The 17th Annual Meeting of Japanese Society of Plant Microbe Interactions

and

International Symposium of the FSRC Research Project, Kagoshima University

Program of Events

19 September, Wednesday

12;30 Registration at Inamori Auditorium

13:30 to 15:00 Opening and Session I

1 Methane Cycle and Symbiosis of C1-microorganisms with Plants
○Yasuyoshi Sakai, Maiko Sakakibara, Hiroyuki Iguchi, Kousuke Kawaguchi, Hiroya Yurimoto
Div. of Appl. Life Sci., Grad. Sch. of Agric., Kyoto Univ.

2 Growth of C1-yeasts on plant surface and cell physiology
○Kosuke Kawaguchi[1], Hiroya Yurimoto[1], Yasuyoshi Sakai [1, 2]
[1]Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ.,[2]JST, CREST

3 Apoptotic cell death in lettuce cells is involved in bacterial rot of lettuce caused by *Pseudomonas cichorii*
○Taku Kawakami, Akinori Kiba, Kouhei Ohnishi, Yasufumi Hikichi
Kochi Univ.

4 The mechanisms of regulation in hypersensitive reaction of potato to *Phytophthora infestans*: Control of the generation of active oxygen species by CDPK1 and CDPK2 in host cells
○Naotaka Furuichi[1]、Kazutoshi Yokokawa[1] 、Hiromasa Yagi[2]、Hideo Akutsu[2]、 Tsuneyoshi Horigome [3]
[1]Niigata Univ.CTR., [2]Osaka Univ.Protein Inst, [3]Niigata Univ.,Sci.

5 Oxolinic Acid-Resistance Mechanism of In Vitro Mutants of *Burkholderia glumae* And Their Survival Fitness on Rice Plants
○Yasufumi Hikichi, Yukiko Maeda, Kouhei Ohnishi, Akinori Kiba
Kochi Univ.

6 The hrp genes of *Pseudomonas cichorii* is essential for its pathogeniucity on eggplant but not lettuce

○Makoto Koyanagi, Masayuki Tanaka, Kouhei Ohnishi, Akinori Kiba, Yasufumi Hikichi
Kochi Univ.

Break

15:15 to 16:45 Session II

7 Expression of the *IRT1* gene in *M. huakuii* subsp. rengei promotes metal accumulation in nodules on *Astragalus sinicus*.
Akiko Ike[1], Rutchadaporn Sriprang[1], Mitsuo Yamashita[1] and○Yoshikatsu Murooka [2]
[1]Osaka Univ.[2]Hiroshima Inst. Technol.

8 Study of GFP-tubulinα6 in root hairs during *Lotus-Mesorhizobium* interaction
○F. M. Perrine-Walker[1] , H. Kouchi [2] and R.W. Ridge [3]
[1] Department of Biology, Division of Natural Sciences, International Christian University, Mitaka 181-8585, Tokyo, Japan [2] Department of Plant physiology, National Institute of Agrobiological Sciences, Tsukuba, 305-8602, Ibaraki, Japan [3] Department of Biology, Division of Natural Sciences, International Christian University, Mitaka 181-8585, Tokyo, Japan

9 Genetic diversity of *Lotus pacificus* indigenous to Southwest Islands of Japan
○Masatsugu Hashiguchi[1], Kazuhiko Saeki[2], Ryo Akashi [1]
[1]Univ. of Miyazaki FSRC, [2]Nara Woman's Univ.

10 New insight on the genes associated with nodulation of *Lotus japonicus*
Hiroshi Oyaizu, YongYi Li, ○YanXu Wang, Kaori Ishikawa, Keisuke Yokota, Chi-Te Liu, Masahiro Hisatomi, Shino Suzuki, Toshihiro Aono
Biotechnology Res. Center,Univ. Tokyo

11 Characterization and positional cloning of Fix$^-$ mutant *Ljsym89* of *Lotus japonicus*
Md.Shakhawat Hossain[1,2], ○Yosuke Umehara[1,2], Shusei Sato[3], Takakazu Kaneko[3], Satoshi Tabata[3], Masayoshi Kawaguchi[2,4] and Hiroshi Kouchi[1,2].
1. Natl. Inst. Agrobiol Sci, 2.CREST/JST, 3. Kazusa DNA Research Institute, 4. Department of Biol Sci, Grad School of Sci, The Univ. of Tokyo

12 Identification of the causative gene of *Lotus japonicus* hypernodulation mutant klavier
○Erika Oka-Kira[1], Hikota Miyazawa[1], Naoto Sato[1], Guo-Jiang Wu[21], Shusei Sato[3], Satoshi Tabata[3], Masaki Hayashi[4], Kyuya Harada[4], Masayoshi Kawaguchi [1,51]Department of Biological Sci, Grad School of Sci, The Univ of Tokyo, [2]South China Botanic Garden, [3]Kazusa DAN Res Inst, [4]National Inst Agrobiol Sci, [5]CREST/JST

Brak

17:00 to 17:45 Session III

13 ALB1 of *Lotus japonicus* is required for infection thread formation
○Koji Yano[1, 2], Yosuke Umehara[2], Haruko Imaizumi-Anraku[2], Shusei Sato[3], Satoshi Tabata[3], Masayoshi Kawaguchi[4], Hiroshi Kouchi[2], Makoto Hayashi [1]
[1]Univ. of Munich, [2]NIAS, [3]Kazusa DNA Res. Inst., [4]Tokyo Univ.

14 Communities of arbuscular *mycorrhizal* and non-*mycorrhizal* fungi colonizing the root of hypernodulating soybean mutant
○Kazunori Sakamoto[1], Maki Tsukui [2]
[1]Grad. Sch. Hort. Chiba Univ., [2]Grad. Sch. Sci. Tech. Chiba Univ.

15 *Mycorrhizal*-specific protein phosphorylation signal in *Lotus japonicus*
○Ryo Ohtomo [1, 4]、Tomoko Kojima [1, 4]、Tatsuhiro Ezawa [2]、Masayoshi Kawaguchi [3, 4]
[1]Natl.Inst.Livestock Grassland Sci., [2]Hokkaido Univ., [3]Univ. Tokyo[4]CREST

17:45 to 18:30 Discussion for presentations No. 1 ~ 15

18:45 Welcome reception at Educa

20 September, Thirsday

9:00 to 10:00 90 seconds presentations of even number posters

10:00 to 11:15 Poster session (even number posters)

11:15 to 12:00 Discussion for even number posters

12:00 to 14:00 Lunch

Symposium : The molecular aspect of plant-microbe interactions and plant immunity as a clue to enhance plant ability

(Supported by Frontier Science Research Center, Kagoshima University)

14:00 to 14:15
Opening : Toshiki Uchiumi (Kagoshima University, Japan)

14:15 to 14:45
Haruko Imaizumi-Anraku (National Institute of Agrobiological Sciences, Japan)
FUNCTIONAL ANALYSIS OF COMMON SIGNALING PATHWAY IN *LOTUS JAPONICUS* AND *ORYZA SATIVA*

14:45 to 15:15

Makoto Hayashi (University of Munich, Germany)
EPIDERMAL EVENTS FOR INFECTION OF RHIZOBIA: ROOT HAIR CURLING AND INFECTION

15:15 to 15:45
Krzysztof Szczyglowski (Agriculture and Agri-Food Canada, Canada)
CYTOKININ, SECRET AGENT OF NODULATION

15:45 to 16:15
Martin Parniske (University of Munich, Germany)
INTRACELLULAR ACCOMODATION OF SYMBIOTIC MICROBES BY PLANTS

16:15 to 16:40
Coffee Break

16:40 to 17:10
Ken-ichi Kucho (Kagoshima University, Japan)
ROLES OF THE CLASS 1 PLANT HEMOGLOBIN IN SYBIOTIC NITROGEN FIXATION AS A MODULATOR OF NITRIC OXIDE

17:10 to 17:40
Hirofumi Yoshioka (Nagoya University, Japan)
MAPKs SIGNALING REGULATES NITRIC OXIDE ASSOCIATED1-MEDIATED NO AND NADPH OXIDASE-DEPENDENT OXIDATIVE BURSTS IN *NICOTIANA BENTHAMIANA*

17:40 to 18:10
Ken Shirasu (RIKEN Plant Science Centre, Japan)
COMMON COMPONENTS IN PLANT AND ANIMAL INNATE IMMUNITY SYSTEMS

19:00 Shokubiken Banquet at Shiroyama Kanko Hotel (shuttle busses will be available from Inamori Auditorium)

21 September, Friday

9:00 to 10:00 90 seconds presentations of odd number posters

10:00 to 11:15 Poster session (odd number posters)

11:15 to 12:00 Discussion for odd number posters

12:00 to 13:00 Lunch

13:00 to 13:45　plenary general meeting

13:45 to 15:30 Session IV

16 Biological resources and tools for functional genomics of *rhizobium*
○Yoshikazu Shimoda[1], Hisayuki Mitsui[2], Hiroko Kamimatsuse[2], Kiwamu Minamisawa[2], Satoshi Tabata[1], Shusei Sato [2]
[1]Kazusa DNA Res. Inst., [2]Tohoku Univ.

17 Exploration of gene repertoire in twenty endophytic bacteria in rice plants
○Takakazu Kaneko[1], Kiwamu Minamisawa[2], Yasukazu Nakamura [1], Akiko Watanabe[1], Akiko Ono[1], Manabu Yamada[1], Mitsuyo Kohara[1], Tadashi Sato[2], Tadashi Abe[2], Shima Eda[2], Nirinya Sudtachat[2], Hisayuki Mitsui[2], Manav Itakura[2], Satoshi Tabata [1]
[1] Kazusa DNA Res.Inst.,[2]Tohoku Univ.

18 Activation of *Sinorhizobium fredii* USDA191 NodD1 in the presence of specific flavonoids: solubilization and stabilization
○Yohei Takada[1], Won-Seok Kim[2], Hari B Krishnan[2], Hitoshi Ashida[1], Ken-ichi Yoshida [1]
[1]Grad. Sch. Agr. Sci.Kobe Univ., [2],　[2]Plant Genet. Res. Unit, Univ. of Missouri.

19 A study on nodule progression and maintenance factors of *rhizobium*
Shino Suzuki[1], Tadahiro Suzuki[1], Seiji Wakao[1], Kazuyoshi Kawahara[2], Toshihiro Aono[1], ○Hiroshi Oyaizu [1]
[1] Biotechnology Res.Center,Univ. Tokyo,[2]College of Engineering, Kanto Gakuin Univ.

20 The identification of genes for modification of cyclic glucans and their role in symbiotic processes in *Mesorhizobium loti*
○Yasuyuki Kawaharada, Shima Eda, Hisayuki Mitsui, Kiwamu Minamisawa
Graduate School of life Science, Tohoku Univ.

21 Two distinct catalases and nitrogen fixation in *Mesorhizobium loti* MAFF303099
○Masaki Hanyu[1,2], Hanae Fujimoto[1], Kouhei Tejima[1], Kazuhiko Saeki [1]
[1] Nara Women's Univ.,[2] Osaka Univ.

22 Comparison of rhizosphere microbial communities among plant families.
○Atsushi Okubo, Shuichi Sugiyama
Hirosaki Univ.

15:30 to 16:15 Disuccion for presentation No. 16 – 22.

16:15　Closing and Departure