda[1], Yukino Muraoka[1], Yasuyuki Yamada[1], Keisuke Tasaki[2], Takuya Teshima[3], Keiichiro Nemoto[3], Masahiro Nishihara[3,4] ([1]Kobe Pharm. Univ., [2]Tokyo Univ. Agriculture, [3]Iwate Biotechnol. Res. Center, [4]Fukui Pref. Univ.)

2P27 The localization of alkaloids in *Amsonia elliptica* leaf tissue

Kotaro Yamamoto[1], Tetsuya Mori[2], Setsuho Tanaka[3], Mai Uzaki[2], Noriko Takeda-Kamiya[2], Kiminori Toyooka[2], Masami Y. Hirai[2] ([1]Sch. Sci., Yokohama City Univ., [2]RIKEN CSRS, [3]HUMANIX Co., Ltd.)

2P28 Establishment of a hairy root transformation system in *Eucalyptus camaldulensis*

Ko Tahara, Mitsuru Nishiguchi, Chihiro Oda-Yamamizo (Forestry and Forest Products Research Institute)

2P29 Investigation for novel genes driving cellular metabolic differentiation in *Catharanthus roseus*

Mai Uzaki[1], Kotaro Yamamoto[2], Tetsuro Mimura[3], Masami Y. Hirai[1,4] ([1]RIKEN CSRS, [2]Sch. Sci., Yokohama City Univ., [3]Fac. Bioenviromental Sci., KUAS, [4]Grad. Sch. Agricul. Sci., Nagoya Univ.)

2P30 The effect of nitrogen deficiency on quinolizidine alkaloid metabolism in Lupinus callus

Natsumi Hara[1], Ryosuke Sugiyama[1,2], Mami Yamazaki[1,3] ([1]Grad. Sch. Pharm. Sci., Chiba Univ., [2]JST PRESTO, [3]PMSC, Chiba Univ.)

2P31 Cross-species metabolomic analysis of polyphenol metabolic response under UV-B exposure among Solanaceae species

Lalida Sangpong[1], Nodoka Shinya[1], Carla Calumpang[1], Federico Scossa[2], Alisdair R. Fernie[2], Shinichiro Komaki[1], Mutsumi Watanabe[1], Takayuki Tohge[1] ([1]Grad. Sch. Sci., Tech., NAIST, [2]MPI-MP)

■ Cell cycle/Cell division

2P32 MYB3R transcriptional activators are indispensable for cytokinesis and completing plant life cycle in *Arabidopsisthaliana*

Rihoko Senga[1], Yuji Nomoto[1], Takamasa Suzuki[2], Masaki Ito[1] ([1]Sch. Biol. Sci. & Tech., Kanazawa Univ., [2]Dept. Biol. Chem., Chubu Univ.)

2P33 Formation of centromeric heterochromatin ensures proper DNA replication and genome maintenance

Moo Kar Yee[1], Hirotomo Takatsuka[2], Nanase Kato[1], Shiori Aki[1], Masaaki Umeda[1] ([1]Grad. Sch. Sci. Technol., NAIST, [2]Sch. Biol. Sci. Technol., Kanazawa Univ.)

■ Reproduction

2P34 Defect of pollen maturation and germination in the mutant of Arabidopsis deadenylases

Kenta Yoshihira[1], Yoshiki Omuro[2], Kazuki Motomura[3,4], Taku Tokunaka[2], Mitsunaga Hamashima[1], Toshihiro Arae[5], Yukako Chiba[1,2] ([1]Sch. Sci., Univ. Hokkaido, [2]Grad. Sch. Life Sci., Univ. Hokkaido, [3]Coll. Life Sci., Univ. Ritsumeikan, [4]JST PRESTO, [5]Grad. Sch. Front. Sci., Univ. Tokyo)

2P35 DNA methylation profiling in Arabidopsis egg cells

Hiroki Tsutsui[1], Marc W. Schmid[2], Ueli Grossniklaus[1] ([1]University of Zurich, [2]MWSchmid GmbH)

2P36 Molecular study on the factor related to self-incompatibility expression in Arabidopsis

Zhen Zhang[1], Sota Fujii[1,2], Seiji Takayama[1] ([1]The University of Tokyo, Graduate School of Agricultural and Life Sciences, Japan, [2]Suntory Rising Stars Encouragement Program in Life Science)

2P37 Functional analysis of K^+ channel homolog genes, Mp*BK1,* Mp*BK2a*, and Mp*BK2b*, in the sperm chemotaxis in the liverwort *Marchantia polymorpha*

Genta Aoki[1], Katsuyuki T. Yamato[2] ([1]Grad. Sch. BOST, Kindai Univ., [2]Fac. BOST, Kindai Univ.)

2P38 Plasma membrane H^+-ATPase in female papilla cells is involved in the control of pollen hydration in Brassicaceae

Maki Hayashi[1], Kazuki Fukushima[1], Hiromi Masuko-Suzuki[1], Toshinori Kinoshita[2,3], Shin-ichiro Inoue[2], Seiji Takayama[4], Yoshinobu Takada[1], Masao Watanabe[1] ([1]Grad. Sch. Life Sci., Tohoku Univ., [2]Grad. Sch. Sci., Nagoya Univ., [3]ITbM, Nagoya Univ., [4]Grad. Sch. Agric. Life Sci., Univ. Tokyo)

2P39 Establishment of novel Arabidopsis thaliana sperm cells isolation system

Mizuka Kobashi[1], Naoya Sugi[1], Daichi Susaki[1], Kazuki Motomura[2,3], Kazuo Ebine[4,5], Tetsu Kinoshita[1], Daisuke Maruyama[1] ([1]KIBR, Yokohama City Univ., [2]Col. of Life Sci., Ritsumeikan Univ., [3]PRESTO, JST, [4]Div. Cellular Dynamics, NIBB, [5]Grad. Inst. for Adv. Stud., SOKENDAI)

2P40 Histological analysis of amyloid formation in EC1 peptides, sperm-cell-activating factors expressed in egg cell

Hinako Oshirabe[1], Shiori Nagahara[2], Yumi Goto[3], Takao Oi[4], Hidenori Takeuchi[5,6], Kiminori Toyooka[3], Tetsu Kinoshita[1], Daichi Susaki[1], Daisuke Maruyama[1] ([1]KIBR, Yokohama City Univ., [2]Grad. Sch. Sci., Kyoto Univ., [3]CSRS, RIKEN, [4]Grad. Sch. Bioagric. Sci., Nagoya Univ., [5]ITbM, Nagoya Univ., [6]Inst. Adv. Res., Nagoya Univ.)

2P41 *RE* genes regulate embryo size in rice

Ken-ichro Hibara[1,2], Hiromi Kobayashi[2], Nobuhiro Nagasawa[3,4], Hajime Sakai[4,8], Takumi Tezuka[5,6], Nhung Ta Kim[6,7], Yutaka Sato[5,6], Yasuo Nagato[2] ([1]Kibi Intl. Univ., [2]Grad. Sch. Agric. Life Sci., U. Tokyo, [3]Fac. BioSci., Akita Pref. U., [4]DuPont, [5]SOKENDAI Department of Advanced Science, [6]NIG, [7]Vietnam Japan University, Vietnam National University, [8]NAPIGEN, Inc.)

2P42 Comparative analysis of the development of *Ginkgo biloba* female gametophyte in the cultivars cultured in Sobue, Inazawa, Japan

Hidenobu Uchida[1,2], Hongqiao Lu[1], Tatsuya Shibutani[3], Masami Kobayashi[3], Hirofumi Yamashita[4], Kazuhito Inoue[2,5] ([1]Dept. Food Business, Nagoya Bunri Univ., [2]Res. Inst. Integ. Sci., Kanagawa Univ., [3]Dept. Mat. Sci., Univ. Tsukuba, [4]Dept. Inf. Env. Sci., Kyoto Pref. Univ., [5]Dept. Biochem. Biotechnol., Kanagawa Univ.)

2P43 Arabidopsis *TTL* gene is required for the splicing of AT–AC-type introns and embryogenesis

Tomoko Niwa[1], Junshin Miyamoto[2], Daisuke Kurihara[3,4], Mine Morimoto[1], Takamasa Suzuki[1] ([1]Col. Biosci. Biotech., Chubu Univ., [2]Grad. Sch. Biosci. Biotech., Chubu Univ., [3]ITbM, Nagoya Univ., [4]Inst. Adv. Res., Nagoya Univ.)

2P44 Involvement of Plastid-Localized Trx-Like Proteins in Embryogenesis in *Arabidopsis thaliana*

Yuka Fukushi[1,2], Yokochi Yuichi[1,2], Toru Hisabori[1,2,3], Keisuke Yoshida[1,2] ([1]CLS, IIR, Tokyo Tech, [2]School of Life Science and Technology, Tokyo Tech, [3]IRFI, Tokyo Tech)

2P45 Identification of the causal mutation at *qSH3* involved in a loss of seed shattering and its role in rice domestication

Ryo Ishikawa, Than Myint Htun, Koji Numaguchi, Yumi Oka, Miki Ogasawara, Shohei Sugiyama, Natsumi Takama, Chhourn Orn, Chizuru Inoue, Takashige Ishii (Grad. Sch. Agr. Sci., Kobe Univ.)

■ Plant hormones/Signaling molecules

2P46 Identification of a novel functional amino acid inducing lateral root formation in a wide range of dicotyledonous plants

Hiromitsu Tabeta[1], Masami Y. Hirai[1,2] ([1]RIKEN CSRS, [2]Dep. of App. Bio., Grad. Sch. of Bioagri. Sci., Nagoya Univ.)

2P47 Involvement of an Arabidopsis SWEET protein in the salt stress responses

Yuri Kanno[1], Mitsunori Seo[1,2] ([1]RIKEN CSRS, [2]TBRC, Univ. of the Ryukyus)

2P48 A Novel Peptide Involved in The Regulation of Cambium Stem Cells during Secondary Growth in Arabidopsis

Hui Cao, Dongbo Shi (Inst. Biochemistry. Biol., Univ. Potsdam)

2P49 Analysis of strigolactone biosynthesis in the root parasitic plant *Orobanche minor*

Mayu Kawabuchi[1], Yoshinori Fukasawa[1], Xiaonan Xie[1], Yoshiya Seto[2], Takahito Nomura[1] ([1]Ctr. Biosci. Res. Edu., Utsunomiya Univ., [2]Sch. Agri., Meiji Univ.)

2P50 SMAX1 is a Signaling Hub That Integrates Karrikin- and Ethylene-mediated Regulation of Seedling Photomorphogenesis in *Arabidopsis thaliana*

Satoshi Ogawa[1,2], Caroline Gutjahr[3], David C. Nelson[2] ([1]RIKEN Center for Sustainable Resource Science, [2]Dept. of Botany and Plant Sciences, Univ. of California, Riverside, [3]Max-Planck Inst. for Molecular Plant Physiology)

2P51 Genetic analysis for fairy compound low-sensitive Arabidopsis mutant lines

Masanori Okamoto[1,2,3], Yuki Tanaka[2,4], Jae-Hoon Choi[5], Takahito Nomura[2], Tomohiro Suzuki[2], Hirokazu Kawagishi[5] ([1]RIKEN, CSRS, [2]Ctr. of Bio. & Edu. Res., Utsunomiya Univ., [3]Kihara Inst. Biol. Res., Yokohama City Univ., [4]Fac. of Food & Agri. Sci., Fukushima Univ., [5]Fac. of Agri., Shizuoka Univ.)

2P52 A Functional Analysis of CLE46 Peptide Signaling

Tatsuya Ito[1], Hiroo Fukuda[2,3], Satoshi Endo[3] ([1]Grad. Sch. Bioenviron., Kyoto Univ. Adv. Sci., [2]Akita Pref. Univ., [3]Fac. Bioenviron., Kyoto Univ. Adv. Sci.)

2P53 Analysis of a strigolactone-related compound identified from the xylem sap in Arabidopsis

Yuya Watanabe[1], Takaya Kisugi[2], Taiga Tatsumi[3], Ryota Noda[2], Kohki Akiyama[3,4], Kiyoshi Mashiguchi[1,2], Shinjiro Yamaguchi[1,2] ([1]ICR, Kyoto Univ., [2]Grad. Sch. Life Sci., Tohoku Univ., [3]Grad. Sch. Life Environ., Osaka Pref. Univ., [4]Grad. Sch. Agri., Osaka Metropolitan Univ.)

2P54 Biochemical studies on byosynthesis and metabolism of fairy chemicals in plants

Marika Torigoe[1], Jae-Hoon Choi[1,2,3,4,5,6], Hideo Dohra[4,5,6], Jing Wu[1,6], Hirofumi Hirai[1,2,3,4,5,6], Hirokazu Kawagishi[1,6] ([1]Fac. Agr., Shizuoka Univ., [2]Fac. Glob. Int. Sci. Inno., Shizuoka Univ., [3]Grad. Sch. of Inte. Sci. and Tech., Shizuoka Univ., [4]Grad. Sch. of Integr., Shizuoka Univ., [5]Res. Inst. Green Sci. Tech., Shizuoka Univ., [6]Mushroom Sci. Tech., Shizuoka Univ.)

2P55 Biochemical studies on biosynthetic pathway of fairy chemicals in rice

Futa Morii[1], Jae-Hoon Choi[1,2,3,4,5], Taisei Miyoshi[2], David C. Nelson[6], Hideo Dohra[3,4], Takahito Nomura[7], Hirofumi Hirai[1,2,3,4,5], Hirokazu Kawagishi[1,4] ([1]Fac. Agr., Shizuoka Univ., [2]Grad. Sch. of Inte. Sci. and Tech., Shizuoka Univ., [3]Res. Inst. Green Sci., Shizuoka. Univ., [4]Res. Inst, Mushroom Sci. Tech., Shizuoka Univ., [5]Fac. Glob Int. Sci. Inno., Shizuoka Univ., [6]Bot. Plant Sci., UCR, [7]C-Bio, Utsunomiya Univ.)

2P56 Effect of glycosylation on the function of the rice DELLA protein SLR1

Hideki Yoshida, Shunsuke Nishio, Makoto Matsuoka (IFeS, Fukushima Univ.)

2P57 Analysis of ethylene production and action in germinating rice seeds

Shigeto Morita[1,2], Mizuki Ojio[1], Ayaka Takabatake[1], Yuzuki Tani[1], Akihiro Itai[1], Takehiro Masumura[1,2] ([1]Grad. Sch. Life Environ. Sci., Kyoto Pref. Univ., [2]Kyoto Pref. Agr., Forest. Fish. Technol. Center)

2P58 Characterization of novel Anti-Auxin compounds AAs

Yuko Maki[1], Hiroshi Soejima[1], Takeo Sato[2], Masaaki K. Watahiki[2], Keiji Tanino[2], Junji Yam[2] ([1]Snow Brand Seed Co., Ltd., [2]Fac. Sci., Hokkaido Univ.)

2P59 Biochemical analysis about regulatory mechanism of chloroplast by a novel BR signaling factor BPG4

Takao Ohashi, Ryo Tachibana, Ayumi Yamagami, Takuya Miyakawa, Takeshi Nakano (Grad. Sch. Bio., Univ. Kyoto)

2P60 Expression and Physiological Functions of Two Transcription Factors ERF105 and ERF104 in *Arabidopsis*

Jingyan Xu, Kyoka Sato, Tomohide Uno, Daiki Hayashi, Kengo Kanamaru (Grad. Sch. Agri., Kobe Univ.)

2P61 Exploring metabolic enzymes for gibberellins in the bryophyte *Marchantia polymorpha*

Yoko Kamata[1], Yoshihiro Yoshitake[2], Maiko Okabe[2], Kiyoshi Mashiguchi[3], Konoka Shimada[2], Rui Sun[2], Shogo Kawamura[2], Kaori Suzuki[2], Eita Shimokawa[2], Yukiko Yasui[2], Shinjiro Yamaguchi[3], Takayuki Kohchi[2] ([1]Fac. Agric., Kyoto. Univ., [2]Grad. Sch. Biostudies., Kyoto. Univ., [3]Inst. Chem. Res., Kyoto. Univ.)

2P62 Exploration of gibberellin-related bioactive molecules in the liverwort *Marchantia polymorpha*

Maiko Okabe[1], Rui Sun[1], Yoshihiro Yoshitake[1], Shogo Kawamura[1], Kaori Suzuki[1], Eita Shimokawa[1], Yukiko Yasui[1], Shohei Yamaoka[1], Toshiaki Ishida[2], Kiyoshi Mashiguchi[2], Shinjiro Yamaguchi[2], Takayuki Kohchi[1] ([1]Grad. Sch. Biostudies, Kyoto Univ., [2]Inst. Chem. Res., Kyoto Univ.)

2P63 Functional analysis of peptide hormones generated by alternative promoter selection

Ryotaro Mitsuboshi[1], Haruaki Kobayashi[1], Kazumasa Shirai[2], Kousuke Hanada[2], Tomoo Shimada[1], Yoshito Oka[1], Tomonao Matsushita[1] ([1]Grad. Sch. Sci., Univ. Kyoto, [2]Grad. Sch. Comput. Sci. Sys. Eng., Kyushu Inst. Tech)

2P64 Analysis of physiological functions of BIL7, a novel brassinosteroid signaling factor, in rice

Ayano Nishimoto[1], Ayumi Yamagami[1], Noriko Ishikawa[2], Masakazu Kashihara[2], Ganbayar Namuunaa[1], Bardorj Bujin[1], Masaki Mori[3], Tadao Asami[4], Takeshi Nakano[1] ([1]Grad. Sch. Biostudies., Univ. Kyoto, [2]Japan Tobacco Inc., Plant Innovation Center, [3]NARO, [4]Grad. Sch. Agri. Life Sci., Univ. Tokyo)

2P65 Spatial regulation of strigolactone production and exudation in *Marchantia paleacea*

Akiyoshi Yoda, Kyoichi Kodama, Junko Kyozuka (Grad. Sch. of Life Sci., Tohoku Univ.)

2P66 Auxin-induced Elongation Growth and Activation of PM H^+-ATPase in the Excised Hypocotyls

Koji Takahashi[1,2], Toshinori Kinoshita[1,2] ([1]Grad. Sch. Sci., Nagoya Univ., [2]ITbM, Nagoya Univ.)

2P67 Analysis of the molecular mechanism for novel plant growth promoter PPG, and screenings of natural PPG analogues

Sakurako Katsuta[1], Shun Takeno[2,3], Shota Tanaka[2,3], Keiya Kaga[1,6], Kazuma Ohata[1], Ayumi Yamagami[1], Takuya Miyakawa[1], Shoji Segami[4], Yasumitsu Kondo[2], Naoshi Dohmae[2], Tetsuo Kushiro[3], Masayoshi Maeshima[4], Tadao Asami[5], Masaru Takagi[6], Hiroyuki Osada[2], Takeshi Nakano[1] ([1]Grad. Sch. Bio., Univ. Kyoto, [2]RIKEN·CSRS, [3]Grad. Sch. Agr., Univ. Meiji, [4]Grad. Sch. Agr., Univ. Nagoya, [5]Grad. Sch. Agr., Univ. Tokyo, [6]Grad. Sch. S&E., Univ. Saitama)

2P68 Analysis of stomatal aperture regulation mechanism using K^+ channel modulating compounds

Kanane Sato[1], Shunya Saito[1], Kohsuke Endo[1], Kyota Suzuki[1], Tomoki Shimada[1], Taishin Kakei[1], Haruka Taketa[1], Masaru Kono[2], Mieko Arisawa[3], Yuki Hayashi[4], Toshinori Kinoshita[4], Matteo Grenzi[5], Alex Costa[5], Shintaro Munemasa[6], Yoshiyuki Murata[6], Khurram Bashir[7], Motoaki Seki[7], Masaru Tsujii[1], Yasuhiro Ishimaru[1], Nobuyuki Uozumi[1] ([1]Grad. Sch. Eng., Tohoku Univ., [2]Grad. Sch. Sci., Univ. Tokyo, [3]Grad. Sch. Bioresour. Bioenv. Sci, Kyushu Univ., [4]Grad. Sch. Sci., Nagoya Univ., [5]Dept. Biosci., Univ. Milan, [6]Grad. Sch. Env. Life Sci., Okayama Univ., [7]CSRS, RIKEN)

■ Genome function/Gene regulation

2P69 Genetic and transcriptomic characterization of newborn genes that emerged during *Arabidopsis thaliana* lineage diversification

Yusei Shigematsu[1], Shoma Morita[1], Takuya Nakagawa[2], Soichirou Satoh[1,2] ([1]Grad. Life Env. Sci., Kyoto Pref. Univ., [2]Fac. Life Env. Sci., Kyoto Pref. Univ.)

2P70 Exploring the Genetic Basis of High Soil Temperature Tolerance in Wild Rice Introgression Line: Unveiling Promising Gene Candidates for Crop Improvement

Mel Anthony Talavera[1], Sachiko Funayama-Noguchi[1], Akifumi Shimizu[2], Yoshihiro Ohmori[3], Toru Fujiwara[1] ([1]Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Yayoi, Bunkyo-ku, Tokyo, 113-8657 Japan, [2]School of Environmental Science, The University of Shiga Prefecture, Hassaka-cho, Hikone-City, Shiga 522-8533 Japan, [3]Agricultural Bioinformatics Research Unit, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Yayoi, Bunkyo-ku, Tokyo, 113-8657 Japan)

2P71 Application of restriction enzyme-inducible plants that can reproducibly evoke genome-wide DNA double-strand breaks

Kohei Kawaguchi[1], Mei Kazama[1], Takayuki Hata[2], Mitsuhiro Matsuo[3], Junichi Obokata[3], Soichirou Satoh[1] ([1]Grad. Sch. Life Env. Sci., Kyoto Pref. Univ., [2]Grad. Sch. Med., Hirosaki Univ., [3]Fac. Agri., Setsunan Univ.)

2P72 Functional analysis of cohesin in the formation of chromosomal higher-order structure in *Cyanidioschyzonmerolae*

Takuya Sakamomto[1], Minami Nakayama[2], Daniel Slane[3], Shunnosuke Mori[3], Ryota Aoki[3], Yayoi Inui[3], Tomoko Matsunaga[3], Yamato Yoshida[4], Takamasa Suzuki[5], Kan Tanaka[6], Sachihiro Matsunaga[3] ([1]Fac. Sci., Kanagawa Univ., [2]Fac. Sci. Tech., Tokyo Univ. Sci., [3]Grad. Sch. Fro. Sci., Univ. Tokyo, [4]Grad. Sch. Sci., Univ. Tokyo, [5]Col. Biosci. Biotech., Chubu Univ., [6]Inst. Innov. Res., Tokyo Inst. Tech.)

2P73 Identification And Characterization Of Two Arabidopsis NAC Transcription Factors That Regulate Phosphate Starvation-induced Membrane Lipid Remodeling

Jiratorn Meethonganantamas[1], Kai-Lun Yeh[2], Nobutaka Mitsuda[3], You-Yi Chen[1], Wen-Chieh Tsai[1], Sumire Fujiwara[3], Masaru Ohme-Takagi[1,3], Chuan-Ming Yeh[2,3,4] ([1]Institute of Tropical Plant Sciences and Microbiology, National Cheng Kung University, Tainan, Taiwan, [2]Institute of Molecular Biology, National Chung Hsing University, Taichung, Taiwan, [3]Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Ibaraki, Japan, [4]Advanced Plant and Food Crop Biotechnology Center, National Chung Hsing University, Taichung, Taiwan)

2P74 Sequence-specific DNA binding activity of a dinoflagellate cold shock domain containing protein from *Breviolum minutum*
Rei Tanaka, Shizue Yoshihara (Sch. Sci., Osaka Pref. Univ.)

2P75 Stage-specific isoflavones synthesis genes expression profile of soybean growing on various soils
Hidefumi Hamasaki[1], Yukio Kurihara[1], Tomoko Kuriyama[1], Yuko Makita[1,2], Masaharu Kawauchi[1], Takashi Kenjyo[3], Katsuhiro Kojima[3], Toyoaki Anai[4], Haruko Takeyama[5], Minami Matsui[1,6] ([1]Yokohama Riken Inst.·CSRS, [2]Maebashi Institute of Tech., [3]ASAHI AGRIA CO., [4]Kyusyu Univ., [5]Waseda Univ., [6]Yokohama City Univ.)

2P76 NtcA is involved in the CnfR-dependent transcriptional activation of the *nif* gene cluster in the cyanobacterium *Leptolyngbya boryana*
Takeshi Hada[1], Mari Banba[1], Madoka Adachi[1], Tsend-Ayush Badbold[2], Hana Sugihara[2], Ryoma Tsujimoto[1], Haruki Yamamoto[1], Yuichi Fujita[1] ([1]Grad. Sch. Bio., Univ. Nagoya, [2]Agr., Univ. Nagoya)

2P77 The Loss of *Arabidopsis thaliana* Actin Depolymerizing Factors alters the expression of *NLR* type R genes upon Pathogen infection
Tomoko Matsumoto, Noriko Inada (Osaka Metropolitan Univ., Grad. Schl. of Agri.)

2P78 Comparative TSS-seq Analysis of Arabidopsis Four Accessions
Kazuki Sugekawa[1], Ezeh Okechukwu Samson[2], Yoshiharu Y. Yamamoto[1,2,3] ([1]Fac Appl Biol Sci., Univ. GIfu, [2]UGSAS., Univ. Gifu, [3]CSRS., Riken)

2P79 Searching of promoter working in *Euglena gracilis* and analysis of gene expression under the dark-light condition
Yayoi Inui[1], Takuto Ito[1], Chihana Toyokawa[2], Kohei Atsuji[2], Toshinao Nomura[3], June-Sik Kim[3,4], Keiichi Mochida[3], Kengo Suzuki[2,3], Sachihiro Matsunaga[1] ([1]Dept. of Integr. Biosci., Grad. Sch. of Front. Sci., Univ. of Tokyo, [2]Euglena Co., Ltd., [3]RIKEN CSRS., [4]IPSR, Okayama Univ.)

2P80 Elucidation of the Regulatory Mechanism of the Expression of Crassulacean Acid Metabolism (CAM) related genes
Yuri Kondo, Ryoma Sato, Sakae Agarie, Kazuyuki Saito (kondo, yuri)

2P81 Insights into the functional significance of EML family proteins in gene regulation and development
Saho Okada[1], Yuta Tokiwa[1], Tokuji Tsuchiya[2] ([1]Grad. Sch. ALS., Univ. Nihon, [2]Coll. Biores. Sci., Univ. Nihon)

2P82 Knock-in of epitope-tag sequence into the *Dicer-like* genes with CRISPR-Cas9 in the unicellular green alga *Chlamydomonas*
Hayato Goda (Sci. Technol., Univ. Kochi)

2P83 Identification and functional analysis of the proteins constituting the *Chlamydomonas* miRISC
Nao Yoshinaga (Sci. Technol., Univ. Kochi)

2P84 Interaction between Cucumber Mosaic Virus 2b and the N-terminal Region of Arabidopsis Dicer-Like1
Ryosuke Kigami, Shinya Tokuda, Tomo Ikuta, Nozomu Koizumi, Yuji Iwata (Grad. Sch. Agri., Osaka Metro. Univ.)

2P85 An attempt to prepare 20 aminoacyl-tRNA synthetases from wheat toward reconstitution of the translation system
Haruyuki Furukawa[1], Yuto Nagashio[1], Kensuke Tsutsumi[1], Kazuki Goto[1], Takumi Nishioka[1], Takumi Kondo[1], Ryunosuke Watanabe[2], Ryohei Kato[1], Chie Tomikawa[1], Kazuyuki Takai[1] ([1]Grad. Sci. Sci. and Eng., Ehime Univ., [2]Dept. Eng.)

2P86 Effects of overexpression of ribosomal proteins RACK1 and uL22 in Arabidopsis and tobacco
Rin Kitazawa[1], Kei Kondo[1], Hitoshi Onouchi[1], Yui Yamashita[1], Satoshi Naito[1,2] ([1]Grad. Sch. Agr., Univ. Hokkaido, [2]Grad. Sch. Life Sci., Univ. Hokkaido)

2P87 Newly suggested relationship between N-terminal methionine excision and response to light
Kazuki Oda[1], Shiori Muraoka[1], Takamasa Suzuki[2], Muneo Sato[3], Masami Y. Hirai[3], Sora Fukui[1], Taichi Takasuka[1], Hitoshi Onouchi[1], Yui Yamashita[1], Satoshi Naito[1] ([1]Grad. Schl. Agr., Hokkaido Univ., [2]College of Bioscience and Biotechnology, Chubu Univ., [3]RIKEN CSRS)

2P88 The transposition of a heat-activated retrotransposon *ONSEN* resulted in changes in the hypocotyl elongation
Ryu Hasegawa (Grad. Sch. LifeSci., Univ. Hokkaido)

2P89 Effect of a mutation in the ribosomal protein (uL13x) gene on growth under different Ca conditions in *Arabidopsis thaliana*
Arpna Kumari, Hirofumi Fukuda, Naoyuki Sotta, Dichao Ma, Toru Fujiwara (Department of Applied Biological Chemistry, The University of Tokyo, Japan)

2P90 Physiological roles of two allantoin synthase variants, produced by alternative splicing and differing in subcellular localization
Yuta Takeuchi, Hiroshi Shimada, Atsushi Sakamoto (Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)

■ Development/Morphogenesis

2Q01 Reinvestigation of Arabidopsis root circumnutation using 4D live-imaging of hydroponically cultivated roots
Takaaki Yonekura[1], Tatsuaki Goh[2], Munetaka Sugiyama[1], Keiji Nakajima[2] ([1]Grad. Sch. Sci., Univ. Tokyo, [2]Div. Biol. Sci., NAIST)

2Q02 Role of VND1 in xylem differentiation of Arabidopsis roots

Kyoko Ohashi-Ito[1], Kuninori Iwamoto[1], Hiroo Fukuda[2] ([1]Grad. Sch. Sci., Uni. Tokyo, [2]Akita Pref. Univ.)

2Q03 Study on cytokinin signaling that is involved in root secondary growth of *A. thaliana*

Kotomi Yamamoto, Shoya Takahashi, Miyu Imamura, Kazuma Uesaka, Takafumi Yamashino (Grad. Sch. of Bioagr. Sci., Nagoya Univ.)

2Q04 Analysis of the Arabidopsis *INDETERMINATE DOMAIN 4* gene involved in the regulation of early root growth by sugar

Rhoichi Shiroma[1], Akiko Kozaki[1,2,3] ([1]Grad Sch of Sci Tech., Shizuoka Univ., [2]Fac of Sci., Shizuoka Univ., [3]Grad Sch of int Sci and Tech., Shizuoka Univ.)

2Q05 Screening and analysis of new *Arabidopsis* mutants showing abnormal root morphogenesis

Souta Oguri, Kentaro Iwata, Akihito Mamiya, Yuki Kondo, Kimitsune Ishizaki, Hidehiro Fukaki (Grad. Sch. Sci., Univ. Kobe)

2Q06 Analysis of *bird feather* mutants showing abnormal branching pattern of root system in *Arabidopsis*

Tsumiki Isa, Kentaro Iwata, Akihito Mamiya, Yuki Kondo, Kimitsune Ishizaki, Hidehiro Fukaki (Grad. Sch. Sci., Kobe Univ.)

2Q07 Toward the production of Eustoma (*Eustomagrandiflorum*) with novel petal texture

Reiko Ishida[1], Ami Tanigami[1], Yuriko Ikeda[1], Tsubasa Yano[2], Yukiko Shimbo[1], Maki Ohtsubo[1], Hirotaka Adachi[3], Noriko Ohnuma[3], Kazuyoshi Fujita[4], Kimitoshi Sakaguchi[3], Takashi Kasai[3], Teruhiko Terakawa[2], Seiji Takeda[1], Norihiro Ohtsubo[1] ([1]Grad. Sch. Life Enviro. Sci., Kyoto Pref. Univ., [2]Inplanta Innovations Inc., [3]Miyoshi & Co., Ltd., [4]Miyoshi Agri Tech Co., Ltd.)

2Q08 Role of Phytochrome in Inflorescence Stem Elongation

Takuto Kudo, Mayu Nakagawa (Ishinomaki Senshu Univ.)

2Q09 Heterosis in Intraspecific Hybrid of *Arabidopsis thaliana* during Early Development

Putri Wijayanti[1], Yuko Wada[1], Kazuaki Utsugi[1], Ryuma Maeda[1], Arei Isaka[1], Yuya Tanaka[1], Tatsuya Nunohira[1], Yuki Hane[1], Seiji Takayama[2], Toshiro Ito[1] ([1]Graduate School of Science and Technology, Nara Institute of Science and Technology, [2]Graduate School of Agriculture and Life Science, Tokyo University)

2Q10 Analysis of sugar signal pathway regulating vascular cell differentiation

Yoshiki Yoshida[1], Aoi Narutaki[1], Shunji Shimadzu[1,2], Kimitsune Ishizaki[1], Hidehiro Fukaki[1], Yuki Kondo[1] ([1]Grad. Sch. Sci., Kobe Univ., [2]Grad. Sch. Sci., Univ. of Tokyo)

2Q11 Histological and gene expression analyses on hyperosmotic stress-induced somatic embryogenesis in Japanese honewort (*Cryptotaenia japonica*)

Sana Takahashi, Mugito Kato, Hajime Shiota (Grad. Sch. Nanobioscience, Yokohama City Univ.)

2Q12 Mechanism of adventitious bud formation on leaf in *Heloniopsis orientalis*

Yui Kuroda[1], Tomoaki Sakamoto[2,3], Shuka Ikematsu[2,3], Seisuke Kimura[2,3] ([1]Grad. Sch. Life Sci., Kyoto Sangyo Univ., [2]Fac. Life Sci., Kyoto Sangyo Univ., [3]Center for Plant Sci., Kyoto Sangyo Univ.)

2Q13 Impact of ectopic expression of Mp*SETA*, a bHLH transcription factor gene that regulates setal formation, on thallus development in *Marchantia polymorpha*

Kenta C. Moriya[1,2], Hiromichi Kono[1], Yoshito Oka[1], Tomonao Matsushita[1], Hiroshi Kudoh[2], Justin Goodrich[3], Tomoo Shimada[1] ([1]Grad. Sch. Sci., Kyoto Univ., [2]CER, Kyoto Univ., [3]Inst. Mol. Plant Sci., Univ. Edinburgh)

2Q14 Co-option of Stomatal Transcription Factors for the Differentiation of Idioblast Myrosin Cells in Arabidopsis

Tatsuyoshi Nakanishi[1], Makoto Shirakawa[1,2], Tomoki Oguro[1], Shigeo S. Sugano[3], Shohei Yamaoka[4], Mayu Sagara[1], Mai Tanida[1], Kyoko Sunuma[1], Takuya Iwami[1], Keita Horiuchi[1], Kie Kumaishi[5], Soma Yoshida[6], Mutsumi Watanabe[1], Takayuki Tohge[1], Takamasa Suzuki[7], Yasunori Ichihashi[2,5], Atsushi Takemiya[6], Nobutoshi Yamaguchi[1], Takayuki Kohchi[4], Toshiro Ito[1] ([1]Graduate School of Science and Technology, Nara Institute of Science and Technology, [2]Precursory Research for Embryonic Science and Technology, JST, [3]Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology, [4]Graduate School of Biostudies, Kyoto University, [5]RIKEN BioResource Research Center, [6]Graduate School of Sciences and Technology for Innovation, Yamaguchi University, [7]Department of Biological Chemistry, College of Bioscience and Biotechnology, Chubu University)

2Q15 A homeodomain-leucine zipper protein MpC4HDG regulates growth of thalli and rhizoids in *Marchantia polymorpha*

Tatsuya Sakamoto[1], Shogo Isoyama[2], Taku Takahashi[1,2], Hiroyasu Motose[1,2] ([1]Dep. Biol., Fac. Sci., Okayama Uni., [2]Grad. Sch. Environm., Life, Nat. Sci. & Tech., Okayama Uni.)

2Q16 Molecular mechanisms regulating sporophyte development in hornworts - Analyses of TALE transcription factors

Kazune Ezaki[1,2], Péter Szövényi[2], Keiko Sakakibara[1] ([1]College of Science, Rikkyo University, [2]Dept. of Systematic and Evolutionary Botany, University of Zurich)

2Q17 Observation of changes in the inner structure of rice seeds during imbibition using X-ray micro-CT: Analysis of time-lapse images

Rin Aramaki[1], Tomonori Nakai[1], Kentaro Uesugi[2], Makoto Hoshino[2], Daisuke Tamaoki[3], Ichirou Karahara[3], Yoshinobu Mineyuki[1], Daisuke Yamauchi[1] ([1]Grad. Sch. of Science, Univ. of Hyogo, [2]JASRI, [3]Grad. Sch. of Science and Engineering, Univ. of Toyama)

2Q18 Analysis of effects of mechanical forces on the floral development in *Arabidopsis thaliana*

Akitoshi Iwamoto, Wakana Inoue, Kaho Nagakura (Dep. Biol. Sci., Fac. Sci., Kanagawa Univ.)

■ Photoreceptors/Photoresponses

2Q19 Live-cell imaging of plant nucleus using phytochrome-derived autofluorescence

Akira Yoshinari[1,2], Reika Isoda[2], Noriyoshi Yagi[2], Wolf B. Frommer[2,3,4], Masayoshi Nakamura[2] ([1]ITbM, Nagoya Univ., [2]IAR, Nagoya Univ., [3]HHU, [4]MPI)

2Q20 Exploration of novel stomatal opening factors using phototropin double mutants

Taku Sakakibara[1], Shogo Kuwayama[1], Toshinori Kinoshita[1,2] ([1]Grad. Sch. Sci., Univ. Nagoya, [2]Institute of Transformative Bio-Molcule, Univ. Nagoya)

2Q21 Detailed analysis of chloroplast movement in mutants deficient in JAC1, WEB1 and PMI2 proteins

Yuki Inoue[1], Noriyuki Suetsugu[2] ([1]Coll. Arts, Sci., Univ. Tokyo, [2]Grad. Sch. Arts, Sci., Univ. Tokyo)

2Q22 The clock genes, *PRR*, modulate phototoropin-mediated responses in *A. thaliana*

Akane Kubota[1], Gian C Maliwat[1], Tomohiro Asami[1], Ayane Kaneko[2], Yuki Inoue[3], Nozomu Takahashi[1,4], Noriyuki Suetsugu[3], Tatsuya Sakai[2], Norihito Nakamichi[5], Motomu Endo[1] ([1]Dev. of Bioscience, NAIST, [2]Grad. Sch. of Science and Technology, Niigata Univ., [3]Grad. Sch. of Arts and Sciences, The Univ. of Tokyo, [4]JST, PRESTO, [5]Grad. Sch. of Bioagricultural Science, Nagoya Univ.)

2Q23 Adaptation mechanism to light environment via plasmid shuffling in *Acaryochloris marina* MBIC 11017

Keita Miyake[1], Tomonori Kashimoto[3], Chikahiro Matsumoto[3], Ryosuke Hasama[5], Mayuko Sato[4], Kiminori Toyooka[4], Yu Kanesaki[6], Wataru Iwasaki[2], Rei Narikawa[5] ([1]Grad, Sch, Arts Sci., Univ. Tokyo, [2]Grad, Sch, Frontier Sci., Univ. Tokyo, [3]Dep, Bio Sci, Faculty Sci., Shizuoka Univ, [4]RIKEN., CSRS, [5]Dep, Bio Sci, Grad, Sch, Sci., Tokyo Metropolitan Univ, [6]Res, Inst, Green Sci, Tech., Shizuoka Univ)

■ Flowering/Clock

2Q24 Analysis of Flowering regulation by RABH1 GTPase

Asaki Sato[1], Yoko Ito[2], Emi Ito[2], Tomohiro Uemura[1,3] ([1]Undergrad. Sch. Sci., Biol. Ochanomizu Univ., [2]IHLS., Ochanomizu Univ., [3]Grad. Sch. Humanities and Sciences, Ochanomizu Univ.)

2Q25 The Role of CONSTANS in Controlling Short-day Photoperiodic Flowering in *Solanum galapagense*, a Wild Tomato Species Endemic to the Galapagos Islands

Chieri Kubo[1], Chiharu Ito[2], Ami Kato[2], Ryosuke Hayama[1,2] ([1]Grad. Sch. NS., Univ. ICU, [2]Dep. NS., Univ. ICU)

2Q26 Function of Second Messenger Cyclic di-GMP in *Synechococcus elongatus* PCC 7942

Chihiro Yamaguchi[1], Robert Kanaly[1], Eri Nisizaki[1], Kei-ichi Yamashita[1], Yamato Sasho[1], Mei Harada[1], Momoe Hirai[1], Masaki Tsukamoto[2], Setsuyuki Aoki[2], Yoichi Nakahira[3], Yoshihiko Huruike[4], Shuji Akiyama[4], Mingxu Fang[5], Susan Golden[5] ([1]Grad. Sch. Sci., Univ. Yokohama City, [2]Grad. Sch. Info., Univ. Nagoya, [3]Col. Agric., Univ. Ibaraki, [4]Research Center of Integrative Molecular Systems (CIMoS), Institute for Molecular Science, [5]Univ. California, San Diego)

2Q27 Mechanism for cyanobacterial circadian clock by two ATPase domains in KaiC

Kumiko Ito-Miwa[1,2], Tomoaki Muranaka[3], Kazuki Terauchi[4], Takao Kondo[1,2] ([1]Grad. Sch. Sci., Nagoya Univ., [2]IAR, Nagoya Univ., [3]Grad. Sch. Bioagr., Nagoya Univ., [4]Grad. Sch. Life Sci., Univ. Ritsumei.)

2Q28 *TOC1* controls circadian rhythms and reduces leaf necrosis during bacterial infection in *Solanum galapagense*

Ayaka Atsuchi, Takaaki Enomoto, Yumi Hirama, Ryosuke Hayama (International Christian University, College of Liberal Arts)

2Q29 Long-Distance Circadian Communication Initiated By Plant Leaves

Nozomu Takahashi[1,2], Motomu Endo[1] ([1]Div. Bio. Sci, NAIST, [2]JST PRESTO)

2Q30 The Analysis of Homologous Clock Genes in The Marine Cyanobacterium *Prochlorococcus*

Taisuke Enomoto, Kento Yoshida, Yuta Ito, Shinsuke Kutsuna (Yokohama City University)

2Q31 The exploration of new post-translational regulation of cyanobacterial clock protein

Keiko Imai[1], Kumiko Ito-Miwa[2,3], Hikari Yoshitane[4], Yoshitaka Fukada[4], Takao Kondo[2,3] ([1]Biology, Kansai Med. Univ., [2]Grad. Sch. Sci., Nagoya Univ., [3]IAR, Nagoya Univ., [4]Tokyo Metropolitan Institute of Medical Science)

■ Environmental response B/Environmental stresses

2Q32 Dehydration properties of dormant buds of a cold hardy interspecific hybrid grape variety under subfreezing temperatures

Jun Kasuga, Shiori Sakahara (Obihiro Univ.)

2Q33 H3K27me3-mediated regulatory unit for prolonged cold stress in *Arabidopsis*

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

2Q34 Identification of novel ultraviolet-absorbing compounds in an edible cyanobacterium *Aphanothece sacrum*

Yoshie Uchida[1], Takashi Maoka[2], Tanapat Palaga[3], Masaki Honda[4], Chisato Tode[5], Motoyuki Shimizu[6], Rungaroon Waditee-Sirisattha[3], Hakuto Kageyama[1,4] ([1]Grad. Sch. Environ. Hum. Sci., Meijo Univ., [2]Res. Ins. Prod. Dev., Div. Food Func. Chem., [3]Fac. Sci. Chulalongkorn Univ., [4]Fac. Sci. Tec., Meijo Univ., [5]Instrumen. Anal. Cent., Kobe Pharmaceutical Univ., [6]Fac. Agric., Meijo Univ.)

2Q35 Characterization of an Arabidopsis MYB transcription factor that regulate sucrose- and phosphate starvation-induced anthocyanin biosynthesis

Hsien-Chen Chiou[1], Ruei Chang[1], Yu-Min Lin[1], Mei-Juan Zheng[1], Sumire Fujiwara[2], Nobutaka Mitsuda[2], Masaru Ohme-Takagi[2,3], Chuan-Ming Yeh[1,2,4] ([1]Institute of Molecular Biology, National Chung Hsing University, Taiwan, [2]Bioproduction Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Japan, [3]Institute of Tropical Plant Sciences and Microbiology, National Cheng Kung University, Taiwan, [4]Advanced Plant and Food Crop Biotechnology Center, National Chung Hsing University, Taiwan)

2Q36 Induction of ROS by Sr in *Arabidopsis thaliana*

Takeshi Nagata, Masaki Arai, Ryota Kawasaki, Yoshiyuki Okada, Sayo Kokubu (Setsunan University)

2Q37 Effects of 1,4-naphthoquinone derivatives on low temperature and abscisic acid signaling

Kohei Kitawaki[1], Yasuko Ito-Inaba[1,2], Takehito Inaba[1] ([1]Fac. Agr., Univ. Miyazaki, [2]Grad. Sch. Life Sci., Tohoku Univ.)

2Q38 Toxic Mechanism of SO_2 in Plants

Mahdi Mozhgani[1], Lia Ooi[1,2], Izumi Mori[1] ([1]IPSR, Okayama Univ., [2]Frontier Technology & New Value Innovation Department, Hayashibara Co. Ltd.)

2Q39 Analysis of the regulatory mechanism of Arabidopsis CAMTA transcription factors in response to rapid temperature decrease

Kazuya Yumikura[1], Shizuki Hashimoto[1], Fuminori Takahashi[2,3], Junya Mizoi[1], Kazuo Shinozaki[3], Kazuko Yamaguchi-Shinozaki[1,4], Satoshi Kidokoro[1,5] ([1]Grad. Sch. Agr. Life Sci., Univ. Tokyo, [2]Faculty of Advanced engineering, Tokyo Univ. Sci., [3]Center for Sustainable Resource Science, RIKEN, [4]Inst. Agr. Life Sci., Tokyo Univ. Agr., [5]Sch. of Life Sci. and Tech., Tokyo Tech.)

2Q40 The Impact of Phosphorus Supply on the Temperature Response of Hydroponically Cultivated *Lotus japonicus*

Lydia Ratna Bunthara[1], ZePeng Sheng[1], Jun Wasaki[1,2] ([1]Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2]Seto Inland Sea CN Research Center, Hiroshima Univ.)

2Q41 Functional analysis of Arabidopsis *NADK2* gene in response to water stress

Akiyoshi Kawaoka[1], Ryosuke Hashimoto[2], Satoshi Kidokoro[1], Kohji Yamada[2], Keishi Osakabe[2], Yuriko Osakabe[1] ([1]Sch. of Life Sci. & Tech., Tokyo Tech., [2]Grad. Sch. of Tech., Ind. & Soc. Sci., Tokushima Univ.)

2Q42 Functional analysis of SDP1 and SDP1L in Arabidopsis during nutrient deficiency

Yuya Mochida, Hiroyuki Ohta, Mie Shimojima (Sch. Life Sci. and Tech., Tokyo Tech)

2Q43 Role of a bHLH transcription factor in *Marchantia polymorpha* under abiotic stress conditions

Zhenxin Zhou[1], Shinsuke Shimizu[1], Koichi Hori[1], Kimitsune Ishizaki[2], Hiroyuki Ohta[1], Mie Shimojima[1] ([1]Sch. Life Sci. and Tech., Tokyo Tech, [2]Grad. Sch. of Sci., Kobe Univ)

2Q44 Analysis of the regulatory mechanism of acidic glycolipid GlcADG synthesis in *Marchantia polymorpha*

Yasutoki Kinoshita, Shinsuke Sekine, Koichi Hori, Hiroyuki Ohta, Mie Shimojima (Sch. Life Sci. and Tech., Tokyo Tech.)

2Q45 Evolution of molecular desiccation gene for osmostress signaling using non-HK5 mutation lines by NGS in the *Physcomitrium patens*

Rahul Sk[1,2], Akihisa Shinozawa[2], Marcos Takeshi Miyabe[2], Daisuke Takezawa[3], Shunsuke Yajima[1,2], Izumi Yotsui[2], Teruaki Taji[2], Yoichi Sakata[2] ([1]NODAI Genome Research Center, [2]Dept. of Biosci., Tokyo Univ. of Agri., [3]Grad. Sch. of Sci. and Eng. Saitama Univ.)

2Q46 Analysis of the role of mitochondrial RNA editing in heavy metal stress responses in Arabidopsis using mitoTALECD

Akiho Yamazaki[1], Koki Misawa[1], Riho Sawai[1], Fumiaki Asahi[1], Mizuki Takenaka[2], Issei Nakazato[3], Shin-ichi Arimura[3], Izumi Yotsui[1], Teruaki Taji[1], Yoichi Sakata[1] ([1]Graduate School of Life Sciences, Tokyo Univ. of Agriculture, [2]Graduate School of Science, Kyoto University, [3]Graduate School of Agricultural and Life Sciences, The University of Tokyo)

2Q47 Functional analysis of B3-Raf like kinase family in tomato

Thuong Nguyen, Shinnosuke Kimura, Izumi Yotsui, Teruaki Taji, Yoichi Sakata (Dept. of Biosci., Tokyo Univ. of Agri.)

2Q48 Optimum water depth for suppressing weed growth with minimizing rice growth inhibition under different temperature conditions

Iwasa Marina, Shunsuke Adachi, Taiichiro Ookawa (Grad. Sch. Agr., Tokyo Univ. Agr. and Tech.)

2Q49 Structural change of chromatin around CREs during the induction of apple bud dormancy using deep learning with a small dataset

Takanori Saito (Grad. Sch. Hort., Chiba Univ.)

2Q50 AtSnRK2.8, a subclass II SnRK2 of *Arabidopsis* is involved in regulating stomatal behavior in poplars

Borislav Horvat[1], Yuhei Shikakura[1], Misato Ohtani[2,3], Taku Demura[3,4], Akira Kikuchi[1,5], Kazuo Watanabe N.[1,5], Taichi Oguchi[1,5] ([1]Life & Env. Sci., Univ. Tsukuba, [2]Grad. Sch. Front. Sci., Univ. Tokyo, [3]CSRS, RIKEN, [4]CDG, Nara Inst. Sci. Tech., [5]T-PRIC, Univ. Tsukuba)

2Q51 Change in covering gain of *Zoysia* spp. under salt stress conditions

Akihiro Yamamoto[1], Nanami Saito[1], Koki Fuji[1], Masatsugu Hashiguchi[2], Yuichi Saeki[1], Ryo Akashi[1] ([1]Fac. Agric., Univ. Miyazaki, [2]Fac. Reg. Innov., Univ. Miyazaki)

2Q52 Cytosolic ascorbate peroxidase 1 is required for glutathione oxidation and cell death in catalase-deficient mutants

Satsuki Sato, Kana Kikuraku, Gen Mitomi, Takahiro Ishikawa, Takanori Maruta (Life Environ. Sci., Shimane Univ.)

2Q53 Molecular Mechanism Of Ascorbate Degradation And Its Association With Senescence Signaling

Tamami Hamada, Takahiro Ishikawa, Takanori Maruta (Grad. Sch. Nat. Sci. Technol., Shimane Univ.)

2Q54 Functional analysis of the enzyme involved in the metabolism of an ascorbate degradation product, L-threonate, in Arabidopsis

Kojiro Yamamoto, Takahiro Ishikawa, Takanori Maruta (Grad. Sch. Nat. Sci. Technol., Shimane Univ.)

2Q55 Negative regulation of chitosan-induced stomatal closure by glutathione in *Arabidopsis thaliana*

Israt Jahan, Toshiyuki Nakamura, Nakamura Yoshimasa, Munemasa Shintaro, Murata Yoshiyuki (Grad. Sch. Environ. Life Sci.)

2Q56 Identification of novel proteins required for hydrogen peroxide-induced cell death in Arabidopsis catalase-deficient mutants

Nanami Fujimoto[1], Kana Ishibashi[1], Takanori Maruta[1,2], Amna Mhamdi[2], Frank Van Breusegem[2] ([1]Life Environ. Sci., Shimane Univ., [2]Plant Systems Biol., VIB-Ghent Univ.)

2Q57 Light priming alleviates the cell death response of ascorbate-deficient mutants to high-light stress

Tadashi Sasaki, Takumi Iwagami, Takahiro Ishikawa, Takanori Maruta (Grad. Sch. Nat. Sci. Technol., Shimane Univ.)

2Q58 Acclimation to P-starvation in *Chlorella kessleri*: lipid remodeling and internal-P sources

Sorao Motegi, Yukari Iijima, Eriko Kimura, Shoko Fujiwara, Norihiro Sato (Tokyo Univ. of Pharm. & Life Sci.)

2Q59 Protein expression analysis of GDP-L-galactose phosphorylase, a rate-limiting enzyme for ascorbate biosynthesis, in response to light

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2Q60 BGLU18, an Arabidopsis enzyme required for quick ABA production, contributes to early transcriptomic responses to drought stress

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2Q61 Interspecific Comparison of Metabolite Variability in Rice under Low Temperature Stress

Nobutoki Igarashi, Tomoki Kobayashi, Takafumi Shimizu, Shinichiro Komaki, Mutsumi Watanabe, Takayuki Tohge (Grad. Sch. Sci., Tech., NAIST)

2Q62 *E. coli* GppA homolog in Arabidopsis dephosphorylates guanosine pentaphosphate

Takanari Nemoto, Masataka Inazu, Shinji Masuda (Dep. Life Sci. Tech., Tokyo Tech)

2Q63 The Functional Plasticity of Cuticular Wax in the Amphibious Plant *Rorippa aquatica* Facilitating Gas Exchange in Submerged Conditions

Shuka Ikematsu[1], Tatsuki Tujino[1], Keita Minai[1], Tomoaki Sakamoto[1], Takashi Nobusawa[2], Seisuke Kimura[1] ([1]Life Sci., Kyoto Sangyo Univ., [2]Grad. Sch. Integr. Sci., Hiroshima Univ.)

2Q64 Identification Of Novel Factors Involved In DNA Damage Responses In *Arabidopsis*

Toshiki Wada, Mihiro Nakajima, Huka Hozumi, Naoki Takahashi (Sch. Agr., Meiji. Univ)

2Q65 Proteomic Analysis to Understand the Promotive Effects of Titanium-Oxide Nanoparticles on Soybean Growth under Salt Stress

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2Q66 Proteomic analysis of Arabidopsis root tips after osmotic pressure release

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■ Science education

2Q67 Academic harassment as a technique for organized research misconduct

Emiko Harada (The University of Shiga Prefecture)

2Q68 Design, Print, Discover! - Using Computer-aided Design, 3D Printing, and Programming to Build Experimental Design Skills and Investigate EuglenaMovement in Response to Different Stimuli

Chizuru Honda[2], Suzuka Iguchi[2], Andy Crofts[1,3] ([1]Akita International University, Department of International Liberal Arts (Faculty member), [2]Akita International University, Department of International Liberal Arts (Undergraduate student), [3]Akita Prefectural University, Department of Biological Production, (Visiting Researcher))

■ Systems biology

2Q69 Arabidopsis abscisic acid receptor complexes regulate the central kinases in energy and stress signaling

Takuya Yoshida[1,2,3,4], Julia Mergner[5,6], Zhenyu Yang[1], Jinghui Liu[1], Bernhard Kuster[6], Alisdair R. Fernie[2], Erwin Grill[1] ([1]Lehrstuhl für Botanik, Technische Universität München, [2]Max-Planck-Institut für Molekulare Pflanzenphysiologie, [3]Trans-Omics Facility, National Institute for Basic Biology, [4]Basic Biology Program, SOKENDAI, [5]Bavarian Center for Biomolecular Mass Spectrometry at Klinikum rechts der Isar (BayBioMS@MRI), Technical University of Munich, [6]Chair of Proteomics and Bioanalytics, Technical University of Munich)