

Report to ISPP on activities of the Phytopathological Society of Japan (PJS) for 2008 - 2013

Name of Society, The Phytopathological Society of Japan (PSJ) Established: 1916

Web of address for Society: <http://www.ppsj.org/>

Current representatives of the PSJ:

President (2013 - 2014): Prof. Mitsuro Hyakumachi (Gifu Univ.)

Vice President (2013 - 2015): Prof. Kenichi Tsuchiya (Kyushu Univ.)

Secretary General (2013 - 2014): Prof. Hiromitsu Negishi (Tokyo Univ. Agric.)

General Report of PSJ 2009 - 2013

The PSJ was founded in 1916 to promote or spread knowledge of plant diseases and their control in Japan, and now has been grown as an international society. In 2013, our society has 2015 members including a lot of overseas members, and in addition about 354 student members. The PSJ aims at more contributive society in developing basic bioscience and maintaining the health of agricultural and non-agricultural plants. We publish the Journal of General Plant Pathology (JGPP) bimonthly and the Japanese Journal of Phytopathology quarterly. The JGPP has been cited in the Web of science by June, 2008, and the impact factor has been noticed since 2011. Now, we have projects to establish the international friendship programs between our PSJ and the related foreign societies to promote the international collaboration. We have established the friendship agreements with Vietnamese Society of Molecular Plant Pathology, Korea Society of Plant Pathology and Austrasian Plant Pathological Society since 2009.

I. Report for PSJ Meetings 2009 - 2013

Regularly we hold the annual meeting in spring and the local division meetings in autumn, and also sponsor the 10 workshop accordingly.

I-1. Annual Meeting (every year in spring)

2009 (Yamagata University, in Yamagata, President Prof. Namai T)

2010 (Kyoto University, in Kyoto, President Prof. Okuno 1T)

2011 (Tokyo Univ. Agric. & Techn., in Fuchu, President Prof. Teraoka T)

2012 (Kyushu University, in Fukuoka, President Prof. Tsuchiya K)

2013 (Gifu University, in Gifu, President Prof. Hyakumachi M)

Number of participants in Annual meeting

About 1,000 people had taken part in every case except the 2009 annual meeting that was cancelled because of the big earthquake.

I-2. Division Meeting (every year in autumn)

We have 5 local divisions i.e. Hokkaido, Tohoku, Kanto, Kansai and Kyushu Division.

I-3. Workshop (every year or biyearly):

The society covers broad areas of basic and applied plant pathology, including diagnosis of plant diseases and identification of the causative agents, mechanisms for pathogen infection and multiplication, plant-pathogen interactions, mechanisms for plant disease

resistance, epidemiology on disease transmission, monitoring or assessment, chemical and biological control, development of disease-resistant plants, and related areas dealing with plant pathological disorders. Now, 10 kinds of workshops are sponsored as following; PLANT BACTERIAL PATHOGEN, PLANT DISEASE ECOLOGY, RESEARCH COMMITTEE ON FUNGICIDE RESISTANCE, PLANT VIRUS DISEASE, PLANT-MICROBE INTERACTION, SOIL-BORN DISEASE, PLANT DISEASE DIAGNOSIS, EVIDENCE-BASED CONTROL, BIOLOGICAL CONTROL, EDUCATION PROGRAM FOR PLANT PATHOLOGY. Each workshop is held in every year or biyearly. Representative programs of current workshops are shown below.

13th Plant Fungal Pathogen Workshop. Date: March 29th, 2013. Site: Gifu University (the same site of the 2013 PSJ Annual Meeting) Program: “Research lessons learned from many decades of investigation of rice blast disease.” 1. Blast Fungus, *Pyricularia oryzae*, Designated as an Indicator of Finger Millet Dissemination H. Kato. 2. Observation of Rice Blast Disease-from the standpoint of disease forecasting R. Yoshino. 3. Cytological Aspects of Infection by the Rice Blast Fungus *Magnaporthe oryzae* H. Koga (Ishikawa Prefectural University). 4. Durable use of Blast Resistance in Rice S. Koizumi (Japan International Cooperation Agency). Prompt report: The current situation in discussions on the generic name of blast fungi arising from changes in the International Code of Nomenclature for algae, fungi and plants I. Chuma (Kobe University). Information: Takayuki Aoki (National Institute of Agrobiological Sciences) E-mail: taoki@nias.affrc.go.jp Kyoko Watanabe (Tamagawa University) E-mail: wkyoko@agr.tamagawa.ac.jp

47th PSJ Plant-Microbe Interactions Symposium -New Aspects of Studies on Plant-Microbe Interactions Date: August 30th - September 1st, 2012. Site: National Park Resort OHMI HACHIMAN (Okishima, Ohmi Hachiman, Shiga 523-0801, Japan). Program: August 30th / 1. Infection and Host response. 1-1. Molecular analysis of hypersensitive cell death induced by flagellin of *Acidovorax avenae*. Fang-Sik Che (Nagahama Institute of Bio-Science and Technology). 1-2. Regulation of environment-responsive and virulence-related gene expression in *Xanthomonas oryzae* pv. *oryzae*. Seiji Tsuge (Kyoto Prefectural University). 1-3. Rice PAMPS-triggered immunity targeted by pathogen effectors. Tsutomu Kawasaki (Kinki University). 1-4. The mechanisms of disease resistance induced by proteinogenic amino acids. Naoki Kadotani (Institute for Innovation, Ajinomoto Co. Inc.). 2. Special Lecture: Frontier of recent research on Lake Biwa. 2-1. Movement and fate of pesticides in Lake Biwa basin. Miki Sudo (The University of Shiga Prefecture). 2-2. Paradigm shift for food-web study in Lake Biwa: Fungi play an important role!? Syuhei Ban (The University of Shiga Prefecture). August 31st / 3. Infection strategy of plant pathogenic fungi. 3-1. Hemibiotrophic infection of anthracnose fungal pathogen *Colletotrichum higginsianum*. Hiroyuki Takahara (Ishikawa Prefectural University). 3-2. Nonhost resistance of *Arabidopsis thaliana* against anthracnose fungi. Yoshitaka Takano (Kyoto University). 3-3. Whole genome sequence analysis reveal rice-*Magnaporthe oryzae* interactions. Ryohei Terauchi (Iwate Biotechnology Research Center). 3-4. Stealth infection strategy in fungal pathogens. Marie Nishimura (National Institute of Agrobiological Sciences). 3-5. Histopathological study on the infection by a human pathogenic fungus *Cryptococcus neoformans*. Kiminori Shimizu (Chiba University).

3-6. Fungicides disturbing a cell signaling pathway of plant pathogenic fungi. Kosuke Izumitsu (The University of Shiga Prefecture). September 1st /3-7. Biosynthesis of secondary metabolites in plant pathogenic fungi and its involvement in pathogenicity; a genomics-based approach for understanding their evolution and diversity. Motoichiro Kodama (Tottori University). 3-8. Fungal endophytes of grasses; interaction and coevolution of fungal pathogen captured in grasses, inferred by analysis of genes and their expression. Koya Sugawara (Tohoku Agricultural Research Center). 4. New aspects of research on plant virus. 4-1. Functional analysis of NB-LRR class R protein conferring defense response to Cucumber mosaic virus. Hideki Takahashi (Tohoku University). 4-2. Mycoviruses and virocontrol. Nobuhiro Suzuki (Okayama University). Information: Kazumi suzuki; ksuzuki@ses.usp.jp (The University of Shiga Prefecture).

26th PSJ Soil-Borne Disease Symposium Date: September 20th, 2012. Site: Tokatsu Techno Plaza (Kashiwanoha, Kashiwa, Chiba 277-0882, Japan). Program: 1. Application of low concentration of ethanol that enhances the efficiency of anaerobic soil disinfection. Nobuhiro Kita (Kanagawa Agricultural Technology Center). 2. Study of reductive soil disinfection with low concentration of ethanol in Chiba prefecture. Tomoko Yokoyama (Chiba Prefectural Agriculture and Forestry Research Center). 3. Mechanisms of suppression of *Fusarium oxysporum* f. sp. *lycopersici* by biological soil disinfection. Noriaki Momma (Japan Horticultural Production and Research Institute). 4. Control of soilborne plant diseases by soil incorporation of organic matter such as cruciferous crops. Toshiaki Takehara (Western Region Agricultural Research Center, National Agriculture and Food Research Organization). 5. Suppressive Mechanism of soil-borne plant diseases by organic amendments. Yoshimiki Amemiya (Graduate School of Horticulture, Chiba University). 6. Summary and outlook of biological control for soil borne diseases. Masataka Aino (Hyogo Prefectural Technology Center for Agriculture, Forestry and Fisheries). 7. Occurrence and control of soil disease on welsh onion and lettuce in Ibaraki prefecture. Takashi Ogawara (Horticultural Research Institute, Ibaraki Agricultural Center). 8. Verticillium wilt on lettuce in Japan. Takeshi Kanto (Hyogo Prefectural Technology Center for Agriculture, Forestry and Fisheries). 9. Development and assessment of quantitative nested real-time PCR assays for detecting *Verticillium longisporum* and *V. dahliae* in the soil of cabbage fields. Shinpei Banno (Plant Regulation Research Center, Toyo University). 10. A gene involved in virulence and avirulence of *Verticillium dahliae* that is pathogenic on tomato. Toshiyuki Usami (Graduate School of Horticulture, Chiba University).

26th Plant Bacterial Disease Workshop (cosponsored by The 2nd Korea-Japan Joint Workshop). Date: March 27th-28th, 2012. Site: Fukuoka International Congress Center. Invited Lectures (Japanese only) 1. Epidemiological study of tomato bacterial canker in greenhouse in Japan A. Kawaguchi et al. (Okayama Prefectural Technology Center for Agriculture, Forestry and Fisheries). 2. Citrus Greening T. Iwanami (National Institute of Fruit Tree Science). 3. Global regulation of pathogenicity mechanism of *Ralstonia solanacearum* Y. Hikichi et al. (Kochi University). Twenty two posters were also presented.

Evidence-based Control Workshop 2012. Date: September 11, 2012. Venue: Agricultural Research and Development Center, JA Zen-Noh (4-18-1, Higashiyawata, Hiratsuka-shi, Kanagawa 254-0016, JAPAN), Program: 1. The meaning and the technique of on-farm research. Akira KAWAGUCHI (Okayama Prefectural Technology Center for Agriculture Forestry and Fisheries). 2. Explanation of meta-analysis and box-and-whisker plots. Yasuya IWADATE (Iwate Agricultural Research Center). 3. Change of the effects on some fungicides in case of spraying with other chemicals. Yoichi IDE (Saga Prefectural Agriculture Support Center) and Nobuya TASHIRO (Saga Prefectural Uwaba Upland Farming Experiment and Extension Center). 4. Recent situation of pesticide applicator and pesticide formulation after the implementation of the positive list of pesticide residue. Yutaka KAWABATA (Zen-Noh Agricultural R & D Center). Information: Hiromitsu NEGISHI (Tokyo University of Agriculture) E-mail: negishi@nodai.ac.jp

II. Report for International Activity 2009-2013

Participation of our committee members

The 4th Asian Concrerence on Plant Pathology (ACPP) concurrent with the 18th biennial Australasian Plant Pathology Soceity Conference, 26-29 April 2011, Darwin, Austraria.

* Prof. Natsuaki K is elected as one of next vice presidents of AASPP.

Joint-meeting in Japan

The 1st Korea-Japan Joint Symposium, 28-31 October 2009, Jeju, Korea.

(The Korean Society of Plant Pathology Dr. Seung Hun Yu and PSJ Dr. Tomonori Shiraishi)

Total number of participants was 99 from PSJ and about 300 from KSPP.

The 2nd Korea-Japan Joint Symposium, 27-28 March 2012, Fukuoka, Japan.

(The Korean Society of Plant Pathology Dr. Eun Woo Park and PSJ Dr. Namba S.)

Total number of participants was 348 from PSJ and 133 from KSPP. Preliminary lectures by Drs. K. W. Lee and I. Uyeda followed by several invited lectures were given. Total 232 posters were also exhibited.

Establishment of student exchange program between PSJ and APPS

The Australasian Plant Pathology Society (APPS) and PSJ have begun a reciprocal exchange partnership to foster friendship between both societies and encourage international collaborative linkages since 2011. In 2011, PSJ sent two Japanese student members to Australia and in 2012 PSJ accepted two APPS student/early-career researcher members. In 2013, the MOU was extended two more years to continue this program by sending 2 student members from PSJ to APPS in 2013, and will accept two from APPS in 2014.

II-1. Joint-meeting in Japan sponsored by the PSJ

Co-sponsored by PSJ

XV International Congress on Molecular Plant-Microbe Interactions (Chair, Ko Shimamoto, NAIST), July 29-August 2, 2012, Kyoto, Japan

- XIII International Congress of Bacteriology and Applied Microbiology 6-10 September 2011, Sapporo, Japan.
- XIII International Congress of Mycology 6-10 September 2011, Sapporo, Japan
- XV International Congress of Virology 11-16 September 2011, Sapporo, Japan