Daily Schedule and Sessions of 31st JSPMI Annual Meeting

**Thursday, September 8**

9:30 – 9:40 a.m. Opening Ceremony

9:40 – 10:40 a.m. Oral Presentation (4 titles)

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

1 Understanding the infection mechanism of *Ralstonia pseudosolanacearum* strain OE1-1 by comparative transcriptome analysis
*Masayuki Tsuzuki[1], Chika Takemura[1], Wakana Senuma[1], Yuki Terazawa[1], Sora Tateda[1], Yuri Abe[1], Akinori Kiba[1], Kouhei Ohnishi[1], Kenji Kai[2], Yasufumi Hikichi[1]
[1]Fac. of Agric. and Mar. Sci., Kochi Univ., [2]Grad. Sch. of Agric., Osaka Met. Univ.

2 Damage-associated Pep peptides promote both immunity and growth during plant adaptation to phosphate deficiency
*Natsuki Tsuchida, Lee Tae Hong, Kentaro Okada, Kei Hiruma, Shigetaka Yasuda, Yusuke Saijo
Nara Institute of Science and Technology

3 OsPep peptides play a critical role in beneficial interactions with bacteria in rice roots
*Masahiro Nagayasu[1], Masako Fuji[1], Shota Kido[1], Yushin Suzuki[1], Asahi Adachi[1], Takumi Murakami[2], Yusuke Saijo[1]
[1]Nara Institute of Science and Technology, [2]National Institute of Genetics

4 Secoiridoid glycosides are involved in gibberellin-promoted arbuscular mycorrhizal symbiosis in *Eustoma grandiflorum*
*Takaya Tominaga[1], Kotomi Ueno[2], Katsushi Yamaguchi[3], Shuji Shigenobu[3], Hironori Kaminaka[2]
[1]United Grad. Sch. of Agric. Tottori Univ., [2]Fac. of Agric. Tottori Univ., [3]NIBB

10:40 – 10:55 a.m. Break

10:55 – 11:55 a.m. Oral Presentation (4 titles)

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

5 Auxin methylation in root nodule symbiosis
*Takashi Goto[1,2], Takashi Soyano[1,2], Meng Liu[2], Tomoko Mori[2], Masayoshi Kawaguchi[1,2]
[1]Sch. of Life Sci. The Grad. Univ. for Advanced Studies (SOKENDAI), [2]NIBB

6 Regulation of periodic gene expression induced depending on Nod factor receptors
*Takashi Soyano, Masayoshi Kawaguchi
NIBB, Sch. of Life Sci. The Grad. SOKENDAI

7 Biological interactions between Lotus japonicus and their natural habitat soil microbiomes
*Masaru Bamba[1], Turgut Y. Akyol[2], Johan Quilbe[2], Stig U. Andersen[2], Shusei Sato[1]
[1]Grad. Sch. of Life Sci.Tohoku Univ., [2]Mol. Biol. Genet. Aarhus Univ.

8 Advantage of nitrogen fixation enhanced type of *SEN1*
*Aya Shimomura[1], Yuki Nishida[2], Kirin Takemura[1], Norio Suganuma[3], Satoshi Watanabe[1], Toyoaki Anai[4], Susumu Arima1, Akiyoshi Tominaga[5], Michio Onjo[6], Akihiro Suzuki[1]
[1]Fac. of Agric. Saga Univ., [2]Grad. Sch. of Agric. Saga Univ., [3]Aichi Univ. of Educ., [4]Grad. Sch. of Agric. Kyushu Univ., [5]Fac. of Agric. Shizuoka Univ., [6]Fac. of Agric. Kagoshima Univ.

noon – 1:00 p.m.
Special Session for Students and Early Carrier Researchers

1:25 – 2:10 p.m. Oral Presentation (3 titles)

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

9 Control of microbial infection by the dynamics of phosphatidylinositol
Hiroto Tanaka[1], Toshiki Ishikawa[2], Yoji Kawano[3], NaoyaTakeda[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

10 Production of Reactive sulfur species by cystathionine gamma-lyase of *Mesorhizobium loti* during root nodule symbiosis
*Mitsutaka Fukudome[1,3], Yuta Shimokawa[2], Toshiki Uchiumi[2], Masayoshi Kawaguchi[3]
[1]Fac. of Agri. Kagawa Univ., [2]Grad. Sch. of Sci. and Eng. Kagoshima Univ., [3]NIBB

11 Cancelled

12 Functional analysis of *PINK4* gene of Lotus japonicus in symbiont selection after the establishment of endosymbiosis
*Haruka Arashida[1], Tomomi Nakagawa[2], Hiroko Maita[3], Shohei Kusakabe[1], Masaru Bamba[1], Yusdar Mustamin[1], Shusei Sato[1]
[1]Grad. Sch. of Life Sci. Tohoku Univ., [2]Yokohama Science Frontier High School, [3]Kazusa DNA Research Institute

2:10 – 2:30 p.m. Break

2:30 – 4:10 p.m. General Discussion 1 (oral: 1 – 12)

4:10 – 4:30 p.m. Break

4:30 – 5:30 p.m. Special Lecture
“Use of a plant virus vector for basic and applied researches in plant science”
Dr. Nobuyuki Yoshikawa (Emeritus Professor, Iwate University)

5:30 p.m. – 6:00 p.m. Committee Meeting

**Friday, September 9**

9:00 – 10:00 a.m. Short Presentation (25 poster titles)

10:00 – 11:00 a.m. Poster Viewing with Authors (*odd numbers*)

11:00 – 12:00 p.m. Poster Viewing with Authors (*even numbers*)

12:00 p.m. – 1:00 p.m. Break

1:00 – 2:00 p.m. General Discussion 2 (P1 – P12)

2:00 – 2:10 p.m. Break

2:10 – 3:10 p.m. General Discussion 3 (P13 – P25)

3:10 – 3:40 p.m. JSPMI 31st General Meeting & Closing Ceremony

4:00 – 6:20 p.m.
Mini Symposium【2022 International Mini Symposium on Plant-Microbe Interactions】

Speakers and Lecture titles:
Dr. Shu-Yi Yang (Plant Biology, National Taiwan University)
Arbuscular mycorrhizal symbiosis enhances tomato lateral root formation by modulating CEP2 peptide expression

Dr. Macarena Marin (Ludwig Maximilian University of Munich)
Nodule endophytes and how they shape the root nodule symbiosis

Dr. Dugald Reid (Molecular Biology and Genetics, Aarhus University)
Distinct transcriptional signatures define infection thread success or failure

Dr. Takaki Maekawa (Plant Sciences, University of Cologne)
Mechanistic parallels between plant and animal immune systems ~A tale of the mixed lineage kinase domain-like (MLKL) protein-mediated immunity~

6:30 p.m.– Online Social Gathering

Scientific Posters of JSPMI 31st Annual Meeting

**Friday, September 9**

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|---|---|
| 9:00 – 10:00 a.m. | Short Presentation (all posters) |
| 10:00 – 11:00 a.m. | Poster Viewing with Authors (*odd numbers*) |
| 11:00 – 12:00 p.m. | Poster Viewing with Authors (*even numbers*) |
| 1:00 – 2:00 p.m. | General Discussion 2 (P1 – P12) |
| 2:10 – 3:10 p.m. | General Discussion 3 (P13 – P25) |

【Posters, 25 titles】
＊Boxed poster numbers indicate presentations by student.

P1 Involvement of Ferric uptake regulator in the Fe(II)-dependent regulation of siderophore activity in *Ralstonia pseudosolanacearum* strain OE1-1
*Sora Tateda[1], Yuki Terazawa[1], Hiroto Nakajima[2], Akinori Kiba[1], Kouhei Ohnishi[1], Kenji Kai[2], Yasuhumi Hikichi[1], Masayuki Tsuzuki[1]
[1]Fac. of Agric. and Mar. Sci., Kochi Univ., [2]Grad. Sch. of Agric., Osaka Met. Univ.

P2 Cancelled

P3 Expression of pathogenesis related genes in mutant line XM14 resistant to rice bacterial leaf blight
*Ryota Okamoto[1], Yuki Gatayama[2], Tomoaki Muranaka[2], Satoru Taura[3], Katsuyuki Ichitani[2], Toshiki Uchiumi[1]
[1]Grad. Sch. Eng. Kagoshima Univ., [2]Fac. Agri. Kagoshima Univ., [3]CASRP. Kagoshima Univ.

P4 CEP peptides, a family of conserved, secreted peptides that negatively modulate Arabidopsis immunity III. Potential role during PTI and ETI
*Chiaki Itoh[1], Haruka Hasegawa[1], Aprilia Nur Fitrianti[1], Hidenori Matsui[1,3] Mikihiro Yamamoto[1,3], Yoshiteru Noutoshi[1,3], Yuki Ichinose[1,3], Tomonori Shiraishi[2], Kazuhiro Toyoda[1,3]
[1]Grad. Sch. of Environ. Life Sci. Okayama Univ., [2]RIBS Okayama [3]Fac. of Environ. and Life Sci. Okayama Univ.

P5 CEP peptides, a family of conserved, secreted peptides that negatively modulate Arabidopsis immunity IV. CEP peptide attenuates SA-mediated immunity
*Haruka Hasegawa[1], Chiaki Itoh[1], Aprilia Nur Fitrianti[1], Hidenori Matsui[1,3], Mikihiro Yamamoto[1,3], Yoshiteru Noutoshi[1,3], Yuki Ichinose[1,3], Tomonori Shiraishi[2], and Kazuhiro Toyoda[1,3]
[1]Grad. Sch. of Environ. Life Sci., Okayama Univ., [2]RIBS Okayama, [3]Fac. of Environ. Life Sci., Okayama Univ.

P6 Chitin-induced systemic disease resistance is mediated by cell wall functions in Arabidopsis
*Hisako Yamagata[1], Kaoru Osawa[2], Momoko Takagi[2], Akira Mine[3], Shinsuke Ifuku[4], Hironori Kaminaka[2]
[1]Grad. Sch. Agr., Tottori Univ., [2]Fac. Agr., Tottori Univ., [3]Grad. Sch. Agr., Kyoto Univ., [4]Grad. Sch. Eng., Tottori Univ.

P7 Phylogenetic analysis and new classification of *Lotus japonicus* lysin motif receptor like kinases
*Hafijur Ruman[1], Yasuyuki Kawaharada[1,2]

[1]Iwate Univ. UGAS, [2]Iwate Univ. of Agric.

P8 LysM Receptor-like Kinases of Lotus japonicus regulate Arbuscular Mycorrhizal Symbiosis
*Hayato Fukuda, Misaki Hayata, Keisuke Isoshima, Akira Akamatsu, Naoya Takeda
Kwansei-Gakuin Univ.

P9 Functional analysis of gibberellin-responsive cis-regions of arbscular mycorrhizal symbiosis genes in Lotus japonicus
*Shiomi Hosaka, Tatsuya Ibushi, Kyousuke Omichi, Akira Akamatsu, Naoya Takeda
Kwansei-Gakuin Univ.

P10 Effects of secoiridoid glycosides derived from gentians on arbuscular mycorrhizal symbiosis
*Hikaru Saito[1], Takaya Tominaga[2], Hironori Kaminaka[3]
[1]Grad. Sch. Agr., Tottori Univ., [2]United Grad. Sch. Agr., Tottori Univ., [3]Fac. Agr., Tottori Univ.

P11 Effect of inoculation of arbuscular mycorrhizal fungi on the growth of the parasitic plant *Pedicularis* (Orobanchaceae)
*Tomohiro Kawai[1,2], Kee Yee Jia[1], Motomi Ito[2], Satoko Yoshida[1]
[1]Grad. Sch. Sci. and Tech. NAIST, [2]Grad. Sch. Art. and Sci. Univ. Tokyo

P12 VTC4 catalyzes the polymerization and depolymerization of polyphosphate in arbuscular mycorrhizal fungi
*Nguyen Thi Cuc, Katsuharu Saito
Fac. of Agric. Shinshu Univ.

P13 Isolation and identification of putative didehydro-orobanchol isomers producted by tomato (*Solanum lycopersicum*)
*Rina Wakita[1], Xiaonan Xie[2], Kohki Akiyama[1]
[1]Grad. Sch. of Agric. Osaka Metro. Univ., [2]Ctr. for Biosci. Res. & Educ. Utsunomiya Univ.

P14 Identification of nodule formation inhibitor possessed by *Rhizobium* sp. Chiba-1
*Mao Sasaki[1], Yuhei Chiba[2], Yasuyuki Kawaharada[1,2,3]
[1]Iwate Univ. Grad. Sch, [2]Iwate Univ. UGAS, [3]Iwate Univ. of Agric.

P15 Functional analysis of *Caffeate O-methyltransferase* in root nodule symbiosis
*Akito Hase[1], Mayu Kawasaki[1], Ria Hirota[1], Minato Matsuda[1], Satoshi Kondo[2], Akira Akamatsu[1], Naoya Takeda[1]
[1]Kwansei-Gakuin Univ., [2]Agri.&Biotech.Div., Toyota Motor Corp. Genesis Research Institute, Inc.

P16 Exporing the potential of Poland indigenous *Phyllobacterium* in soybean cultivation under cold conditions
*Riku Watanabe[1], Maria Daniela Artigas Ramirez[1,2], Sylwia Lewandowska[3], Sonoko Dorothea Bellingrath-Kimura[4], Yong Guo[5], Tomoyasu Nishizawa[5], Tadashi Kajita[2], Michiko Yasuda[1], Shin-ichiro Agake[1], Naoko Ohtsu[1]
[1]Tokyo Univ. of Agric. and Tech., [2]Univ. of the Ryukyus, [3]Wrocław Univ. of Environmental and Life Sciences, Poland, [4]Leibniz Centre for Agricultural Landscape Research, Germany, [5]Ibaraki Univ.

P17 Type III secretion system of *Bradyrhizobium* sp. SUTN9-2 obstructs symbiotic nitrogen fixation with *Lotus* spp.
*Shun Hashimoto[1], Kohki Goto[2], Pongdet Pyromyou[3], Pongpan Songwattana[3], Teerana Greetatorn[3], Masahiro Fukuda[2], Cui Ying[1], Panlada Tittabutr[3], Nantakorn Boonkerd[3], Neung Teaumroong[3], Toshiki Uchiumi[2], Shusei Sato[1]
[1]Grad. Sch. of Life Sci. Tohoku Univ., [2]Grad. Sch. of Sci. and Eng. Kagoshima Univ., [3]Suranaree Univ. of Technol.

P18 Efficient cultivation of the medicinal plant *Glycyrrhiza* using rhizobial symbiosis
*Shion Yamamoto[1], Ikuko Kusaba[1], Takahiro Nakao[1], Aya Shiomura[1,2], Susumu Arima[1,2], Kanzi Ishimaru[1,2], Mareshige Kojoma[3], Akihiro Suzuki[1,2]
[1]Grad. Sch. of Agric. Saga Univ., [2]Fac. of Agric. Saga Univ., [3]Fac. of Pharmacy. Health. Sci. Univ. of Hokkaido

P19 Establishing an efficient hairy root transformation system of *Glycine max* using *Agrobacterium rhizogenes*
*Masato Araragi, Yasuyuki Kawaharada
Fac. of Agric. Iwate Univ.

P20 Involvement of receptor proteins for peptidoglycans in mediation of growth promoting effects by *Bacillus pumilus* TUAT1 in *Arabidopsis thaliana*
*Md Monirul Islam[1], Shin-ichiro Agake[2], Tetsuya Yamasda[3] and Naoko Ohkama-Ohtsu[2,3]
[1]United Graduate School of Agriculture, [2]Institute of Global Innovation Research, [3]Institute of Agriculture, Tokyo University of Agriculture and Technology

P21 Identification of genes involved in isoflavone degradation in soybean rhizosphere bacterium *Variovorax* sp.
*Noritaka Aoki[1], Tomohisa Shimasaki[1,2], Wataru Yazaki[1], Masaru Nakayasu[1], Akinori Ando[3], Shigenobu Kishino[3], Jun Ogawa[3], Sachiko Masuda[4], Arisa Shibata[4], Wataru suda[5], Ken Shirasu[4], Kazufumi Yazaki[1], Akifumi Sugiyama[1]
[1]RISH, Kyoto Univ., [2]RIKEN BRC, [3]Grad. Sch. of Agri. Kyoto Univ., [4]RIKEN CSRS, [5]RIKEN IMS

P22 Analysis of the modulation of tomatine-mediated rhizosphere bacterial community using a model experiment device
*Kyoko Takamatsu[1], Miwako Toyofuku[1], Fuki Okutani[1], Masaru Nakayasu[1], Shinichi Yamazaki[2], Yuichi Aoki[2], Kazufumi Yazaki[1], Akifumi Sugiyama[1]
[1]RISH Kyoto Univ., [2]ToMMo Tohoku Univ.

P23 Analysis of effects of volatile organic compounds on the soil bacterial microbiome
*Eriko Iwata, Hinako Matsuda, Kazufumi Yazaki, Akifumi Sugiyama
RISH Kyoto Univ.

P24 The Role of Phosphate-Solubilizing *Franconibacter* on Rice Growth Promotion
*Jean Louise Cocson Damo[1,2], Hinako Sugiura[1], Shin-ichiro Agake[1], Takehiro Ito[1], Kaisei Maruyama[1], Maria Daniela Artigas Ramirez[3], Yong Guo[4], Tadashi Yokoyama[5], Tomoyasu Nishizawa[4], Hiroyuki Kasahara[1], Shin Okazaki[1], Naoko Ohkama-Ohtsu[1]
[1]Tokyo Univ. of Agric. and Tech., [2]BIOTECH Univ. of the Philippines Los Baños, [3]Univ. of the Ryukyus, [4]Ibaraki Univ., [5]Fukushima Univ.

P25 Identification of the genomic region in *Lotus* spp. related host specificity of symbiotic nodulation
*Yuhei Chiba[1], Akihisa Shinozawa[2,3], Akira Abe[1,4], Yasuyuki Kawaharada[1,5]
[1]Iwate Univ. UGAS, [2]Tokyo Univ. of Agri., Genome Res. Cent., [3]Tokyo Univ. of Agri., Life science, [4]Iwate Biotechnology Res. Cent., Genomics and breeding, [5]Iwate Univ., Agri.