Daily Schedule and Sessions of 32th JSPMI Annual Meeting

Wednesday, September 27

0:00 p.m. – Registration

1:00 – 1:10 p.m. Opening Ceremony

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

***** Boxed numbers indicate presentations by student.

1 Exploration of major gene co-expression networks in *Ralstonia pseudosolanacearum*
*Masayuki Tsuzuki, Sora Tateda, Tatsuya Ueyama, Yuri Abe, Yuki Terazawa, Akinori Kiba, Kouhei Ohnishi, Yasufumi Hikichi
Fac. of Agric. and Marine Sci. Kochi Univ.

2 Analysis of two factors essential for rice blast induced resistance using salicylic acid
*Haruka Suwazono[1], Haruhiko Inoue[1,2]
[1]Fac. of Sci. and Tech. TUS, [2]NARO

3 Colonization of *Rhizoctonia*-like mycorrhizal fungi systemically induce resistance against bacterial leaf soft rot in *Bletilla striata* (Orchidaceae)
*Galih C. Pujasatria[1], Chihiro Miura[2], Katsushi Yamaguchi[3], Shuji Shigenobu[3], Hironori Kaminaka[2]
[1] United Grad. Schl. Agri. Sci., Tottori Univ., [2]Fac. Agr., Tottori Univ., [3]Nat. Inst. Basic Biol.

4 Phosphorus starvation response mediates microbial infection in *Arabidopsis thaliana*
*Haruna Tadai, Kentaro Okada, Taiga Ishihara, Ryo Chigusa, Yusuke Saijo
Div. of Biosci. Nara Inst. of Sci. and Tech.

5 Microbiota-influenced coordination of root growth and defense
Jana Hucklenbroich[1], Tomohisa Shimasaki[2], *Ryohei Thomas Nakano[1,2]
[1]MPI for Plant Breeding Research, [2]Fac. of Sci., Hokkaido Univ.

2:25 – 2:40 p.m. Break

2:40 – 4:10 p.m. Oral Presentation (6 titles)

***** Boxed numbers indicate presentations by student.

6 Analysis of root colonization and root growth promotion by tomatine degrading *Sphingobium* sp. isolated from tomato rhizosphere
*Kyoko Takamatsu[1], Masaru Nakayasu[1], Shinichi Yamazaki[2,3], Yuichi Aoki[2,4], Atsushi J. Nagano[5,6], Masaru Kobayashi[7], Kentaro Ifuku[7], Kazufumi Yazaki[1], Akifumi Sugiyama[1]
[1]RISH Kyoto Univ., [2]ToMMo Tohoku Univ., [3]RIKEN BRC, [4]GSIS, Tohoku Univ., [5]Agri. Ryukoku Univ., [6]IAB Keio Univ., [7]Grad. Agri., Kyoto Univ.

7 Exploration and isolation of a microbial consortium of methane-oxidizing bacteria in rice
*Rina Shinjo[1], Fumika Oe[1], Ma Xuping[2], Daichi Fukushima[2], Masako Kajiura[2,3], Takeshi Tokida[2], Shun Hashimoto[4], Hisayuki Mitsui[4] Shusei Sato[4], Takeshi Watanabe[1], Susumu Asakawa[1]
[1]Grad. Sch. of Bioagric. Sci. Nagoya Univ., [2]Inst. for Agro-Environ. Sci. NARO., [3]Res. Cent. for Agric. Inf. Tech. NARO., [4]Grad. Sch. of Life Sci. Tohoku Univ.

8 Rice root colonization by diverse methanotroph strains and the effect of oxygen on their nitrogen fixing activity
*Abdela Argen Adem[1], Taiho Komatsu[1], Rina Shinjo[2], Fumika Oe[2], Sachiko Masuda[3], Arisa Shibata[3], Ken Shirasu[3], Takeshi Watanabe[2], Susumu Asakawa[2], Shintaro Hara[1], Kiwamu Minamisawa[1], Hisayuki Mitsui[1], Shusei Sato[1]
[1]Grad. Sch. of Life Sci. Tohoku Univ., [2]Grad. Sch. of Bioagri. Nagoya Univ., [3]RIKEN CSRS

9 Active nitrogen fixation by sugar- and methane-utilizing bacteria in the unelongated stem of rice
*Takanori Okamoto[1,2], Yukina Hotta[1], Rina Shinjo[1], Yoko Masuda[3], Arisa Nishihara[4], Motohiko Kondo[1]
[1]Grad. Sch. of Bioagri. Sci. Nagoya Univ., [2]JIRCAS, [3]Grad. Sch. of Agri. and Life Sci. Univ. of Tokyo, [4]BPRI. AIST

10 The regulation of gene expressions based on a specific motif of NIN transcription factor
Shohei Nosaki[1,2], *Momona Noda[1], Kenji Miura[1,2], Takuya Suzaki[1,2]
[1]Fac. Life. Sci., Univ. Tsukuba., [2]T-PIRC, Univ. Tsukuba

11 QTL analysis for root microbiome by using recombinant inbred lines of *Lotus*
*Masaru Bamba, Shusei Sato
Grad. Sch. of Life Sci. Tohoku Univ.

4:10 – 4:25 p.m. Break

4:25 – 5:45 p.m. General Discussion 1 (oral: 1 – 11)

5:45 p.m. – Poster Viewing

Thursday, September 28

9:00 – 10:10 a.m. Short Presentation (32 poster titles)

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

11:30 – 0:30 p.m. Poster Viewing with Authors (*even numbers*)

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

1:45 – 2:35 p.m. General Discussion 2 (P1 – P16)

2:35 – 2:50 p.m. Break

2:50 – 3:40 p.m. General Discussion 3 (P17 – P32)

3:40 – 4:00 p.m. Break

4:00 – 4:45 p.m. Special Lecture 1
極域の植物病原微生物の種類や生態から見えてくるもの（仮題）
Dr. Motoaki Tojo (Osaka Metropolitan University)

4:45 – 5:00 p.m. Break

5:00 – 5:45 p.m. Special Lecture 2
サンゴ・褐虫藻に作用する共在細菌の機能（仮題）
Dr. Natsuko Miura (Osaka Metropolitan University)

5:45 – 6:00 p.m. Break

6:00 p.m. – Social Gathering

Friday, September 29
9:00 – 10:30 a.m. Oral Presentation (6 titles)

12 Exploration of soil bacteria and rhizobia reducing nitrous oxide by citizen science
Satoshi Ohkubo[1], Yuich Aoki[2,3], Hiromi Kato[1,4], Masaru Banba[1], Shusei Sato[1], *Kiwamu Minamisawa[1]
[1]Grad. Sch. of Life Sci.Tohoku Univ., [2]ToMMo Tohoku Univ., [3]Grad. Sch. of Inf. Sci. Tohoku Univ., [4]Inst. for Agro-Environmental Sci. NARO

13 Optimization of rhizobial infection regulated by phosphatidylinositol transport protein
Hiroto Tanaka[1], Toshiki Ishikawa[2], Yoji Kawano[3], Naoya Takeda[1], *Akira Akamatsu[1]
[1]Grad. Sch. of Bio. and Env. Sci. Kwansei Gakuin Univ., [2]Fac. of Sci. and Tech. Saitama Univ., [3]Okayama Univ. IPSR

14 Periodic cytokinin response during the early stage of *Lotus japonicus* nodule symbiosis
*Takashi Soyano, Masayoshi Kawaguchi
NIBB, SOKENDAI

15 Role of cysteinyl-tRNA synthetase of *Mesorhizobium loti* in root nodule symbiosis
*Mitsutaka Fukudome[1], Asuka Ikuta[1], Toshiki Uchiumi[2], Mika Nomura[1]
[1]Fac. of Agri. Kagawa Univ., [2]Grad. Sch. Of Sci. and Eng. Kagoshima Univ.

16 Development of fungal disease control strategies using gentian coexisting bacteria
*John Jewish A. Dominguez[1], Rika Ozawa[2], Mari Iwai[1], Yoshiko Abe[1], Gen-ichiro Arimura[3], Masahiro Nishihara[1], Koki Fujisaki[1]
[1]Iwate Biotech. Res. Ctr., [2]Ctr. for Ecol. Res. Kyoto Univ., [3]Tokyo Univ. of Sci.

17 Relationship between cold tolerance and lipid composition in arbuscular mycorrhizal fungi
Yusuke Fujiwara, Genki Ozawa, *Katsuharu Saito
Shinshu Univ.

10:30 – 10:45 a.m. Break

10:45 – 11:25 a.m. General Discussion 4 (oral: 12 – 17)

11:25 – 11:40 a.m. Break

11:40 – 0:10 p.m. JSPMI 32th General Meeting & Closing Ceremony

Scientific Posters of JSPMI 32th Annual Meeting

Wednesday, September 27
0:00 p.m. – Poster Set-Up

Thursday, September 28
9:00 – 10:15 a.m. Short Presentation (all posters)

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

11:30 – 0:30 p.m. Poster Viewing with Authors (*even numbers*)

1:45 – 2:35 p.m. General Discussion 2 (P1 – P16)

2:50 – 3:40 p.m. General Discussion 3 (P17 – P32)

Friday, September 29
9:30 – 0:10 p.m. Poster Take-Down

【Posters, 32 titles】
＊Boxed poster numbers indicate presentations by student.

P1 Analysis of the Effects of Isoflavone Structural Diversity on Soybean-Rhizosphere Bacteria Interactions
*Tomoaki Sato[1], Hinako Matsuda[1], Kyoko Takamatsu[1], Noritaka Aoki[1], Akinori Ando[2], Shigenobu Kishino[2], Jun Ogawa[2], Sachiko Masuda[3], Arisa Shibata[3], Ken Shirasu[3], Tomohisa Shimasaki[4], Kazufumi Yazaki[1], Akifumi Sugiyama[1]
[1]RISH Kyoto Univ., [2]Grad. Sch. of Agri. Kyoto Univ., [3]RIKEN CSRS, [4]Grad. Sch. of Sci. Hokkaido Univ.
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P2 Accumulation of flavones and flavonols in soybean roots and their effect on rhizosphere microbiota
*Koshiro Matsumura[1], Hinako Matsuda[1], Kyoko Matsumura[1], Shinich Yamazaki[2,3], Hisabumi Takase[4], Yoshiharu Fujii[5], Yuichi Aoki[2], Nozomu Sakurai[6,7], Kazufumi Yazaki[1], Akifumi Sugiyama[1]
[1]RISH, Kyoto Univ., [2] ToMMo, Tohoku Univ., [3]RIKEN BRC, [4]KUAS, Bio., [5]Fac. of Agric., Tokyo Univ. of Agric. and Tech., [6]NIG, [7]KAZUSA DNA Res. Inst.

P3 Analysis of α-tomatine secretion and rhizosphere microbiome in tomato plants grown under high temperature stress
*Eriko Iwata[1], Kyoko Takamatsu[1], Shinichi Yamazaki[2,3], Yuichi Aoki[2,4], Shoko Tsuji[5], Masaru Kobayashi[5], Kentaro Ifuku[5], Kazufumi Yazaki[1], Akifumi Sugiyama[1]
[1]RISH, Kyoto Univ., [2]ToMMo, Tohoku Univ., [3]RIKEN BRC, [4]GSIS, Tohoku Univ., [5]Grad. Agri., Kyoto Univ.

P4 Modulation of AM fungal community composition by synthetic canonical SL analogs
*Yuzuha Hara, Kohki Akiyama
Grad. sch. of Agric. OMU.

P5 Functional analysis on a novel ralufranone-induced transcriptional regulator in *Ralstonia pseudosolanacearum* strain OE1-1.
*Tatsuya Ueyama[1], Yuki Terazawa[1], Sora Tateda[1], Akinori Kiba[1], Kenji Kai[2], Kouhei Ohnishi[1], Yasuhumi Hikichi[1], Masayuki Tsuzuki[1]
[1]Fac. of Agric. and Mar. Sci., Kochi Univ., [2]Grad. Sch. of Agric., Osaka Met. Univ.

P6 Regulation of quorum sensing-dependent genes by Ferric uptake regulator in *Ralstonia pseudosolanacearum* strain OE1-1
*Sora Tateda, Yuki Terazawa, Tatsuya Ueyama, Akinori Kiba, Kouhei Ohnishi, Yasufumi Hikichi, Masayuki Tsuzuki
Fac. of Agric. and Mar. Sci., Kochi Univ.

P7 Construction of a heterogeneous production system of a lipopeptide compound from *Ralstonia solanacearum* using synthetic biology
*Minami Yokoyama[1], Kanta Morishige[1], Kenji Kai[2], Naotaka Tanaka[1], Mitsuaki Tabuchi[1]
[1]Fac. of Agric. Univ. of. Kagawa, [2]Fac. of Agric. Univ. of. Osaka Metropolitan

P8 Functional analysis of the plasma membrane localization-dependent activation mechanism of *Ralstonia solanacearum* effector RipAA
*Eri Nakayama[1], Atsushi Hirata[1], Takato Kitasono[1], Saki Shirai[1], Laia Armengot[2], Naotaka Tanaka[3], Marc Valls[2], Mitsuaki Tabuchi[3]
[1]Grad. Sch. of Agric. Kagawa Univ, [2]University of Barcelona, [3]Fac. of Agric. Univ. of. Kagawa

P9 Searching for RsbQ ligand produced by *Bacillus subtilis*
*Reiji Ushiro, Kohki Akiyama
Grad. Sch. of Agric. OMU

P10 Comprehensive functional analysis of effectors of olive bacterial wilt using a yeast expression system
*Yukinao Wake[1], Sho Suwa[2], Mana Toshio[1], Shoko Fujiwara[1], Yoshio Kimura[2], Naotaka Tanaka[2], Mitsuaki Tabuchi[2]
[1]Grad. Sch. of Agric. Kagawa Univ., [2] Fac. of Agric. Kagawa Univ.

P11 The proteomic analysis of secretion protein derived from bacterial endophyte
*Michiko Yasuda[1], Sachiko Masuda[2], Akiko Yoshida[1], Shin Okazaki[1], Naoko Ohtsu-Okama[1]
[1]Fac. of Agric. Univ. of Agric. and Tech., [2]RIKEN CSRS

P12 Anti-SARS-CoV-2 agents in *Artemisia* endophytic fungi and their abundance in *Artemisia vulgaris* tissue
*Shoji Maehara[1], Shogo Nakajima[2], Koichi Watashi[2], Andria Agusta[4], Toshiyuki Hata[1], Kento Takayama[1]
[1]Faculty of Pharmacy and Pharm. Sci., Fukuyama Univ., [2]NIID

P13 Presumed mechanism of resistance to bacterial leaf blight disease of a *Kas-II* mutant rice
*Ryota Okamoto[1], Yuuki Gatayama[2], Tomoaki Muranaka[3], Satoru Taura[4], Katsuyuki Ichitani[3], Toshiki Uchiumi[1]
[1]Grad. Sch. Sci. Eng. Kagoshima Univ., [2]Grad. Sch. Agri. Forest. Fish. Kagoshima Univ., [3]Fac. Agri. Kagoshima Univ., [4]Cent. Adv. Sci. Res. Pro. Kagoshima Univ.

P14 Unraveling the mechanism underlying growth promotion by chitin oligosaccharides in *Arabidopsis thaliana*
*Ayae Sakai[1], Hironori Kaminaka[2]
[1]Grad Sch. Agr., Tottori Univ., [2]Fac. Agr., Tottori Univ.

P15 Receptor-like Kinases involved in the regulation of Arbuscular Mycorrhiza in *Lotus japonicus*
*Rin Mamiya, Hayato Fukuda, Misaki Hayata, Keisuke Isoshima, Akira Akamatsu, Naoya Takeda
Grad. Sch. of Sci. and Tech., Kwansei Gakuin Univ.

P16 The role of OsSYMRK and OsCERK1 for the initiation of AM symbiosis
*Moe Hosotani[1], Wendi Jiang[1], Ryou Takaoka[1], Mirei Furuta[1], Yuka Asai[1], Akira Akamatsu[2] Naoya Takeda[2], Hanae Kaku[1], Kana Miyata[1,3]
[1]Agri. Meiji Univ., [2]Bio. and Env. Sci. Kwansei Gakuin Univ., [3]Life Sci. Toyo Univ.

P17 Functional analysis of serine protease inhibitor *LjSerpin1* in arbuscular mycorrhiza
*Kaita Sugimoto, Ami Shindo, Misuzu Sato, Akira Akamatsu, Naoya Takeda
Kwansei Gakuin Univ.

P18 Comparative analyses between tomato and *Lotus japonicus*, that form distinct arbuscular mycorrhizal morphotypes by inoculation of *Gigaspora margarita*
*Hikaru Saito[1], Takaya Tominaga[2], Luxi Yao[3], Mayumi Egusa[3], Hironori Kaminaka[3]
[1]Dept. Agr. Sci., Grad. Sch. Sust. Sci., Tottori Univ., [2]United Grad. Sch. Agr., Tottori Univ., [3]Fac. Agr., Tottori Univ.

P19 The effect of RNAi targting aphid's symbiotic organ-specific cysteine-rich peptides
*Taisei Kajihara[1], Jiang Xiaoyu[2], Ryuki Takami[2], Shuji Shigenobu[3], Toshiki Uchiumi[1]
[1]Grad. Sch. of Sci. and Eng. Kagoshima Univ., [2]Fac. of Sci. Kagoshima Univ., [3]NIBB

P20 How does a plant root-parasitic cyst nematode induce syncytium in the host plant root?
*Mina Ohtsu
NAIST, JST Sakigake

P21 Response of non-leguminous plants during rhizobium inoculation
*Marika Umetsuki[1], Yoshikazu Shimoda[2], Isobe Sachiko[3], Shigeru Hanano[3], Hideki Hirakawa[3], Akiyoshi Tominaga[4], Takuya Suzaki[5], Takashi Soyano[6], Masayoshi Kawaguchi[6], Shusei Sato[7], Toshiki Uchiumi[1]
[1]Grad Sch. Sci. Eng., Kagoshima Univ., [2]Inst. Agrobiol. Sci., NARO., [3]Kazusa DNA Res. Inst., [4]Fac. Agric., Shizuoka Univ., [5]Life Environ Sci., Tsukuba Univ., [6]NIBB, [7]Grad. Sch. Life Sci., Tohoku Univ.

P22 Analysis of symbiotic genes in *Oxytropis*-rhizobia symbiosis
*Ibuki Nishikawa, Kojiro Takanashi
Fac. of Sci. Shinshu Univ.

P23 HrcA of *Rhizobium* sp. Chiba-1 regulates symbiotic nodulation
*Mao Sasaki[1], Yasuyuki Kawaharada[1,2]
[1]Iwate Univ. Grad. Sch., [2]Iwate Univ. of Agric.

P24 Characterization of symbiotic nodulation between *Rhizobium* sp. Chiba-1 and *Lotus* spp.
*Yuhei Chiba[1], Sachiko Masuda[2], Arisa Shibata[2], Ken Shirasu[2], Yasuyuki Kawaharada[1,3]
[1]UGAS. Iwate Univ., [2]RIKEN・CSRS, [3]Fac. of Agric. Iwate Univ.

P25 Cyclophilins facilitate rhizobial infection
*Takashi Goto[1], Masayoshi Kawaguchi[1,2]
[1]NIBB, [2]SOKENDI

P26 Functional analysis of *Wall-associated kinase1* in root nodule symbiosis
*Shintaro Hada, Mayu Kawasaki, Akira Akamatsu, Naoya Takeda
Grad. Sch. of Sci.and Tech., Kwansei Gakuin Univ.

P27 Expression analysis of leghemoglobin genes during symbiotic nodulation in *Glycine max*
*Masato Araragi, Hiroka Hori, Yasuyuki Kawaharada
Fac. of Agric. Iwate Univ.

P28 Regulation of rhizobial symbiosis after the establishment of endosymbiosis by *PINK4* gene in *Lotus japonicus*

*Haruka Arashida[1], Tomomi Nakagawa[2], Shun Hashimoto[1], Masaru Bamba[1], Hisayuki Mitsui[1], Shusei Sato[1].
[1]Grad. Sch. of Life Sci. Tohoku Univ., [2]Yokohama Science Frontier High School

P29 Effect of nitrate application on acetylene reductant and hydrogen evolution activity in split soybean root system

*Mana Ishikawa, Takuji Miyamoto, Steven Orito, Kuni Sueyoshi, Norikuni Ohtake
Fac. of Agric. Niigata Univ.

P30 Effect of Different Nitrogen Fertilization for Soybean on the Presence or Absence of *hupS* and *hupL* Genes in Infected Nodules

*Norikuni Ohtake, Ayaka Tanbo, Mana Ishikawa, Steven Orito, Kuni Sueyoshi
Fac. of Agric. Univ. of Niigata

P31 Effect of root nodule symbiosis on biomass and glycyrrhizic acid production in medicinal plant *Glycyrrhiza*

*Shion Yamamoto[1,2], Ikuko Kusaba[3], Takahiro Nakao[3], Aya Shiomura[4], Susumu Arima[4], Kanzi Ishimaru[4], Mareshige Kojoma[5], Akihiro Suzuki[1,3,4]
[1]United Grad. Sch. of Agric. Sci. Kagoshima Univ., [2]United Grad. Sch. of Agric. Sci. Saga Univ., [3]Grad. Sch. of Agric. Saga Univ., [4]Fac. of Agric. Saga Univ., [5]Fac. of Pharmaceutical Sci., Health Sci. Univ. of Hokkaido

P32 Analyzing the regulatory mechanism of rice-bacterial symbiosis for adaptation to low nutrient soils

* Masahiro Nagayasu[1], Kanako Inoue[1], Syota Kido[1], Masako Fuji [1], Yushin Suzuki [1], Takumi Murakami [2], Mutsumi Watanabe [1], Takayuki Tohge[1], Yusuke Saijo[1]
[1] Div. of Bio. Sci., NAIST, [2] Dept. of Life Sci. and Tech., Tokyo Institute of Technology