Daily Schedule and Sessions of 26th JSPMI Annual Meeting

Wednesday, September 7

12:00 p.m. – Registration

1:00 – 1:10 p.m. Opening Ceremony

1:10 – 2:25 p.m. Oral Presentation (5 titles)

1 Secretion of isoflavone from soybean roots and its dynamics in the rhizosphere

*Akifumi Sugiyama[1], Yumi Yamazaki[1], Shoichiro Hamamoto[2], Hisabumi Takase[3], Kazufumi Yazaki[1]

[1]Kyoto Univ., [2]Univ. Tokyo, [3]KyotoGakuen Univ.

2 Dicarboxylate transporter in nodules of *Lotus japonicus*

*Kojiro Takanashi[1,2], Takayuki Sasaki[3], Tomohiro Kan[4], Yuka Saida[4], Miteki Yogo[2], Akifumi Sugiyama[4], Yoko Yamamoto[3], Kazufumi Yazaki[4]

[1]IMS, Shinshu Univ., [2]Faculty Sci., Shinshu Univ., [3]IPSR, Okayama Univ., [4]RISH, Kyoto Univ.

3 Nitric oxide scavenging activity of LjGlb1-1 is involved in nodule senescence of *Lotus japonicas*

*Mitsutaka Fukudome[1], Higashi Sayaka[1], Ken-ichi Kucho[1], Ryujiro Imaizumi[2], Toshio Aoki[2], Toshiki Uchiumi[1]

[1]Graduate School of Science and Engineering. Kagoshima University, [2]Department of Applied Biological Science. Nihon University

4 Analysis of common symbiotic genes in the mycorrhizal symbiosis in *Bletilla striata* (Orchidaceae)

*Chihiro Miura[1], Katsushi Yamaguchi[2], Ryohei Miyahara[1], Tatsuki Yamamoto[1], Takahiro Yagame[3], Haruko Imaizumi-Anraku[4], Shuji Shigenobu[2], Masahide Yamato[5], Hironori Kaminaka[1]

[1] Fac. Agr., Tottori Univ., [2]NIBB, [3]Tsukuba Bot. Gar., Nat. Mus. Nat. Sci., [4]NARO, [5]Fac. Edu., Chiba Univ.

5 Chitin nanofiber promotes legume-rhizobia symbiosis

Sarasa Takashima[1], Naoya Takeda[2], Haruko Imaizumi-Anraku[3], Mayumi Egusa[1], Shinsuke Ifuku[4], *Hironori Kaminaka[1]

[1]Fac. Agr., Tottori Univ., [2]NIBB, [3]NARO, [4] Grad. Schl. Eng., Tottori Univ.

2:25 – 2:40 p.m. Break

2:40 – 3:25 p.m. Oral Presentation (3 titles)

6 Cancelled

7 Rhizobial effector protein inducing the symbiotic incompatibility between *Bradyrhizobium diazoefficiens* and soybean plants

*Masayuki Sugawara[1], Hiroya Iwano[1], Hitoshi Kondo[1], Satoko Takahashi[1], Shohei Kusakabe[1], Shusei Sato[1], Yosuke Umehara[2], Hisayuki Mitsui[1], Kiwamu Minamisawa[1]

[1]Graduate School of Life Sciences, Tohoku University, [2]National Agriculture and Food Research Organization

8 Function of RS-IIL in biofilm formation by *Ralstonia solanacearum* strain OE1-1

*Yuka Mori[1], Kanako Inoue[2], Kenichi Ikeda[3], Hitoshi Nakayashiki[3], Akinori Kiba[1], Kouhei Ohnishi[1], Yasufumi Hikichi[1]

[1]Kochi Univ., [2]Osaka Univ., [3]Kobe Univ.

9 Ralfuranones is implicated in biofilm formations produced by *Ralstonia solanacearum* strain OE1-1

Yuka Mori[1], Kenji Kai[2], Kouhei Ohnishi[1], Akinori Kiba[1], *Yasufumi Hikichi[1]

[1]Kochi Univ., [2]Osaka Pref. Univ.

3:25 – 3:35 p.m. Break

3:35 – 4:30 p.m. General Discussion 1 (oral: 1–9)

4:30 – 5:15 p.m Poster Viewing

5:15 – 6:15 p.m. Special Lecture 1

Takanari Tanabata (Kazusa DNA Res. Inst.)

Development of high-throughput phenotyping technologies using information technologies

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Thursday, September 8

9:00 – 10:00 a.m. Short Presentation (36 poster titles)

10:00 – 10:30 a.m. Photographing

10:30 – 11:30 a.m. Poster Viewing with Authors (*odd numbers*)

11:30 a.m. – 12:30 p.m. Poster Viewing with Authors (*even numbers*)

Lunch/Special Session for Students and Early Carrier Researchers/Committee Meeting

2:00 – 2:55 p.m. General Discussion 2 (poster: P1–15)

2:22 – 3:05 p.m. Break

3:05 – 4:15 p.m. General Discussion 3 (poster: P16–36)

4:15 – 4:30 p.m. Break

4:30 – 5:30 p.m. Special Lecture 2

Shinjiro Yamaguchi (Tohoku Univ.)

Strigolactone biosynthesis and its regulation

6:00 p.m. – Social Gathering

Friday, September 9

9:15 – 10:45 a.m. Oral Presentation (6 titles)

10 Cancelled

11 Physical and molecular assessment of arbuscular mycorrhizal fungi from soil and roots of cassava (*Manihot esculenta* Cranzt) grown in Cameroonian agro-ecosystems

*Papa Saliou SARR[1], Akifumi Sugiyama[1], Kazufumi Yazaki[1], Didier Aimer Begoude[2], Shigeru Araki[3], Eiji Nawata[4]

[1]Research Institute for Sustainable Humanosphere, Kyoto University, Japan, [2]Institute for Agricultural Research and Development (IRAD), Cameroon, [3]Center for African Area Studies, Kyoto University, Japan, [4]Faculty of Agriculture, Kyoto University, Japan

12 Evaluation of symbiotic performances such as root nodule numbers and nitrogen fixation

activities in soybean-*Bradyrhizobium* symbiosis on co-inoculation with soybean bradyrhizobia and soil microorganisms isolated from soybean rhizosphere.

Dai Oono[1], Hiroyuki Nakamura[1], Shin Okazaki[2], Naoko Ohtsu[2], *Tadashi Yokoyama[2]

[1]Tokyo University of Agriculture and Technology, The graduate school of Agriculture, [2]Tokyo University of Agriculture and Technology, Institute of Agriculture.

13 Methane oxidation-dependent $15N_2$ fixation by *Methylosinus* sp. isolated from rice root in a low N paddy field

*Ryo Shinoda[1], Bao Zhihua[2], Kiwamu Minamisawa[1]

[1]Graduate School of Life Sciences, Tohoku University, Sendai, Japan., [2]College of Environmental Science and Resources, InnerMongolia University, China.

14 Continuous cropping changed bacterial communities in soybean shoot

*Shintaro Hara[1], Hirohito Tsurumaru[1,2], Noriyuki Asanome[3], Kiwamu Minamisawa[1]

[1]Tohoku Univ., [2]Kagoshima Univ., [3]Yamagata Int.Agr.Res.Center

15 How do host legume plants reject cheating rhizobia?

*Mai Fukuhara[1,2], Wakana Nishiyama[3], Kana Miyata[4], Nanami Sone[5], Sara Kibi[3], Shigeki Yabe[3], Masayoshi Kawaguchi[1,2], Kazuhiko Saeki[5], Shin Okazaki[6], Tomomi Nakagawa[1,7]

[1]NIBB, [2]SOKENDAI, [3]YSFH, [4]Meiji Univ., [5]Nara Women's Univ., [6]Tokyo University of Agriculture and Technology, [7]Nagoya Univ.

16 Rhizobial gibberellin negatively regulates host nodule number

*Yohei Tatsukami[1,2], Mitsuyoshi Ueda[1]

[1]Grad. Sch. Agric., Kyoto Univ., [2]JSPS Research fellow (DC1)

10:45 – 11:00 a.m. Break

11:00 – 11:50 a.m. General Discussion 4 (oral: 11–16)

11:50 – 12:30 p.m. JSPMI 26th General Meeting & Closing Ceremony

Scientific Posters of JSPMI 26th Annual Meeting

Wednesday, September 7

12:00 p.m. – Poster Set-Up

Thursday, September 8

9:00 – 10:00 a.m. Short Presentation (P1–36)

10:30 – 11:30 a.m. Poster Viewing with Authors (*odd numbers*)

11:30 – 12:30 p.m. Poster Viewing with Authors (*even numbers*)

2:00 – 2:55 p.m. General Discussion (P1–15)

3:05 – 4:15 p.m. General Discussion (P16–36)

Friday, September 9

9:00 – 12:30 p.m. Poster Take-Down

【Posters, 36 titles】

P1 Analysis of caffeine secretion from roots of coffee.
*Tomo Kawakami, Kazufumi Yazaki, Akifumi Sugiyama
Kyoto Univ. RISH

P2 Presence of urea in the nodules, stems and leaf blades of nodulated soybean cultivated in solution without combined nitrogen
*Yuki Ono, Norikuni Ohtake, Kuni Sueyoshi, Takuji Ohyama
Niigata Univ. Grad. School Sci. Tech.

P3 Effect of blue light exposure to *Sesbania rostrate* on nodulation
*Aya Shimomura[1,2], Susumu Arima[1,2], Akihiro Suzuki[1,2]
[1] United Graduate School of Agricultural Sciences, Kagoshima Univ., [2] Faculty of Agriculture, Saga Univ.

P4　Identification of the novel CLE peptide that is involved in autoregulation of nodulation

*Hanna Nishida[1,2,3], Yoshihiro Handa[2], Sachiko Tanaka[2], Takuya Suzaki[3], Masayoshi Kawaguchi[1,2]

[1]SOKENDAI, [2]NIBB, [3]Univ of Tsukuba

P5　Functional analysis of AP2/ERF transcription factors *LjERM1*, *LjERM2*, and *LjERM3* induced during arbuscular mycorrhizal development

*Yusaku Sugimura[1], Yoshihiro Handa[2], Masayoshi Kawaguchi[3], Katsuharu Saito[4]

[1]Interdisciplinary Graduate School of Science and Technology, Shinshu University., [2]Bioengineering Lab., [3]NIBB., [4]Faculty of Agriculture, Shinshu University.

P6　Effect of polymorphism *SEN1* genes on symbiotic phenotype

*Satomi Kawano[1], Katsuya Harada[1], Norio Suganuma[2], Masatsugu Hashiguchi[3], Ryo Akashi[3], Susumu Arima[1], Akihiro Suzuki[1]

[1]Faculty of Agriculture, Saga University, [2]Aichi University of Education, [3]University of Miyazaki・FSRC

P7　Genetic variations of *Lotus japonicus* wild accessions collected in NBRP

*Masatsugu Hashiguchi[1], Hidenori Tanaka[1], Shusei Sato[2], Ryo Akashi[1]

[1]Univ. of Miyazaki, [2]Tohoku Univ.

P8　Effect of salt tolerance in rhizobium and host plant for nodulation under salinity stress condition

*Mingzhuo Wang[1], Hiroko Maita[1], Shohei Kusakabe[1], Yasuko Kawamura[1], Kazuhiko Saeki[2], Shusei Sato[1]

[1]Tohoku Univ., [2]Nara Women's Univ.

P9　Expression profile of plant hemoglobin genes and production of nitric oxide in soybean nodules under waterlogged condition

*Masato araragi, Fukudome Mistutaka, Toshiki Uchiumi

Graduated school of Kagoshima university. department of science and technology

P10　Analysis of symbiont selectivity using wild accessions of *Lotus japonicus*

*Yasuko Kawamura[1], Mingzhuo Wang[1], Shohei Kusakabe[1], Kazuhiko Saeki[2], Shusei Sato[1]

[1]Tohoku Univ., [2]Nara Women's Univ.

P11　Basic and application studies of symbiosis regulatory molecules in root nodule symbiosis and arbuscular mycorrhiza

*Naoya Takeda, Miwa Nagae, Masayoshi Kawaguchi
NIBB/SOKENDAI

P12 Functional analysis of senescence-inducible genes in *Lotus japonicus* nodules
Mallika Duangkhet, Sirinapa Chungopast, Shiteyuki Tajima, *Mika Nomura
Kagawa Univ.

P13 Growth and genetic responses of arbuscular mycorrhizal fungi to bacterial and plant siderophores
*Tomo Miyake, Kenji Kai, Kohki Akiyama
[1]Grad. Sch. Life & Environ. Sci., Osaka Pref. Univ.

P14 Analysis of host dependent spore formation in AM fungi
*Hiromu Kameoka[1,2], Taro Maeda[1,2], Naoya Takeda[1,2,3], Katsushi Yamaguchi[1], Shuji Shigenobu[1,3], Masayoshi Kawaguchi[1,2,3]
[1]NIBB, [2] JST ACCEL, [3]SOKENDAI

P15 Involvement of auxin and gibberellic acid in the regulation of mycorrhizal symbiosis in *Bletilla striata* (Orchidaceae)
*Tatsuki Yamamoto[1], Chihiro Miura[2], Takahiro Yagame[3], Masahide Yamato[4], Hironori Kaminaka[2]
[1]Grad. Sch. Agr., Tottori Univ., [2]Fac. Agr., Tottori Univ., [3]Tsukuba Bot. Gar., Nat. Mus. Sci., [4]Fac. Edu., Chiba Univ.

P16 Biochemical characteristics and plant tissue localization of plant growth-promoting bacteria isolated from sugar beet (*Beta vulgaris* L.)
*Oyungerel Natsagdorj[1], Christine M. Dolores-Santiago[1,2], Hisayo Sakamoto[1], Dennis Marvin O. Santiago[1], Kazuyuki Okazaki[3], Seishi Ikeda[3], Takuji Ohwada[1,2]
[1]Obihiro University of Agriculture and Veterinary Medicine, [2]United Graduate School of Agricultural Science, Iwate University, [3]NARO Hokkaido Agricultural Center

P17 Influence of plant microbe associations on leaf development in *Rorippa aquatica* (Brassicaceae)
*Manabu Itakura, Seisuke Kimura, Kaori Kaminoyama, Takakazu Kaneko
Kyoto Sangyo Univ.

P18 Nitrate-dependent changes in *Arabidopsis* root-associated bacterial communities
*Noriyuki Konishi[1,2], Takashi Okubo[3], Toshihiko Hayakawa[1], Tomoyuki Yamaya[2], Kiwamu

Minamisawa[4]

[1] Grad. Sch. of Agr. Sci, Tohoku Univ. [2]DIARE, Tohoku Univ, [3]NARO NIAES, [4] Grad. Sch. of Life Sci., Tohoku Univ.

P19 Metagenome mapping method discriminates native and inoculant populations of soybean bradyrhizobia in soil

*Kazuma Kanehara[1], Manabu Itakura[2], Yuko Hoshino[3], Hiroko Akiyama[3], Masahiro Hayatsu[3], Yong Wang[3], Hiroto Tsurumaru[4], Kiwamu Minamisawa[1]

[1]Tohoku Univ., [2]Kyoto Sangyo Univ., [3]Agro-Environmental Sciences Inst., [4]Kagoshima Univ.

P20 Host specificity of rhizobia isolated from Japanese alpine legumes

*Tomohiro Kawai[1], Naoto Seo[2], Hajime Ikeda[3], Kazufumi Yazaki[2], Kojiro Takanashi[1,4]

[1]Faculty Sci., Shinshu Univ., [2]RISH, Kyoto Univ., [3]IPSR, Okayama Univ., [4]IMS, Shinshu Univ.

P21 Sequence comparison of the symbiosis island of *Bradyrhizobium elkanii* strains

*Yuki Nishida[1], Manabu Itakura[1], Shusei Sato[2], Takakazu Kaneko[1]

[1]Kyoto Sangyo Univ., [2]Tohoku Univ.

P22 Genus *Burkholderia* is a predominant soybean rhizobia at different agro-conditions in Venezuela

*Artigas R. Maria D.[1], Espana Mingrelia[2], Aguirre Claudia[3], Ohkama-Ohtsu Naoko[5], Sekimoto Hitoshi[4], Yokoyama Tadashi[5]

[1]United Graduate School of Agriculture, Tokyo University of Agriculture and Technology (TUAT)., [2]Institute for Advanced Studies (IDEA), Miranda, Venezuela., [3]National Laboratory of Biofertilizer (INSAI), Aragua, Venezuela., [4]Faculty of Agriculture, Utsunomiya University., [5]Institute of Agriculture, Tokyo University of Agriculture and Technology (TUAT)

P23 Genetic Diversity and Symbiotic Phenotype of Hairy Vetch Rhizobia in Japan

*Kun Yuan, Hiroki Miwa, Maki Iizuka, Tadashi Yokoyama, Yoshiharu Fujii, Shin Okazaki

Tokyo University of Agriculture and Technology

P24 Expression of *mcpS* from *Sinorhizobium meliloti*

Yuzuki Asao, Michiho Ninomiya, Masasi Onozato, *Akira Tabuchi

Shinshu Univ.

P25 Enrichment of *nasS* mutant of *Bradyrhizobium diazoefficiens* with higher N_2O reductase activity to recover naturally-rare *nosZ*++ strains

*Arthur F. Siqueira[1], Manabu Itakura[1,2], Kiwamu Minamisawa[1]
[1]Graduate School of Life Sciences, Tohoku University, [2]Center for Ecological Evolutionary Developmental Biology, Kyoto Sangyo University

P26 Screening for symbiotic mutants of *Mesorhizobium loti* using gene co-expression network analysis

*Tsuneo Hakoyama[1], Yoshikazu Shimoda[2], Makoto Hayashi[1]
[1]RIKEN CSRS, [2]NARO NIAS

P27 Diversity in uptake hydrogenase within group USDA110 of *Bradyrhizobium diazoefficiens*

*Go Watanabe[1], Manabu Itakura[2], Kosuke Mitusya[1], Shintaro Hara[1], Kazuma Kanehara[1], Masayuki Sugawara[1], Mizue Anda[1], Ryo Shinoda[1], Takakazu Kaneko[2,3], Kiwamu Minamisawa[1]
[1]Grad. Sch. of Life Sci., Tohoku Univ., [2]Cntr. for Ecol. Evol. Dev. Biol., Kyoto Sangyo Univ., [3]Fac. of Life Sci., Kyoto Sangyo Univ.

P28 Functional characterization of *Bradyrhizobium oligotrophicum* S58 Cu-type and cd_1-type nitrite reductase genes

*Cristina Sanchez, Kiwamu Minamisawa
Graduate School of Life Sciences, Tohoku University

P29 Recognition and response of soybean plants to rhizobial effector proteins for symbiotic incompatibility

*Hitoshi Kondo, Masayuki Sugawara, Hiroya Iwano, Shusei Sato, Hisayuki Mitsui, Kiwamu Minamisawa
Tohoku Univ.

P30 Analysis of Type III secretion system effectors involved in the interaction between *Bradyrhizobium elkanii* USDA61 and *Lotus japonicus*

*Shohei Kusakabe[1], Takakazu Kaneko[2], Michiko Yasuda[3], Hiroki Miwa[3], Shin Okazaki[3], Shusei Sato[1]
[1]Tohoku Univ., [2] Kyoto Sangyo Univ., [3]Tokyo Univ. of Agriculture and Technol.

P31 Diversity of type III effectors in soybean bradyrhizobia

*Satoko Takahashi, Yuta Suzuki, Masayuki Sugawara, Hisayuki Mitsui, Kiwamu Minamisawa
Tohoku Univ.

P32 Rhizobial type III effector protein regulates soybean nodulation

*Sachiko Masuda, Hiroki Miwa, Michiko Yasuda, Omar M. Faruque, Shin Okazaki
Tokyo University of Agriculture and Technology

P33 Rhizobial type 3 effector proteins regulate nodulation of *Lotus japonicus*

*Hiroki Miwa[1], Michiko Yasuda[1], Sachiko Masuda[1], Takakazu Kaneko[2] Shusei Sato[3], Shin okazaki[1]
[1] Tokyo Univ. Agri. and Tech. [2]Kyoto Sangyo Univ. [3]Tohoku Univ.

P34 Effector-triggered Immunity Determines Host Genotype-specific Incompatibility in Legume-Rhizobium Symbiosis

*Michiko Yasuda[1], Hiroki Miwa[1], Sachiko Masuda[1], Yumiko Takebayashi[2], Hitoshi Sakakibara[2], Shin Okazaki[1]
[1]Tokyo University of Agriculture and Technology, [2]RIKEN CSRS

P35 Molecular analysis of *Bradyrhizobium elkanii* genes involved in symbiotic incompatibility with *Vigna radiate* cv. KPS1 and *Rj4* soybean

*Hien P. Nguyen[1], Faruque M. Omar[1], Hiroki Miwa[1], Takakazu Kaneko[2], Shusei Sato[3], Shin Okazaki[1]
[1]Tokyo University of Agriculture and Technology, [2]Kyoto Sangyo University, [3]Tohoku University

P36 Carlactone-type strigolactones act as a host-derived precolonization signals in arbuscular mycorrhizal symbiosis

*Narumi Mori[1], Xiaonan Xie[2], Koichi Yoneyama[2], Kohki Akiyama[1]
[1]Grad. Sch. Life & Environ. Sci., Osaka Pref. Univ., [2]Ctr. Biosci. Res. & Educ., Utsunomiya Univ.