The 18th Annual Meeting of Japanese Society of Plant Microbe Interactions

Program of Events
17 September, Wednesday

12:30 Registration

13:30 to 15:00 Opening and Session I

1 Progress in the genome project of *Lotus japonicus* and its related resoures
○Shusei Sato, Takakazu Kaneko, Yasukazu Nakamura, Erika Asamizu, Tomohiko Kato, Yoshikazu Shimoda, Hiroki Nakatsukasa, Shinobu Okamoto, Satoshi Tabata
Kazusa DNA Res. Inst.

2 Activation of LORE1, a retrotransposon in *Lotus japonicus*
○Eigo Fukai[1,3], Yosuke Umehara[1], Hiroshi Kouchi[1], Jens Stougaard[2], Hirochika Hirohiko[1]
[1]NIAS, [2]Aarhus Univ., [3]JSPS research fellow

3 Functional analysis of *Ljsym101* that is involved in infection thread formation
○Koji Yano[1], Satoshi Shibata[1], Wenli Chen[1], Shusei Sato[2], Takakazu Kaneko[2], Niels Sandal[3], Krzysztof Szczyglowski[4], Jens Stougaard[3], Satoshi Tabata[2], Makoto Hayashi[1], Hiroshi Kouchi[1], Yosuke Umehara[1]
[1]NIAS, [2]Kazusa DNA Res.Inst., [3]Aarhus Univ., [4]SCPFRC

4 Analysis of soybeans and wild soybeans *Rj4* gene restricting nodulation by specific strains of *Bradyrhizobia*
○Masaki Hayashi[1], Yuichi Saeki[2], Miki Nishioka[1], Masakazu Takahashi[3], Takashi Sayama[4], Masao Ishimoto[4], Akito Kaga[1], Kyuya Harada[1], Hiroshi Kouchi[1], Yosuke Umehara[1]
[1]NIAS, [2]Miyazaki Univ., [3]KONARC, [4]HNARC

5 Systemic control mechanism of root nodulation via phytochrome signaling
○Akihiro Suzuki[1], Lalith Suriyagoda[1], Akiyoshi Tominaga[1], Yoshimi Hiratsuka[1], Masayo Sasaki[1], Toshiki Uchiumi[2], Mikiko Abe[2], Masatsugu Hashiguchi[3], Ryo Akashi[3], Tatsuya Sakai[4], Sayaka Inada[4], Shusei Sato[5], Takakazu Kaneko[5], Satoshi Tabata[5], Susumu Arima[1]
[1]Saga Univ., [2]Kagoshima Univ., [3]Univ. of Miyazaki, [4]RIKEN, [5]Kazusa DNA Res. Inst.

6 Symbiotic and non-symbiotic calcium oscillation in root hair cell
○Naoya Takeda[1,2], Makoto Hayashi[1], Haruko Imaizumi-Anraku[1], Martin Parniske[2]
[1]NIAS, [2]LMU Munich

Break

15:15 to 16:45 Session II

7 The roles of nodule specific peptides of galegoid legumes on the symbiotic differentiation of *Rhizobium*
○Toshiki Uchiumi[1], Peter Mergaert[2], Willem Van de Velde[2], Benoit Alunni[2], Grigor Zehirov[3], Hironobu Ishihara[4], Adam Kondorosi[2], Eva Kondorosi[2], Ken-ichi Kucho[1], Shiro Higashi[1], Mikiko Abe[1]
[1]Fac. Sci, Kagoshima Univ., [2]Inst. Sci. Végétal-CNRS, France, [3]Inst. Plant Physiol., BAS, Bulgaria, [4]Grad. Schl. Sci. Tech., Kagoshima Univ.

8 Ultrastructural changes in bacteroids of *Lotus japonicus* nodules expressed NCR-, GRP- or SNARP-peptides
○Grigor Zehirov[1], Hironobu Ishihara[2], Benoit Alunni[3], Willem Van de Velde[3], Adam Kondorosi[3], Eva Kondorosi[3], Peter Mergaert[3], Ken-ichi Kucho[2], Mikiko Abe[2] and Toshiki Uchiumi[2]
[1]Institute of Plant Physiology・Bulgaria, [2] Fac. Sci, Kagoshima Univ., [3]Institut de Sciences du Végétal-CNRS・France）

9 Cell surface components of *Mesorhizobium loti* that induce nitric oxide and a class 1 hemoglobin gene in *Lotus japonicus*
○Maki Nagata[1], Ken-ichi Kucho[2], Masahito Hashimoto[1], Daishi Honda[1], Mikiko Abe[2], Shiro Higashi[2], Toshiki Uchiumi[2]
[1]Grad.Sc.Sci & Eng., Kagoshima Univ., [2]Fac. Sci., Kagoshima Univ.

10 *ex* and *in* planta roles of dismutation enzymes of reactive oxygen species in *Mesorhizobium loti* MAFF303099
○Masaki Hanyu[1,2], Kouhei Tejima[1], Yoshikazu Shimoda[3], Shusei Sato[3], Satoshi Tabata[3], and Kazuhiko Saeki[1]
[1]Dept. Biol. Sci., Fac. Sci., Nara Women's Univ., [2]Dept. Biol., Grad. Sc. Sci., Osaka Univ., [3]Kazusa DNA res. Inst.

11 Responses of *Lotus japonicus* to root parasitic plants
○Yukihiro Sugimoto[1], Hiroaki Ueda[1], Mie Kubo[1], Masayoshi Kawaguchi[2], Pyoyun Park[1]
[1]Graduate School of Agricultural Science, Kobe Univ., [2]Graduate School of Science, Tokyo Univ.

12 Analysis of the defense mechanism in Nod Factor signaling
○Tomomi Nakagawa[1], Hanae Kaku[2], Naoto Shibuya[2], Hiroshi Kouchi[1]
[1]NIAS, [2]Meiji Univ.

Break

17:00 to 17:45 Session III

13 Involvement of small heat shock protein in defense responses to bacterial wilt

pathogen *Ralstonia solanacearum*
○Akinroi Kiba[1], Maimbo Milimo[1], Hirofumi Yoshioka[2], Kouhei Ohnishi[3], Yasufumi Hikichi[1]
[1]Facul. Agri.Kochi Univ., [2]Grad. School Agri. Nagoya Univ., [3]Res. Inst. Kochi Univ.

14 Involvement of asparagine-rich protein in defense responses to bacterial wilt pathogen *Ralstonia solanacearum*
○ Daisuke Komori[1], Kouhei Ohnishi[2], Yasuhumi Hikichi[1], Hirohumi Yoshioka[3], Akinori Kiba[1]
[1]Facul. Agri. Kochi Univ., [2]Res. Inst. Kochi Univ., [3]Grad. School Agri. Nagoya Univ.,

15 Ca^{2+}-dependent protein kinase in potato was stimulated by the host specific toxin of *Alternaria solani*
○Furuichi, N. [1], Yokokawa, K. [1], Ichihara,A. [2]
[1]Grad.Sch. Life Sci. and Tech., Niigata Univ., [2]Hokkaido Univ.

17:45 to 18:30 Discussion for presentation No. 1-15

18:45 Welcome reception

18 September, Thursday
9:00 to 9:40 90 seconds presentation of odd number posters

9:40 to 11:10 Poster session (odd number posters)

11:10 to 11:55 Discussion for odd number posters

11:55 to 13:30 Lunch

13:30 to 14:10 90 seconds presentation of even number posters

14:10 to 15:40 Poster session (even number posters)

15:40 to 16:25 Discussion for even number posters

16:30 to 17:30 Special lecture
Ikuko Nishimura (Kyoto Univ., Japan)
Two different types of vacuole-mediated defense strategies against virus and bacterial pathogens

19 September, Friday
9:00 to 10:30 Session IV

16 Screening for the *Frankia* genes specifically induced in nitrogen-fixing cells under free-living codition
○Masatoshi Yamaura[1], Mikiko Abe[2], Toshiki Uchiumi[2], Shiro Higashi[2], Ken-ichi Kucho[2]

Grad.Sc.Sci & Eng., Kagoshima Univ., [2]Fac. Sci., Kagoshima Univ.

17 Detection of rhizobial genes that express during establishment of Lotus-Mesorhizobium symbiosis by a new generation RIVET (Flip RIVET)
○Eriko Ishida[1], Elina Mishima[1,2], Shusei Sato[3], Satoshi Tabata[3], Kazuhiko Saeki[1]
[1]Nara Women's Univ., [2]Osaka Univ., [3]Kazusa DNA Res. Inst.

18 KazusaAnnotation: Open-access database and literature curation system for community-based annotati
○Shinobu Okamoto, Mitsuteru Nakao, Shusei Sato, Takatomo Fujisawa, Yasukazu Nakamura
Kazusa DNA Res.Inst.

19 Construction of a large mutant library of *Mesorhizobium loti* and its application to several functional analyses
○ Yoshikazu Shimoda[1], Hisayuki Mitsui[2], Hiroko Kamimatsuse[2], Kiwamu Minamisawa[2], Yasukazu Nakamura[3], Satoshi Tabata[3], Shusei Sato[3]
[1]NIAS, [2]Tohoku Univ, [3]Kazusa DNA Res. Inst.

20 Image analysis for characterization of *Lotus japonicus* symbiotic mutants: a comparison of the size of infection pockets
○Atsuko Era, TakumiHigaki, Natsumaro Kutsuna, Seiichiro Hasezawa, Masayoshi Kawaguchi
Univ. of Tokyo

21 Membrane localization of *Sinorhizobium fredii* USDA191 NodD1
○Yohei Takada[1], Hari B Krishnan[2], Hitoshi Ashida[1], Ken-ichi Yoshida[1]
[1]Grad. Sch. Agr. Sci., Kobe Univ., [2]Plant Genet. Res. Unit, Univ. of Missouri

10:45 to 11:45 Session V

22 Establishment of transformation method of the nitrogen-fixing bacterium *Frankia*
○Kentaro Kakoi[1], Masatoshi Yamaura[1], Siro Higashi[2], Toshiki Uchiumi[2], Mikiko Abe[2], Ken-ichi Kucho[2]
[1]Grad. Sc. of Sci. and Eng., Kagoshima Univ., [2]Fac. sci., Kagoshima Univ.

23 Genes expressed in leaves of *Medicago truncatula* in response to fungal suppressor from *Mycosphaerella pinodes*
○Kazuhiro Toyoda, Yuriko Kawanishi, Masataka Matsuzaki, Yoshishige Inagaki, Yuki Ichinose, Tomonori Shiraishi
Okayama Univ.

24 Proteome analysis of *B. japonicum* and *M.loti* bacteroids
○Mika Nomura, Dao Van Tan, Shigeyuki Tajima
Kagawa Univ.

25 Revegetation of a mountain-sand mining site using *Lotus corniculatus* inoculated with rhizobia and arbuscular mycorrhizal fungi
○Kazunori Sakamoto, Kouhei Ito
Grad. Sch. Hort., Chiba Univ.

11:45 to 12:30 Discussion for presentation No. 16 – 25.

2008 JSPMI Poster presentation program

Odd numbers, 18 September, Thursday 9:00-11:10
Even numbers, 18 September, Thursday 13:30-15:40

P1 Analysis of endophytic bacteria in *Lotus japonicus*
○Yasuyuki Kawaharada[1], Manabu Itakura[1], Takakazu Kaneko[2], Shima Eda[1], Hisayuki Mitsui[1], Satoshi Tabata[2], Kiwamu Minamisawa[1]
[1]Graduate School of Life Sciences, Tohoku Univ., [2]Kazusa DNA Res. Inst.

P2 Diversity of endophytic bacteria in field-grown soybeans with different nodulation phenotypes
○Takashi Okubo[1], Seishi Ikeda[1], Shusei Sato[2], Takakazu Kaneko[2], Satoshi Tabata[2], Shima Eda[1], Hisayuki Mitsui[1], Kiwamu Minamisawa[1]
[1]Tohoku Univ., [2]Kazusa DNA Res.Inst.

P3 Microbial community analysis of field-grown soybeans with different nodulation phenotypes
Seishi Ikeda, Lynn Esther E. Rallos, Takashi Okubo, Shima Eda, Shoko Inaba, Hisayuki Mitsui, ○Kiwamu Minamisawa
Graduate School of Life Sciences, Tohoku Univ.

P4 Analysis of the complete genome sequence of bacterial endophyte, *Azospirillum* sp. B510
○Takakazu Kaneko[1], Kiwamu Minamisawa[2], Shusei Sato[1], Hiroki Nakatsukasa[1], Hisayuki Mitsui[2], Yasuyuki Kawaharada[2], Yasukazu Nakamura[1], Satoshi Tabata[1]
[1]Graduate School of Life Sciences, Tohoku Univ., [2]Kazusa DNA Res.Inst.

P5 PCR-SSCP analysis of biotic factors in asparagus decline
○Yoichi Matsubara[1], Nahiyan A.S.M. [1], Louisa Robinson[2], Peter Jeffries[2]
[1]Fac. Appl. Biol. Sci., Gifu Univ., [2]Dept. Biosci., Univ. of Kent

P6 Phylogenic and symbiotic characteristics of rhizobia isolated from Vigna marina in Okinawa and their salt trerances
○Kouji Umezawa[1], Norihiko Tomooka[2], Tadashi Yokoyama[3]
[1]Gra. Sch. of Agriculture, Tokyo Univ. of Agriculture and Technology, [2]Division of Genome and Biodiversity Research, National Institute for Agrobiological Sciences, [3]Institute of Symbiotic Science and Technology, Tokyo Univ. of Agriculture and Technology

P7 Molecular ecological analysis of bacteria in rice rizosphere - Application of improved nitrogen-fixing bacteria as biofertilizer
○Takashi Hamasaki, Tetsuhiro Ogawa, Haruhiko Masaki, Makoto Hidaka
Univ. Tokyo

P8 Isolation and identification of root nodulating bacteria from three cowpea (*Vigna unguiculata* L. Walp.) cultivars
○Papa Saliou Sarr[1], Syunsei Fujimoto[2], Takeo Yamakawa[3]
[1]Div. Bioresour. Bioenviron. Sci., Grad. Sch., Kyushu Univ., [2]Sch. Agr., Kyushu Univ., [3]Dep. Plant Resource, Fac. Agr., Kyushu Univ.

P9 Isolation and characteristics for nitrogen fixation of compatible rhizobium with soybean (*Glycine max* L. Merr.) cv. Fukuyutaka
○Masumi Ishiyama[1], Takeo Yamakawa[2], Chiho Nitta[1]

P10 Comparative genomic analysis of rhizobial isolates from *Lotus* nodules.
○Kouhei Tejima[1], Yoshino Hirabayashi[1], Shusei Sato[2], Satoshi Tabata[2], Kousuke Tashiro[3], Satoru Kuhara[3], Kazuhiko Saeki[1]
[1]Nara Women's Univ., [2]Kazusa DNA Res. Inst., [3]Kyushu Univ.

P11 Analysis of structural components and potential effector proteins of *Mesorhizobium loti* Type III Secretion System
○Miku Higashi[1], Saori Okabe[1], Shin Okazaki[1], Yoshikazu Shimoda[2], Shusei Sato[2], Satoshi Tabata[2], Tetsuko Noguchi[1], Kazuhiko Saeki[1]
[1]Nara Women's Unv., [2]Kazusa DNA Res. Inst.

P12 Identification and sequencing of transposases harbored by *Bradyrhizobium japonicum* Is-1
○Shota Aoki[1], Takeo Yamakawa[2]
[1]Div. Bioresour. Bioenviron. Sci., Grad. Sch., Kyushu Univ., [2]Dep. Plant Resource, Fac. Agr., Kyushu Univ.

P13 Signature-tagged mutagenesis of *Mesorhizobium loti* for genetic analysis of its competitive nodulation
○Naoganchaolu Borjigin[1], Yoshikazu Shimoda[2], Hisayuki Mitsui[1], Shima Eda[1], Satoshi Tabata[2], Shusei Sato[2], Kiwamu Minamisawa[1]
[1]Graduate School of Life Sciences, Tohoku Univ., [2]Kazusa DNA Res. Inst.

P14 Effect of Temperature on the Induction of *Bradyrhizobium japonicum* Type III Secretion System
○ Keisuke Takeshima[1], Min Wei[1], Tadashi Yokoyama[2], Kiwamu Minamisawa[3], Hisayuki Mitsui[3], Manabu Itakura[3], Takakazu Kaneko[4], Satoshi Tabata[4], Kazuhiko Saeki[5], Hirofumi Oomori[6], Shigeyuki Tajima[7], Toshiki Uchiumi[8], Mikiko Abe[8], Takuji Ohwada[1]

[1]Obihiro Univ. of Agriculture and Veterinary Medicine, [2]Tokyo Univ. of Agriculture and Technology, [3] Graduate School of Life Sciences, Tohoku Univ., [4]Kazusa DNA Res. Inst., [5]Department of Biology Science, Nara Women's Univ., [6]Department of Biology, Graduate School of Science Osaka Univ., [7]Department of Life Science, Kagawa Univ., [8]Department of Chemistry and Bioscience, Kagoshima Univ.

P15 Characterization of heavy-ion beams as a physical mutagen for microbes
○Hiroyuki Ichida[1], Tomoki Matsuyama[2], Hiromichi Ryuto[1], Nobuhisa Fukunishi[1], Takato Koba[3], Tomoko Abe[1]
[1]Nishina Center and [2]Advanced Science Institute, RIKEN, [3]Graduate School of Horticulture, Chiba Univ.

P16 Expression of *nif* and *fix* in *mcp* deletion mutants of *Sinorhizobium meliloti*
Nobuyuki Kato, Shinji Iida, ○Akira Tabuchi
Shinshu Univ.

P17 A methyl-accepting chemotaxis protein of *Sinorhizobium meliloti* that has effect on nodulation
○Shinji Iida[1], Nobuyuki Kato[1], Akira Tabuchi[1], Birgit Scharf[2]
[1]Shinshu Univ., [2]Regensburg Univ.

P18 Identification of novel isoflavones that exhibit hyphal growth inhibitory activity against AM fungi from white lupin (*Lupinus albus*)
Kohki Akiyama, ○Fumiaki Tanigawa, Hideo Hayashi
Osaka Prefecture Univ.

P19 Identification of degradative intermediates of strigolactones during inactivation in water
Kohki Akiyama, ○Seisuke Ito, Hideo Hyashi
Osaka Prefecture Univ.

P20 Functional analysis of *Sinorhizobium meliloti* outer membrane protein TolC in exopolysaccharide biosynthesis
○Yukiko Mori, Shima Eda, Hisayuki Mitsui, Kiwamu Minamisawa
Graduate School of Life Sciences, Tohoku Univ.

P21Functional analysis of nitrogen fixation related bacteroid proteins
○Ayaka Noda[1], Kumina Nagaoka[1], DAO VAN TAN[1], Hatthaya Arunothayanan[1], Nanthipak Thapanapongworakul[1], Tomoyuki Ueda[1], Kengo kumagai[1], Kimihiko Toma[1], Kiwamu Minamisawa[2], Manabu Itakur[2], Mika Nomura[1], Shigeyuki Tajima[1]
[1]Faculty of Agriculture, Kagawa Univ., [2]Department of Life science, Tohoku Univ.

P22 Exploration of factors for nodule formation by Signature-tagged Mutagenesis in *Bradyrhizobium japonicum*
○ Keisuke Furukawa, Takashi Okubo, Hisayuki Mitsui, Shima Eda, Kiwamu Minamisawa

Graduate School of Life Sciences, Tohoku Univ.

P23 Nodulation of *Rj* soybean depends on the Type III protein secretion system of *Bradyrhizobium elkanii*
○Shin Okazaki[1], Kazuhiko Saeki[1], Michael Göttfert[2]
[1]Nara Women's Univ., [2]Dresden Univ. of Technology

P24 Phenotype analysis of *Mesorhizobium loti* mutated by sigunature-tagged mutagenesis in symbiosis
○Hiroki Nakatsukasa[1], Yoshikazu Shimoda[2], Yasukazu Nakamura[1], Satoshi Tabata[1], Syusei Sato[1]
[1]Kazusa Res. Inst., [2]NIAS

P25 Growth improving through AMF in asparagus decline plants
○Tomohiro Okada, Yoichi Matsubara
Fac. Appl. Biol. Sci., Gifu Univ.

P26 Analysis of ABA-related mutant *enf1* (enhanced nitrogen fixation 1) enhanced nitrogen fixation ability of *Lotus japonicus*
○Akiyoshi Tominaga[1], Toshiki Uchiumi[2], Mikiko Abe[2], Ken-ichi Kucho[2], Masatsugu Hashiguchi[3], Ryo Akashi[3], Shusei Sato[4], Takakazu Kaneko[4], Satoshi Tabata[4], Susumu Arima[1], Akihiro Suzuki[1]
[1]Saga Univ., [2]Kagoshima Univ., [3]Miyazaki Univ., [4]Kazusa DNA Res.Inst.

P27 Class 1 plant hemoglobin mutant lines of *Lotus japonicus*
○Tomohiro Kado[1], Ken-ichi Kucho[2], Mikiko Abe[2], Siro Higashi[2], Toshiki Uchiumi[2]
[1]Grad.Sc. Sci. & Eng., Kadoshima Univ., [2]Dept. Chem & Biosci., Kagoshima Univ.

P28 Isolation of novel Fix$^-$ mutants in *Lotus japonicus*
○Tsuneo Hakoyama[1,2], Mayumi Kobayashi[1], Kina Takenaka[1], Eri Suga[1], Akari Ito[1], Chisa Kato[1], Kazuya Hazuma[1], Koji Yano[2], Yosuke Umehara[2], Hiroshi Kouchi[2], Norio Suganuma[1]
[1]Aichi Univ Educ, [2]NIAS

P29 Genetic diversities of LysM domains of *GmNFR5a* genes isolated from wild (*Glycine soja*) and native (*Glycine max*) soybeans distributing in Japan, China, and Korea
Mika Yamaguchi[1], Norihiko Tomooka[2], ○Tadashi Yokoyama[3]
[1]Gra. Sch. of Agriculture, Tokyo Univ. of Agriculture and Technology, [2]Division of Genome and Biodiversity Research, National Institute for Agrobiological Sciences, [2]Institute of Symbiotic Science and Technology, Tokyo Univ. of Agriculture and Technology.

P30 Characterization of bacteroids in indeterminate-type nodule of *Leucaena glauca*
○Hironobu Ishihara[1], Grigor Zehirov[2], Peter Mergaert[3], Willem Van de V Velde[3], Benoit Alunni[3], Adam Kondorosi[3], Eva Kondorosi[3], Ken-ichi Kucho[4], Mikiko Abe[4],

Shiro Higashi[4], Toshiki Uchiumi[4]
[1]Grad. Schl. Sci. Tech., [2]Inst. Plant Physiol., BAS, Bulgaria, [3]Inst. Sci. Végétal-CNRS, France, [4]Kagoshima Univ. Fac. Sci.

P31 Morphological analyses of powdery mildew infection on *Arabidopsis* at early infection stages
○Noriko Inada[1], [2]Elizabeth Ann Savory[2], Brad Day[2]
[1]NAIST, Grad Schl of Biol Sci, [2]Michigan State Univ.

P32 Analysis of ABC protein responsive to symbiotic nitrogen fixation in *Lotus japonicus*
○Kojiro Takanashi[1], Akifumi Sugiyama[1], Shusei Sato[2], Satoshi Tabata[2], Kazufumi Yazaki[1]
[1]Kyoto Univ., [2]Kazusa DNA Res.Inst.

P33 Functional analysis of SNARE genes in *Lotus japonicus*
○Tomomi Manabe[1], Misa Komi[1], Kumina Nagaoka[1], Yousuke Kanki[1], Erika Asamizu[2], Shusei Sato[3], Satoshi Tabata[3], Mika Nomura[1], Shigeyuki Tajima[1]
[1]Fuculty of Agriculture, Kagawa Univ., [2]Tsukuba Univ., [3]Kazusa DNA Res. Inst.

P34 Metabolic profiling of *Lotus japonicus* inoculated with an ACC deaminase knockout mutant of *Mesorhizobium loti*
○Noriyuki NUKUI[1], Tatsunari NISHI[1], Kensaku IMAI[1], Shin-Ichi AYABE[2], Toshio AOKI[2]
[1]Genaris, Inc., [2]Nihon Univ. College of Bioresource sciences

P35 Host and non-host intraction of the parasitic weed *Striga hermonthica*
○Satoko Yoshida, Ken Shirasu
RIKEN, PSC

P36 Production of substances by alfalfa that mimic bacterial *N*-acyl homoserine lactone signal
○Kenji Kai, Hideo Hayashi
Osaka Prefecture Univ.

P37 Induced tolerance to Fusarium wilt and changes in antioxidative ability in mycorrhizal strawberry plants
○Youhong Li[1,3], Tomo Tsuzuki[1], Yoichi Matsubara[1], Kaneyuki Koshikawa[2]
[1]Fac. Appli. Biol. Sci., Gifu Univ., [2]Gifu Pref. Res. Inst. Agric. Sci., [3]Central South Forestry Univ.

P38 Molecular responses of *Lotus japonicus* to compatible and incompatible root parasites
○Tomoko Doi[1], Yukihiro Hiraoka[1], Sayaka Ohta[2], Yukihiro Sugimoto[1]
[1]Graduate School of Agricultural Science, Kobe Univ. [2]Faculty of Agriculture, Kobe Univ.

P39 *Striga hermonthica*, an incompatible parasitic plant, activates phytoalexin biosynthesis in *Lotus japonicus*

○Hiroaki Ueda[1], Ikue Mukai[2], Yukihiro Hiraoka[1], Yukihiro Sugimoto[1]
[1]Graduate School of Agricultural Science, Kobe Univ., [2]Faculty of Agriculture, Kobe Univ.

P40 Expression analysis of defense genes of *Lotus japonicus* in symbiosis with *Mesorhizobium loti*

○Ei-ichi Murakami[1], Maki Nagata[1], Kucho Ken-ichi[2], Mikiko Abe[2], Akihiro Suzuki[3], Shiro Higashi[2], Toshiki Uchiumi[2]
[1]Grad. Sc. Sci & Eng., Kagoshima Univ., [2]Fac. Sci., Kagoshima Univ., [3]Fac. Agr., Saga Univ.

P41 Systemic regulation of nodulation induced by two *Lotus CLE* genes

○Satoru Okamoto[1], Shusei Sato[2], Satoshi Tabata[2], Masayoshi Kawaguchi[1]
[1] Graduate School of Science, Tokyo Univ., [2] Kazusa DNA Res.Inst.