The 22th Annual Meeting for Plant-Microbe Interactions Program

September 25 (Tuesday)

Oral Presentation PM 1:00 ～ PM 2:30

1 Diversity in genome structure among closely related *Frankia* strains
○Ken-ichi Kucho[1], Hideo Sasakawa[2], Takashi Yamanaka[3], Mikiko Abe[1], Toshiki Uchiumi[1] ([1]Kagoshima Univ., [2]Okayama Univ., [3]Forestry Forest Products Res. Inst.)

2 Local variations and evolution of *Mesorhizobium loti* isolates from the original habitat of the *Lotus japonicus* model accession Miyakojima MG-20
○Kazuhiko Saeki[1], Yoshimi Tani[1], Midori Ikeda[1], Takakazu Kaneko[2], Hiroko Maita[3], Hideki Hirakawa[3], Satoshi Tabata[3], Shusei Sato[3] ([1]Nara Women's Univ., [2]Kyoto Sangyo Univ., [3]Kazusa DNA Res. Inst.)

3 Search for a key target of the sigma factor RpoH1 during symbiosis in *Sinorhizobium meliloti*
○Shohei Sasaki, Kiwamu Minamisawa, Hisayuki Mitsui (Grad. Sch. Life Sci. Tohoku Univ.)

4 A disruption of blr7984 gene in *B. japonicum* USDA110 increases its growth rate and keeps its high ARA with high glutathione concentration in aged soybean root nodules
○Naoko Ohkama-Ohtsu, Haruna Homma, Norina Hiraoka, Yoshinori Sano, Mariko Nakagome, Sachiko Ichida, Tadashi Yokoyama (Tokyo University of Agriculture and Technology)

5 Type III secretion system in *Bradyrhizobium japoncum* induces symbiotic incompatibility with *Rj2* soybean plants
○Takahiro Tsukui[1], Shima Eda[1], Takakazu Kaneko[2], Shusei Sato[3], Shin Okazaki[4], Kaori Kakizaki-Chiba[1], Manabu Itakura[1], Hisayuki Mitsui[1], and Kiwamu Minamisawa[1] ([1]Tohoku Univ., [2]Kyoto Sangyo Univ., [3] Kazusa DNA Res. Inst., [4]Tokyo Univ. of Agricul. Technol.)

6 Characteristics of endophytic bacteria isolated from root nodule of continuous cropping black soybean
○Yoshiaki Shizukawa[1], Yoshinari Ohwaki[2], Junko Tazawa[2], Tadashi Yokoyama[3], Masami Yoshikawa[1] ([1]Kyoto Pref. Agr. Tec. Cent., [2]NARO, [3]Tokyo Univ. Agr. Tech.)

Coffee Break PM 2:30 ～ PM 2:45

Oral Presentation PM 2:45 ～ PM 4:00

7 Functional analysis of *LjERN1* in *Lotus japonicus*
○Koji Yano[1], Yosuke Umehara[2], Norio Suganuma[3], Shusei Sato[4], Satoshi Tabata[4], Hiroshi Kouchi[2], Makoto Hayashi[2], Toru Fujiwara[1], Masayoshi Kawaguchi[5] ([1]Univ. of Tokyo, [2]NIAS, [3]Aichi Univ. of Education, [4]Kazusa DNA Res.Inst., [5]NIBB)

8 MAMP-responsive phosphoprotein 'RAM1' negatively regulates ROS production in Arabidopsis
Hidenori Matsui, Yuko Nomura, Juliarni and Hirofumi Nakagami (Plant Proteomics Research Unit, RIKEN Plant Science Center)

9 Salicylic acid (SA)-mediated defenses are involved in pre-penetration resistance of pea against *Mycosphaerella pinodes*
○Kazuhiro Toyoda[1], Hiroko Ishii[1], Noriko Yamagishi[2], Nobuyuki Yoshikawa[2], Yoshishige Inagaki[1], Yuki Ichinose[1], Tomonori Shiraishi[1] ([1]Okayama Univ., [2]Iwate Univ.)

10 Involvement of siderophore activity in diversity of *Pseudomonas cichorii* virulence
Wali Md Ullah, Masayuki Tanaka, Hiroyuki Mizumoto, Kouhei Ohnishi, Akinori Kiba, ○Yasufumi Hikichi (Kochi Univ.)

11 Study of mycorrhizal symbiosis in *Marchantia paleacea* var. diptera
○Tomomi Nakagawa[1], Toshinori Kozaki[2], Keiko Sakakibara[3], Kimitsune Ishizaki[4], Norichika Ogata[2], Ayano Miyamoto[1], Kazuo Ishii[2], Masaki Shimamura[3], Hanae Kaku[1], Takayuki Kohchi[4], Naoto Shibuya[1]

([1]Meiji Univ., [2]Tokyo Univ. of Agri. and Tech., [3]Grad. Sc. Sci., Hiroshima Univ., [4]Grad. Sc. Biostudies, Kyoto Univ.)

Coffee Break　PM 4:00 ～ PM 4:15

Discussion 1　PM 4:15 ～ PM 5:15

Coffee Break　PM 5:15 ～ PM 5:30

Keynote Lecture1　PM 5:30 ～ PM 6:15

Dr. Takayuki Kohchi　Graduate School of Biostudies, Kyoto University

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September 26 (Wednesday)

Poster 90 sec Oral Presentation　AM 9:30 ～ AM 10:45

Coffee Break　AM 10:45 ～ AM 11:00

Poster Presentation (odd number)　AM 11:00 ～ PM 12:00

Lunch

Poster Presentation (even number)　PM 2:00 ～ PM 3:00

Poster Presentation and free discussion　PM 3:00 ～ PM 3:30

Coffee Break　PM 3:30 ～ PM 3:45

Discussion 2 (for posters)　PM 3:45 ～ PM 5:15

Coffee Break　PM 5:15 ～ PM 5:30

Keynote Lecture 2　PM 5:30 ～ PM 6:15

Dr. Shuji Shigenobu　National Institute for Basic Biology

Welcome Reception　PM 6: 45 ～

September 27 (Thursday)

Oral Presentation　AM 9:00 ～ AM 10:15

12　Detection of nitrogen fixation activity in free living *B. japonicum* USDA110 with symbiosome solution isolated from soybean root nodules
Seishi Komatsu[1], Naoko Ohkama-Ohtsu[2], ○Tadashi Yokoyama[2] ([1]Graduate school of Agriculture, Tokyo University of Agriculture and Technology, [2]Institute of Agriculture, Tokyo University of Agriculture and Technology)

13　Mutation of class 1 hemoglobin affects the infection of *Mesorhizobium loti* to its host plant *Lotus japonicus*
○Tomohiro Kado, Ken-ichi Osuki, Ken-ichi Kucho, Mikiko Abe, Shiro Higashi, Toshiki Uchiumi (Grad. Sc. Sci. & Eng., Kagoshima Univ.)

14　An negative inhibitory pathway of root nodule formation is mediated by NIN that induces cortical cell division
○Takashi Soyano[1], Makoto Hayashi[2], Masayosi Kawaguchi[1] ([1]NIBB, [2]NIAS)

15　Roles of novel common symbiosis factors during symbiont infection.
○Naoya Takeda[1, 2], Shusaku Tsuduki[2], Yoshihiro Handa[1], Martin Parniske[3], Masayoshi Kawaguchi[1, 2] ([1]NIBB, [2]SOKENDAI, [3]LMU Munich)

16　Elicitor-induced pH changes and regulation of the plasma membrane H^+-ATPase
○ Norihito Ito[1], Tomoko Kubota[1], Haruyasu Hamada[1], Ryosuke Tamauchi[1], Yoshiko Sakakibara[1], Kazuhiro Miyanabe[1], Toshinori Kinoshita[2], Kazuyuki Kuchitsu[1] ([1]Tokyo Univ. of Science.,[2]Nagoya Univ.)

Coffee Break　AM 10:15 ～ AM 10:30

Discussion 3　AM 10:30 ～ AM 11:00

Coffee Break　AM 11:00 ～ AM 11:15

Keynote Lecture 3　AM 11:15 ～ PM 12:00

'Multiples roles of nitric oxide (NO) in the *Sinorhizobium meliloti-Medicago truncatula* nitrogen-fixing symbiosis'
Dr. Claude Bruand　　LIPM INRA, France

Coffee Break　PM 12:00 ～ PM 12:15

General Meeting　PM 12:15 ～ PM 12:45

Poster Number

P1* Extracellular ATP-regulated genes in *Medicago truncatula*: Analysis by suppression subtractive hybridization (SSH) technology
○Kaori Tanaka, Kazuhiro Toyoda, Yoshishige Inagaki, Yuki Ichinose, Tomonori Shiraishi (Okayama Univ.)

P2* Role of a pea infection-inhibitor, dihydromaleimide, in local and systemic resistance
○Kentaro Iio, Chie Kamada, Tomokazu Watanabe, Minoru Izumi, Yoshishige Inagaki, Yuki Ichinose, Kazuhiro Toyoda, Tomonori Shiraishi (Graduate School of Environmental and Life Science, Okayama University)

P3* Roles of an S-type anion channel SLAC1 in the regulation of cryptogein-induced anion efflux and defense responses in tobacco BY-2 cells
○Sonoko Horikoshi[1], Takamitsu Kurusu[1], Katsunori Saito[1], Shigeru Hanamata[1], Juntaro Negi[2], Koh Iba[2] and Kazuyuki Kuchitsu[1] ([1]Tokyo Univ. of Science., [2]Kyushu Univ.)

P4* Isolation of mutants of the nitrogen-fixing bacterium *Frankia*
○Kentaro Kakoi, Masatoshi Yamaura, Mikiko Abe, Toshiki Uchiumi and Ken-ichi Kucho (Graduate School of Science and Engineering, Kagoshima University)

P5 Functional analysis of transcription regulator ProA in *Epichloë festucae*, a mutualistic symbiont of *perennial ryegrass*
○Aiko Tanaka[1], Sanjay Saikia[2], Gemma Cartwright[2], Daigo Takemoto[1], Takashi Tsuge[1], Shingo Hata[1] and Barry Scott[2] ([1]Nagoya Univ., [2]Massey Univ.)

P6* Inoculation and colonization of photosynthetic *Bradyrhizobium* and *Burkholderia kururiensis* in rice plant
○ Shohei Fukushima, Takashi Okubo, Ryo Shinoda, Manabu Itakura, Hisayuki Mitsui, Kiwamu Minamisawa (Grad. Sch. of Life Sci., Tohoku Univ.)

P7* Comparison of endophytic bacterial community structure among Arabidopsis thaliana grown on different soils/medium
○Shigenori Odashima, Shigeto Otsuka, Kazuo Isobe, Keishi Senoo (Grad. Sch. of Agric. Life Sci., Univ. of Tokyo)

P8* Population shift of *Aurantimonas sp*. AU20 responding to *L. japonicus* nodulation genotypes
○Mizue Anda[1], Seishi Ikeda[2], Shima Eda[1], Hisayuki Mitsui[1], Kiwamu Minamisawa[1] ([1]Tohoku University., [2]HARC)

P9 Effect of inoculation with the *Bacillus* strain on rice cv. Hinohikari
○Ai Ono[1], Masami Yoshikawa[1], Tadashi Yokoyama[2] ([1]Kyoto Pref. Agr. Tech. Cent., [2]Tokyo Univ. Agr. Tech.)

P10 Genome sequence of a novel *Bradyrhizobium* strain isolated from *Aeschynomene americana*
○Shin Okazaki[1], Kenshiro Oshima[2], Masahira Hattori[3], Neung Teaumroong[3] ([1]Grad. Sch. of Agr., Tokyo Univ. of Agr. and Tec., [2]Grad. Sch. of Font. Sci., Univ. of Tokyo, [3]Inst. Agr. Tech., Suranaree Univ. of Tech, Thailand.)

P11* Genome analysis of *Bradyrhizobium elkanii* strain USDA61
○Koki Miyazawa[1], Hidenobu Hida[1], Ota Kohei[1], Shusei Sato[2], Hideki Hirakawa[2], Satoshi Tabata[2], Shin Okazaki[3], Kazuhiko Saeki[4], Takakazu Kaneko[1] ([1]Kyoto Sangyo Univ., [2]Kazusa DNA Res.Inst., [3]Tokyo Univ. of Agriculture and Technol., [4]Nara Women's Univ.)

P12* *mcpS* deletion mutant of *Sinorhizobium meliloti* can not establish normal symbiosis system with alfalfa
○Yuu Yamamoto, Katsuharu Saitou, Akira Tabuchi (Faculty of Agriculture, Shinshu University)

P13* Symbiotic roles of genistein-induced genes of *Bradyrhizobium japonicum* with soybean
○Tatsuo Hidaka[1], Keisuke Takeshima[1], Masayuki Ohnishi[1], Min Wei[2],Tadashi Yokoyama[3], Kiwamu Minamisawa[4],Hisayuki Mitsui[4], Manabu Itakura[4], Takakazu Kaneko[5], Satoshi Tabata[6], Kazuhiko Saeki[7], Hirofumi Oomori[8], Shigeyuki Tajima[9], Toshiki Uchiumi[10], Mikiko Abe[10], Takuji Ohwada[1] ([1]Depertment of Food science, Obihiro Univ. of Agriculture and Veterinary Medicine, [2]School of Life Science, Lanzhou Univ., [3]Tokyo Univ. of Agriculture and technology, [4]Graduate School of Life Science, Tohoku Univ., [5]Faculty of Engineering, Kyoto Sangyo Univ., [6]Kazusa DNA Res. Inst., [7]Depertment of Biological Science, Faculty of Science, Nara Women's Univ., [8]Depertment of Biology, Graduate School of Science, Osaka Univ., [9]Depertment of Life Science, Kagawa Univ., [10]Graduate School of Science and Engineering, Kagoshima Univ.)

P14* Effect of NCR peptides on rhizobium and *Escherichia coli*
○Nahoko Uchi[1], Toshiki Uchiumi[1], Ken-ichi Kucho[1], Mikiko Abe[1], Shiro Higashi[1], Peter Mergaert[2], Eva Kondorosi[2], Attila Farkas[3] ([1]Grad. Sc. Sci. & Eng., Kagoshima Univ., [2]ISV, France,[3] BRC, Hungary)

P15* Search for *Rj*$_4$*-gsn* gene of *Bradyrhizobium japonicum* Is-34 by Tn5 mutagenesis
○Shogo Hashimoto[1], Hirohito Tsurumaru[2], Takeo Yamakawa[3], Kiwamu Minamisawa[2], Seishi Ikeda[4] ([1]Graduate School of Bioresource and Bioenvironmental Sciences, Kyushu University, [2]Graduate School of Life Sciences, Tohoku University, [3]Faculty of Agriculture, Kyushu University, [4]HARC)

P16* Designing and application of artificially controllable expression vector system in *Mesorhizobium loti*
○Rie Shirai, Kumi Nakamura, Mai Soejima, Shin Okazaki[1], Kazuhiko Saeki (Department of Biological Sciences, Nara Women's University, [1]Tokyo University of Agriculture and Technology)

P17* Possible myo-inositol biosynthesis in *Sinorhizobium meliloti*
○Yoshihiro Ashida, Ayako Terakawa, and Ken-ichi Yoshida (Department of Agrobioscience, Graduate School of Agricultural Science, Kobe University)

P18* Metabolic regulation of nodule senescence between *L. japonicus* and *M.loti* mutant (STM30) symbioses.
○Sirinapa Chungopast[1,4], Mika Nomura[1], Shigeyuki Tajima[1], Nanthipak Thapanapongworakul[2], Hiroyuki Matsuura[1], Yoshikazu Shimoda[3], Shusei Sato[3] ([1]Dept. Applied Life science, Faculty of agriculture, Kagawa University., [2]Dept. Entomology and Plant Pathology, Faculty of Agriculture, Chiang Mai University., [3]Kazusa DNA Research Institute., [4]Dept. Soil Science, Faculty of Agriculture Kamphaeng Saen, Kasetsart University Kamphaeng Saen Campus.)

P19* A novel role of vitamin B6 metabolic pathway of *Mesorhizobium loti* in *Lotus japonicus* root nodule symbiosis
○Akiyoshi Tominaga[1, 2], Aiko Ide[2], Saya Iwamoto[3], Toshiharu Yagi[3], Susumu Arima[1, 2], Akihiro Suzuki[1, 2] ([1]Kagoshima Univ., [2]Saga Univ., [3]Kochi Univ.)

P20* Analysis of salinity tolerance mechanisms of root nodule bacteria associated with Vigna marina in coral beach soils, Ishigaki and Iriomote
○ Tetsuya Akatsu[1], Naoto Sano[1], Motoki Kanekatsu[2], Hideaki Ishikawa[1,3], Naoko Ohkama-Ohtsu[2], Norihiko Tomooka[4], Tadashi Yokoyama[2] ([1]Faculty of Agriculture, Tokyo University of Agriculture and Technology, [2]Institute of Agriculture, Tokyo University of Agriculture and Technology., [3]JST-CREST., [4]National Institute of Agrobiological Sciences)

P21 Mycorrhizal infection is controlled by the R/FR ratio in tomato
○Maki NAGATA, Naoya YAMAMOTO, Toyoaki ANAI, Susumu ARIMA, Akihiro SUZUKI (Faculty of Agriculture, Saga Univ.)

P22* Detection of the strigolactone receptor protein in AM fungi using 5-deoxystrigol photoaffinity probes
○Yoshifumi Nakatani, Kohki Akiyama, Hideo Hayashi (Grad. Sch. Life & Environ. Sci., Osaka Pref. Univ.)

P23* Analysis of NFR-dependency in the induction of symbiosis gene expression by Myc-LCOs and

chitooligosaccharides in *Lotus japonicus*
○Chiharu Kawahara, Kohki Akiyama, Hideo Hayashi (Grad. Sch. Life & Environ. Sci., Osaka Pref. Univ.)

P24 The linkage mapping and the phenotypic characterization of symbiotic mutants of *Lotus japonicus*, ME2329 and ME778, specific for arbuscular mycorrhiza
○Tomoko Kojima[1], Katsuharu Saito[2], Hirosuke Oba[3], Suganuma Norio[4], Masayoshi Kawaguchi[5], Ryo Ohtomo[6] ([1]NARO Institute of Livestock and Grassland Science, [2]Shinshu Univ., [3]The Univ. of Tokyo, [4]Aichi Univ. of Education, [5]National Institute of Basic Biology, [6]NARO Agricultural Research Center for Hokkaido Region)

P25* Expression analysis of GARP-type transcription factor *LjGGL1* specifically induced by arbuscular mycorrhizal symbiosis in *Lotus japonicus*
○Yohei Iguchi[1], Naoya Takeda[2], Masayoshi Kawaguchi[2], Hironori Kaminaka[1] ([1]Tottori Univ., [2]NIBB)

P26 Expression and characterization of arbuscular mycorrhiza-inducible phosphate transporter genes of barley (*Hordeum vulgare*) and wheat (*Triticum aestivum*)
○Shingo Hata, Haruka Matsunaga, Thongkhoun Sisaphaithong (Nagoya Univ)

P27* Soybean phosphate transporter *GmPT7* is expressed in mycorrhizas and senescent leaves
○Yuki Inoue[1], Yoshihiro Kobae[2], Mari Banba[1], Shingo Hata[1] ([1]Graduate School of Bioagricultual Sciences, Nagoya Univ., [1]Graduate School of Agricultural and Life Sciences, Tokyo Univ.)

P28* Expression and characterization of arbuscular mycorrhiza-inducible acyltransferase and esterase genes of rice (*Oryza sativa*)
○Thongkhoun Sisaphaithong, Megumi Yanase, Shingo. Hata (Nagoya Univ.)

P29* Inhibitory mechanism of nodulation by light irradiation to the root
○Aya Shimomura[1], Chie Morotomi[1], Ayumi Naka[1], Nobuyuki Miyazaki[1], Hideki Hirakawa[2], Shusei Sato[2], Satoshi Tabata[2], Susumu Arima[1], Akihiro Suzuki[1] ([1]Agriculture, Saga Univ., [2]Kazusa DNA Res. Inst.)

P30* Analysis of two MATE-type transporters, LjMATE2 and LjMATE3, expressing in *Lotus japonicus*
○Yoshihiro Ota, Kojiro Takanashi, Akifumi Sugiyama, Kazufumi Yazaki (RISH, Kyoto Univ.)

P31* Functional analysis of a SWEET transporter expressed in nodule of *Lotus japonicus*
○Yuka Saida, Akifumi Sugiyama, Kojiro Takanashi, Kazufumi Yazaki (RISH., Kyoto Univ.)

P32* *plenty*, a novel hypernodulation mutant in *Lotus japonicus*
○Emiko Yoro[1,2], Chie Yoshida[3], Yoshihiro Handa[1,2], Kazuhiko Saeki[4], Takuya Suzaki[1,2], Masayoshi Kawaguchi[1,2] ([1]NIBB, [2]SOKENDAI, [3]The Univ. of Tokyo, [4]Nara Women's Univ.)

P33* SNARE gene *Syn1*of *L.japonicus* is important factor in the early stage of nodule formation
○Aoi Sogawa[1], Daiki Yamasaki[1], Takahiro Miyoshi[1], Makoto Hayashi[2], Keisuke Yokota[2], Shigeyuki Tajima[1], Mika Nomura[1] ([1]Faculty of Agriculture, Kagawa Univ., [2]NIAS)

P34 Comparative functional analysis of legume CCaMK
○Yoshikazu Shimoda, Makoto Hayashi, Haruko Imaizumi-Anraku (NIAS)

P35 RNA-seq analysis of root nodules and arbuscular mycorrhiza in *Lotus japonicus*.
○Yoshihiro Handa[1], Naoya Takeda[1, 2], Yutaka Suzuki[3], Masayoshi Kawaguchi[1, 2], Katsuharu Saito[4] ([1]NIBB, [2]SOKENDAI, [3]Graduate School of Frontier Sciences, the University of Tokyo, [4]Faculty of Agriculture, Shinshu University)

P36* Analysis of nitrate-induced inhibition of nitrogen fixation using transgenic *Lotus japonicus* plants harbouring the anti-sense nitrate reductase gene
○Hanna Nishida[1], Kazuhisa Kato[2], Yoshinori Kanayama[2], Norio Suganuma[1] ([1]Aichi Univ, Educ, [2]Grad, Sch, Agri, Sci,. Tohoku Univ,)

P37* Expression of β -1,3-glucanase gene in autoregulation of nodulation

○Osuki K[1], Suzuki A[2], Hara H[1], Yamashita K[1], Takahara A[1], Araragi M[1], Iwasaki N[1], Asami T[3], Kucho K[1], Higashi S[1], Abe M[1] and Uchiumi T[1] ([1]Graduate School of Science and Engineering, Kagoshima Univ., [2]Department of Environmental Science, Saga Univ., [3]Graduate School of Agriculture and Life Science, Tokyo Univ.)

P38* Variation in nucleotide sequence of *SEN1* gene and nitrogen fixation activity in wild type accession of *Lotus japonicus*
○ Katsuya Harada[1], Akiyoshi Tominaga[1,2], Hidenori Kawazumi[1], Norio Suganuma[3], Masatsugu Hashiguchi[4], Ryo Akashi[4], Susumu Arima[1], Akihiro Suzuki[1] ([1]Saga Univ. Agri., [2]The United Graduate School of Agricultural Sciences Kagoshima University, [3]Aichi University of Education, [4]University of Miyazaki・FSRC)

P39 Positive and negative regulation of cortical cell division during root nodule development in *Lotus japonicus* is accompanied by auxin response
○ Takuya Suzaki[1, 2], Koji Yano[1], Momoyo Ito[1], Yosuke Umehara[3], Norio Suganuma[4], Masayoshi Kawaguchi[1, 2]([1]NIBB, [2]SOKENDAI, [3]NIAS, [4]Aichi Univ. Edu.)

P40* Research of the mechanisms of soybean nodulation repression by rhizospheric microorganisms.
○Hiroyuki Nakamura[1], Taihei Kitahara[1], Naoko Ohtsu[2], Tadashi Yokoyama[2] ([1]Tokyo university of agriculture and technology, [2]Tokyo university of agriculture and technology institute of agriculture.)

P41 Analysis of rhizosphere microbes of soybean during development
Akifumi Sugiyama[1], Hisafumi Takase[2], Jiro Sekiya[2], Kazufumi Yazaki[1] ([1]RISH, Kyoto Univ. [2]Kyoto Gakuen Univ.)

P42* Survey of soybean genes involved in flavonoid transport in soybean root
○Kazuaki Yamashita, Akifumi Sugiyama, Kojiro Takanashi, Kazufumi Yazaki (Reserch Institute for Sustainable Humanosphere, Kyoto University)

P43* The effect of temperature and diurnal rhythm on nodule growth of soybean
○Keisuke Ishikawa[1], Shiori Watanabe[1], Takanari Tanabata[2], Sayuri tanabata[3], Shinji Ishikawa[4], Norikuni Ohtake[4], Kuni Sueyoshi[4], Takuji Ohyama ([1]Graduate School of Science and technology, Niigata Univ., [2]Natl. inst. of Agrobiologic., [3]Ibaraki Pref. agr. center for Exp. Extension and education., [4]Faculty of Agriculture, Niigata Univ.)

P44* Quantitative analysis of transport of fixed nitrogen from soybean nodule Using ^{15}N as a tracer
○Nguyen Van phi Hung[1,2], Shiori Watanabe[1], Shinji Ishikawa[1], Norikuni Ohtake[1], Kuni Sueyoshi[1], Satomi Ishii[2], Shu Fujimaki[2], Takuji Ohyama[1] ([1]Niigata Univ., [2]Japan Atomic Energy Agency., [3]Akita Prefectural Univ.)

P45* Structure-activity relationship of strigolactone analogs as a phytohormone in Rice and germination stimulants toward root parasitic weeds
○Tomoyuki Inoue[1], Mitsuru Sasaki[1], Hirosato Takikawa[1,2], Masaharu Mizutani[1], Yukihiro Sugimoto[1,2] ([1]Graduation School of Agricultural Science, Kobe University, [2]JST/JICA, SATREPS)

P46* Variations in N_2-fixation and nitrate absorption among thirteen wild accessions of a nitrogen-fixing plant, *Lotus japonicus*, in response to soil nitrogen availability
○Nozomi Nakata, Naoki Kachi (Graduate School of Science and Engineering, Tokyo University)