



The 5th Korea-Japan Joint Symposium **on Plant Pathology**

**March 24-26 2025, Sunport Takamatsu,
Kagawa, Japan**



**The Phytopathological Society of Japan
The Korean Society of Plant Pathology**

The 5th Korea-Japan Joint Symposium on Plant Pathology



24th–26th March, 2025 Takamatsu, Kagawa, JAPAN



The Phytopathological Society of Japan

The Korean Society of Plant Pathology

Program of the Symposium

March 24 (Monday), 2025

14:00-17:00 Registration (Grand Foyer of Grand Hall on 3rd floor of Hall Building)

March 25 (Tuesday), 2025

9:00-10:00 Registration (Grand Foyer of Grand Hall)

10:00-10:30 **OPENING CEREMONY (Grand Hall)**

Welcoming Remarks

Kazuyuki Hiratsuka (Yokohama National University)
Former PSJ President

Congratulatory Remarks

Yong-Hwan Lee (Seoul National University)
ISPP President

Opening Remarks

Seon-Woo Lee (Dong-A University)
Former KSPP President

Opening Address

Hideki Takahashi (Tohoku University)
Vice PSJ President

10:30-11:50 **PLENARY LECTURES (Grand Hall)**

Chair: Sung-Hwan Yun (Soonchunhyang University)

10:30-11:10 Yasuyuki Kubo (Setsunan University)
From Plant Pathogenesis to Human Disease Therapy: *Colletotrichum orbiculare* as a Model for Niemann-Pick Type C.

Chair: Kazuyuki Hiratsuka (Yokohama National University)

11:10~11:50 Kook-Hyung Kim (Seoul National University)
Identification and characterization of soybean genes associated with resistance to the soybean mosaic virus

11:50~13:30 **LUNCH**

13:30~16:10 SYMPOSIUM CONCURRENT SESSIONS

Session 1: Emerging New Diseases (Grand Hall)

Chair: Takashi Fujikawa (National Agriculture and Food Research Organization) and Hyong Woo Choi (Gyeongguk National University)

- 13:30~13:50 Kwang-Hyung Kim (Seoul National University, Korea)
Understanding the eco-environmental factors affecting the occurrence of Fusarium head blight and their relevance to climate change in Korea
- 13:50~14:10 Masako Tujimoto Noguchi (National Agriculture and Food Research Organization, Japan):
The occurrence and control of sweet potato foot rot caused by *Diaporthe destruens* in Japan
- 14:10~14:30 Eui-Joon Kil (Gyeongguk National University, Korea)
Emerging Plant Viruses in Korea: Expanding Diversity and New Threats
- 14:30~14:50 Namiko Kirino (Okayama Prefectural Technology Center for Agriculture, Forestry and Fisheries, Japan)
Efforts to elucidate the causes of peach bacterial canker caused by *Dickeya dadantii*

Session 2: New Control Measures: Both Chemical and Biological (Grand Hall)

Chair: Masafumi Shimizu (Gifu University) and Young-Ryun Chung (Gyeongsang National University; JGreen INC.)

- 14:50~15:10 Akira Kawaguchi (National Agriculture and Food Research Organization, Japan)
Biological control for grapevine crown gall using the nonpathogenic *Allorhizobium vitis* strains
- 15:10~15:30 Hyunkyu Sang (Chonnam National University, Korea)
Fungicide resistance and management of *Botrytis cinerea* from strawberry
- 15:30~15:50 Yuichiro Iida (Setsunan University, Japan)
Mycoparasite-pathogen-plant: A tripartite interaction in the biocontrol of tomato leaf mold

- 15:50~16:10 Kihyuck Choi (Dong-A University, Korea)
Identification of keystone taxa from tomato seed endophytic communities
and ecological role analysis in protective synthetic community construction

Session 3: Molecular Mechanisms of Pathogenicity (Small Hall 2 on 5th floor)

Chair: Kenro Ohshima (Hosei University) and

Kwang-Hyung Kim (Seoul National University)

- 13:30~13:50 Chang-Sik Oh (Seoul National University, Korea)
Plasmid-borne virulence genes of Gram-positive *Clavibacter* species to
determine disease development in host plants
- 13:50~14:10 Kensaku Maejima (The University of Tokyo, Japan)
Exploring phyllody: how a tiny effector can manipulate giant plant flowers
- 14:10~14:30 Junhyun Jeon (Yeungnam University; Seoul National University, Korea)
Genetic and transcriptomic analysis of hyphal constriction with a novel
assay system in the rice blast fungus
- 14:30~14:50 Soichiro Asume (Kobe University, Japan)
Molecular mechanisms of the host specificity of the blast fungus at the plant
genus level

Session 4: Molecular Mechanisms of Resistance (Small Hall 2)

Chair: Yoshitaka Takano (Kyoto University) and

Doil Choi (Seoul National University)

- 14:50~15:10 Yoji Kawano (Okayama University, Japan)
An NLR paralog Pit2 generated from tandem duplication of Pit1 fine-tunes
Pit1 localization and function
- 15:10~15:30 Hangil Kim (Kangwon National University, Korea)
RNA silencing suppressors: A driving force in the evolution of plant viruses
- 15:30~15:50 Kazuhiro Ishibashi (National Agriculture and Food Research Organization,
Japan)
Genome engineering toward making virus-resistant plants

15:50~16:10 Eui Hwan Chung (Korea University, Korea)
Natural compound-mediated plant immune-priming

16:10~16:30 BREAK

16:30~18:30 POSTER SESSION (Exhibition Hall on 1st floor)

Chair: Yoshitaka Takano (Kyoto University) and

Hyong Woo Choi (Gyeongguk National University)

Information of respective poster sessions

Session I: Emerging New Diseases

Session II: New Control Measures: Both Chemical and Biological

Session III: Molecular Mechanisms of Pathogenicity

Session IV: Molecular Mechanisms of Resistance

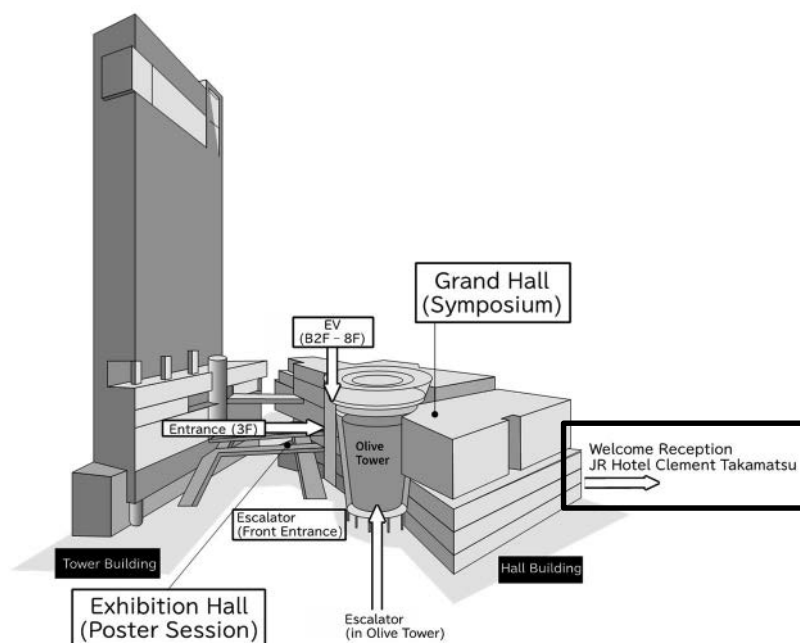
Session V: Others

March 26 (Wednesday), 2025

9:00~12:00 POSTER PRESENTATION

18:30~21:00 RECEPTION BANQUET and AWARD CEREMONY

Reception Banquet and Award Ceremony are planned for all participants at **JR Hotel Clement Takamatsu** (<https://www.jrclement.co.jp/takamatsu/en/>). The participation fee is 9,000 Japanese Yen and includes light meal and drinks. Other details will be announced at the registration desk on site.



Poster Sessions

POSTER INDEX

- I: Emerging New Diseases**
- II: New Control Measures: Both Chemical and Biological**
- III: Molecular Mechanisms of Pathogenicity**
- IV: Molecular Mechanisms of Resistance**
- V: Others**

I: Emerging New Diseases

P1-1

First report of rust on hazelnut (*Corylus heterophylla*) caused by *Pucciniastrum coryli* in South Korea

A Yeong Heo¹, Ki Hyeong Park¹, Sang-Tae Seo¹

¹ National Institute of Forest Science

P1-2

Forest diseases related with the ophiostomatoid fungi in South Korea

Dong-Hyeon Lee¹, Sang-Tae Seo², Yong-Ho Kim¹, Hee-Gyu Woo¹, Sung-Eun Cho³

¹ Department of Environment and Forest Resources, Chungnam National University; ² Division of Forest Entomology and Pathology, National Institute of Forest Science; ³ Institute of Agriculture and Life Science, Gyeongsang National University

P1-3

Isolation, morphological, and molecular characterization of *Ceratobasidium* sp. associated with the Cassava witches' broom disease

Darwin Landicho^{1,2}, Ray Jerome Montanez³, Marita Pinili³, Ikuo Sato⁴, Daigo Takemoto⁴, Sotaro Chiba^{2,4}

¹ Central Laboratory, National Plant Quarantine Services Division, Bureau of Plant Industry; ² Nagoya University Asian Satellite Campuses Institute – Philippine Campus, University of the Philippines Los Baños; ³ National Crop Protection Center, College of Agriculture and Food Science, University of the Philippines Los Baños; ⁴ Graduate School of Bioagricultural Sciences, Nagoya University

P1-4

Sigatoka-like disease caused by *Fusarium* spp. in the Philippines

Yui Harada¹, Yoshiki Takata², Mike Andre Malonzo³, Shunsuke Nozawa², Kyoko Watanabe^{1,2}

¹ Graduate School of Agriculture, Tamagawa University; ² College of Agriculture, Tamagawa University

P1-5

Pathogenicity of *Pythium myriotylum* from asymptomatic-hydroponically-grown lettuce on spinach and lettuce seedlings

Takafumi Umei¹, Tomoko Shinozaki², Motoaki Tojo^{1,2}

¹ Graduate School of Agriculture, Osaka Metropolitan University; ² Graduate School of Life and Environmental Sciences, Osaka Prefecture University

P1-6

Association of *Globisporangium* species as causal agents of cavity spot of carrot in Japan

Keisuke Katsura¹, Motoaki Tojo¹

¹ Grad. Sch. Osaka Metro. Univ.

P1-7

Characterizations of *Globisporangium ultimum* var. *ultimum* from cucumber in Japan on its species identity and pathogenicity

Sophaneth Keo¹, Ruka Kawasumi¹, Motoaki Tojo¹

¹ Graduate School of Agriculture, Osaka Metropolitan University

P1-8

Morphological and molecular identification of *Globisporangium iwayamae* from wheat with browning root rot in Hokkaido, Japan

Nanako Saga¹, Kennichi Mino², Seiji Shimoda³, Tamotsu Hoshino⁴, Naoyuki Matsumoto⁵, Motoaki Tojo¹

¹ Graduate School of Agriculture, Osaka Metropolitan University; ² Hokkaido Research Organization, Agricultural Research Department, Central Agricultural Experiment Station; ³ NARO Hokkaido Agricultural Research Center; ⁴ Faculty of Engineering, Hachinohe Institute of Technology; ⁵ None

P1-9

Damping off caused by *Aphanomyces cochlioides* in hydroponically-grown quinoa and soil-grown sugar beet

Ruka Kawasumi¹, Keisuke Katsura¹, Megumi Nagahama², Motoaki Tojo¹

¹ Grad. Sch. Agri. Osaka Metro. Univ; ² Kamikawa Agri. Exp. Sta.

P1-10

A next-generation-sequencing and visual assessment based diagnosis of sweet potato virus diseases

Miki Aoyama¹, Riku Ogura^{1,2}, Minoru Takeshita¹

¹ Fac. Agri. Univ. Miyazaki; ² Kagoshima Pref.

P1-11

Altitude-Dependent Occurrence of *Polerovirus TUUV* (BrYV) in Kimchi Cabbage Fields in Korea

Hee-Seong Byun¹, Bong-Choon Lee¹, Hae-Ryun Kwak¹, Young-Gyu Lee²

¹ National Institute of Agricultural Sciences (RDA); ² National Institute of Crop Science (RDA)

II: New Control Measures: Both Chemical and Biological

P2-1

Field fitness and competitive ability of pyraclostrobin-resistant *Colletotrichum viniferum* causing grape anthracnose

Taejun Yun¹, Minseok Kim¹, Seoyeon Lee¹, Heungtae Kim¹

¹ Chungbuk National University

P2-2

Fungicide response of *Sclerotinia nivalis* and *Botrytis cinerea* isolated from sclerotia of diseased ginseng

Eunchong Jeong¹, Yunyeong Kang¹, Sinbi Hwang¹, Heungtae Kim¹

¹ Chungbuk National University

P2-3

Benomyl resistance of *Passalora fulva* causing tomato leaf mold

Yunyeong Kang¹, Heungtae Kim¹

¹ Chungbuk National University

P2-4

Evaluation of the Control Efficacy of Clubroot Disease in Chinese Cabbage Using Comprehensive Eco-Friendly Control Techniques

Shim Chang-Ki¹, Kim Min-Jeong², Han Min-Young², Nam Joo-Hee³, Shin Joonh-Doo⁴, Kim Ae-Jin¹, Lee Chang-Muk¹

¹ Technology Services Division, National Institute of Agricultural Sciences; ² Organic Agricultural Division, National Institute of Agricultural Sciences; ³ Environment-Friendly Microorganism Research Institute, Gyeonggi-Do Agricultural Research and Extension Service; ⁴ Bio-technology of Multidisciplinary Sciences, Co., JBTP R&D Center

P2-5

2'-deoxyuridine (dU), a self-infection promoting factor of rice blast fungus, and biological control using dU-degrading bacteria

Haowei Hu¹, Hiroka Maeshima¹, Rikuto Tsukahara¹, Sotaro Chiba¹, Daigo Takemoto¹, Ikuo Sato¹

¹ Grad. Sch. Bioagr. Sci., Nagoya Univ.

P2-6

Biocontrol Potential of *Trichoderma asperellum* CMML20-29 Against Sweet Potato Diseases

Soyoon Park¹, Ju Gyeong Lee¹, Gui Hwan Han², Hyunkyu Sang^{1,3}

¹ Department of Integrative Food, Bioscience and Biotechnology, Chonnam National University; ² Center for Industrialization of Agricultural and Livestock Microorganisms; ³ Kumho Life Science Laboratory, Chonnam National University

P2-7

Biological Control of Sweet Potato *Fusarium* Wilt and Black Rot Using *Bacillus velezensis* CMML21-49

Ju Gyeong Lee¹, Yoeng-Seok Yoon^{2,3}, Gui Hwan Han², Hyunkyu Sang¹

¹ Department of Integrative Food, Bioscience and Biotechnology, Chonnam National University; ² Center for Industrialization of Agricultural and Livestock Microorganisms; ³ Food Safety and Processing Research Division, National Institute of Fisheries Science

P2-8

Assessment of disease suppressiveness against *Fusarium* wilt disease using organic hydroponics with the MPM system

Yudai Sasada¹, Takumi Masuda¹, Masaaki Masumoto², Tomomi Sano³, Haibo Xu³, Ryoya Nishida³, Kazuki Fujiwara¹

¹ Faculty of Agriculture, Meijo University; ² Kumamoto Prefecture Agriculture Research Center; ³ TOWING Ltd.

P2-9

Metagenomic analysis of microbes involved in banana *fusarium* wilt-suppressive soil in Huánuco, Perú

Carla Trigosso Hidalgo¹, Liliana Aragon Caballero², Koji Tobata¹, Takeshi Kashiwa³, Ken Komatsu¹, Motoichiro Kodama⁴, Tsutomu Arie¹

¹ United Graduate School of Agricultural Science, Tokyo University of Agriculture and Technology (TUAT); ² National Agrarian University – La Molina (UNALM); ³ Japan Int Res Ctr Agr Sci JIRCAS, Biol Resources & Postharvest Div
⁴ Faculty of Agriculture, Tottori University

P2-10

Siminovitchia fortis GURL-96 and *Priestia megaterium* GURL-107, promising strains for biocontrol of rubber leaf fall disease

Stephany Angelia Tumewu¹, Masafumi Shimizu¹, Tri Rapani Febbiyanti², Kiki Andayani², Minami Matsui³, Yuichiro Ikagawa¹, Kosei Yamauchi¹

¹ Faculty of Applied Biological Sciences, Gifu University; ² Indonesian Rubber Research Institute; ³ RIKEN Center for Sustainable Resources Science

P2-11

Development and evaluation of a new attenuated strain of melon yellow spot virus.

Yoshifumi Shimomoto¹, Kazusa Hayashi¹, Yasuhiro Tomitaka², Momoko Matsuyama², Kanamu Kozakai³, Teruyuki Mametsuka³, Boseong Yang⁴

¹ Kochi Agricultural Research Center; ² Institute for Plant Protection, NARO; ³ Berg Fukushima, Inc.; ⁴ Kyoto Biken Laboratories, Inc.

P2-12

RNAi-Based Pre-Infection Treatment with dsRNA Effectively Suppresses TYLCV Infection in Tomato Plants

Man-Cheol Son^{1,2}, Myeonghwan Kwak^{1,2}, Eui-Joon Kil^{1,2}

¹ Department of Plant Medicals, Gyeongsang National University; ² Agriculture Science and Technology Research Institute, Gyeongsang National University

III: Molecular Mechanisms of Pathogenicity

P3-1

Functional analysis of structurally similar homologues of cell death-inducing proteins secreted by *Colletotrichum higginsianum*.

Toi Sasaki¹, Kenji Ogura¹, **Hiroyuki Takahara**¹

¹ Ishikawa Prefectural University

P3-2

Metabolism between Ceramide and Glucosylceramide in *C. orbiculare* is involved in morphogenesis and pathogenicity

Hodaka Sano¹, Ayaka Chiba¹, Chikako Tanaka¹, Takumi Nishiuchi², Kazuyuki Kitatani³, Sayo Kodama¹, Yasuyuki Kubo¹

¹ Fac. of Agriculture, Setsunan Univ.; ² Biosci. Core Fac., Kanazawa Univ.; ³ Fac. of Pharmacy, Setsunan Univ.

P3-3

Restoration of pathogenicity in *Colletotrichum orbiculare* Niemann-Pick type C gene mutants by Hydroxypropyl- β -Cyclodextrin

Shun Takezawa¹, Chikako Tanaka¹, Naoki Kato¹, Takumi Nishiuchi², Kazuyuki Kitatani³, Sayo Kodama¹, Yasuyuki Kubo¹

¹ Fac. of Agriculture, Setsunan Univ.; ² Biosci. Core Fac., Kanazawa Univ.; ³ Fac. of Pharmacy, Setsunan Univ.

P3-4

Nucleus-Vacuole Junction of *Colletotrichum orbiculare* is involved in host invasion and pathogenicity

Naoya Saomoto¹, Takumi Nishiuchi², Yasuyuki Kubo¹, Sayo Kodama¹

¹ Fac. of Agriculture, Setsunan Univ.; ² Biosci. Core Fac., Kanazawa Univ.

P3-5

Therapeutic seed screening for human NPC disease using *C. orbiculare*: potential repositioning of the antidepressant imipramine

Haruto Horiguchi¹, Chikako Tanaka¹, Naoki Katou¹, Takumi Nishiuchi², Kazuyuki Kitatani³, Sayo Kodama¹, Yasuyuki Kubo¹

¹ Fac. of Agriculture Setsunan Univ.; ² Biosci. Core Facility, Kanazawa Univ.; ³ Fac. of Pharmacy, Setsunan Univ.

P3-6

Oxysterol binding protein related protein 2 is involved in appressorium morphogenesis and pathogenicity of *C. orbiculare*

Min Huang¹

¹ Faculty of agriculture, Setsunan University

P3-7

Two transcription factors are crucial for host specificity of *Colletotrichum orbiculare* by regulating cucurbit-specific effectors

Ru Zhang¹

¹ Kyoto University

P3-8

A fungal transcription factor *BOT6* converts a beneficial root endophyte *Colletotrichum tofieldiae* into an anthracnose pathogen

Ren Ujimatsu¹, Junya Takino², Seishiro Aoki³, Masami Nakamura¹, Hiromi Haba¹, Atsushi Minami⁴, Kei Hiruma¹

¹ Grad. Sch. Art. Sci., UTokyo; ² Grad. Sch. Sci., Hokkaido Univ.; ³ Grad. Sch. Front. Sci., UTokyo; ⁴ Sch. Sci., Science Tokyo

P3-9

Asynchronous evolution of centromeric sequences across chromosomes in *Pyricularia oryzae*

Atsumi Morimoto¹, An Thach Dang¹, Kenichi Ikeda¹, Hitoshi Nakayashiki¹

¹ Graduate School of Agricultural Science, Faculty of Agriculture Kobe University.

P3-10

***Septoria gentianae* controls host stomatal development to induce systemic-induced susceptibility in gentian.**

Chika Tateda^{1,2}, Mari Iwai³, Kazue Obara³, Yoshiko Abe³, Motoki Shimizu³, Hiromasa Saitho⁴, Akihisa Shinozawa⁴, Masahiro Nishihara^{3,5}, Katsunori Hatakeyama¹, Koki Fujisaki³

¹ Iwate Univ.; ² JST PRESTO; ³ IBRC; ⁴ Tokyo Univ. Agric.; ⁵ Fukui Pref. Univ.

P3-11

***Starship* giant transposons dominate plastic genomic regions in a fungal plant pathogen and drive virulence evolution**

Yukiyo Sato¹, Roos Bex², Grady Berg³, Monica Höfte², Michael Seidl⁴, Bart Thomma¹

¹ UoC; ² UGent; ³ WUR; ⁴ UU

P3-12

Two distantly related polyxenous phytopathogenic fungi exhibit analogous response mechanisms to plant antimicrobial compounds

Akira Ashida¹, Minami Kawashima², Abriel Bulasag¹, Teruhiko Kuroyanagi¹, Makoto Ojika¹, Ikuo Sato¹, Sotaro Chiba¹, Daigo Takemoto¹

¹ Grad. Sch. Bioagr. Sci., Nagoya Univ.; ² Sch. Agr. Sci., Nagoya Univ.

P3-13

Mycoparasitism of *Hansfordia pulvinata* against tomato leaf mold is regulated by red and far-red light

Eishin Iwao¹, Kazuya Maeda¹, Takuya Sumita², Tomokazu Ushijima¹, Yuichiro Iida¹

¹ Faculty of Agriculture, Setsunan Univ.; ² School of Environmental Science, Univ. of Shiga Prefecture

P3-14

Transcriptome analysis in the tripartite interaction among tomato, *Cladosporium fulvum*, and mycoparasite *Hansfordia pulvinata*.

Kazuya Maeda¹, Hirotooshi Sushida², Takuya Sumita³, Yuichiro Iida¹

¹ Faculty of Agriculture, Setsunan University; ² Institute of Food Research, NARO; ³ School of Environmental Science, The University of Shiga Prefecture

P3-15

Functional analysis of proteins secreted from the mycoparasitic fungus *Hansfordia pulvinata*

Takumi Kawase¹, Mai Ohara¹, Kazuya Maeda¹, Mariko Kouda¹, Takuya Sumita², Yuichiro Iida¹

¹ Faculty of Agriculture, Setsunan University; ² School of Environmental Science, The University of Shiga Prefecture

P3-16

Infection of mycovirus FbLFV1 and its defective RNA induces hypovirulence by loss of fungal membrane integrity in *Fusarium boothii*

Vanshika Abbhi¹, Yurisa Sato¹, Yukiyoishi Mizutani¹, Ikuo Sato¹, Daigo Takemoto¹, Haruhisa Suga², Nobuhiro Suzuki³, Sotaro Chiba¹

¹ Graduate School of Bioagricultural Sciences, Nagoya University; ² Institute for Glyco-core Research (iGCORE), Gifu University; ³ Institute of Plant Science and Resources (IPSR), Okayama University

P3-17

Narrowing down the pathogenicity-related chromosomal regions and genes in the tomato wilt fungus using genome editing technology

Masaya Yamazaki¹, Hiroki Saito², Shuta Asai³, Takayuki Arazoe⁴, Takashi Kamakura⁴, Ken Komatsu¹, Tsutomu Arie¹

¹ United Graduate School of Agricultural Science, Tokyo University of Agriculture and Technology; ² Institute of Bioresources Engineering, Ishikawa Prefectural University; ³ RIKEN CSRS; ⁴ Faculty of Science and Technology, Tokyo University of Science

P3-18

Functional variations in conidiation-related genes between two pathotypes of *Fusarium fujikuroi*

Sang-Won Lee¹, Sung-Hwan Yun¹

¹ Dept. of Medical Biotechnology & Medical Science, Soonchunhyang University

P3-19

The minimum repertoire of Type III effector required for *Pta* 6605

Kana Kuroe¹, Takafumi Nishimura¹, Nanami Sakata¹, Yoshiteru Noutoshi¹, Kazuhiro Toyoda¹, Yuki Ichinose¹, Hidenori Matsui¹

¹ Okayama Univ.

P3-20

Function in virulence of *Pseudomonas syringae* pv. *tabaci* 6605 genomic island-1 and -2 (*PtaGI*-1 and *PtaGI*-2)

Yuta Watanabe¹, Kotomi Kunishi², Nanami Sakata^{1,2}, Hidenori Matsui^{1,2}, Yoshiteru Noutoshi^{1,2}, Kazuhiro Toyoda^{1,2}, Yuki Ichinose^{1,2}

¹ Graduate School of Environmental, Life, Natural Science and Technology, Okayama University; ² Faculty of Agriculture, Okayama University

P3-21

Development of reliable inoculation methods for studying *Xanthomonas arboricola* pv. *pruni* virulence in peach

Nanami Sakata¹, Takafumi Mukaiharu², Chisato Kami², Yoshiteru Noutoshi¹, Kazuhiro Toyoda¹, Hidenori Matsui¹, Yuki Ichinose¹

¹ Okayama Univ.; ² RIBS

P3-22

Comparative genome analysis uncovers the functions of *fleQ* and *gdpA* in *Pseudomonas syringae* pv. *tabaci* 6605 virulence

Muhammad Taufiq Hidayat¹, Kei Yoshioka¹, Takafumi Nishimura¹, Shuta Asai², Nanami Sakata¹, Yoshiteru Noutoshi¹, Kazuhiro Toyoda¹, Yuki Ichinose¹, Hidenori Matsui¹

¹ Graduate School of Environmental, Life, Natural Science and Technology, Okayama University; ² Center for Sustainable Resource Science, RIKEN

P3-23

Formate chemoreceptor and its role in motility and virulence in *Pseudomonas syringae* pv. *tabaci* 6605

Phuoc Quy Thang Nguyen¹, Yuta Watanabe¹, Hidenori Matsui¹, Nanami Sakata¹, Yoshiteru Noutoshi¹, Kazuhiro Toyoda¹, Yuki Ichinose¹

¹ The Graduate School of Environmental, Life, Natural Science and Technology, Okayama University

P3-24

Characterization *Pseudomonas syringae* pv. *tabaci* 6605 genomic island-1 by introducing it into *P. syringae* pv. *tomato* DC3000

Norika Fujisawa¹, Yuta Watanabe¹, Hidenori Matsui¹, Nanami Sakata¹, yoshiteru Noutoshi¹, kazuhiko Toyoda¹, Yuki Ichinose¹

¹ Graduate School of Environmental, Life, Natural Science and Technology, Okayama University

P3-25

Deletion of lipopolysaccharide biosynthesis genes reduces drug resistance, motility, and virulence in *Pantoea ananatis*

Yuta Isobe¹, Luna Kanatsu¹, Kenji Ueda¹, Keita Fukui², Yoshihiko Hara², Yuichi Takikawa³, Kenro Oshima¹

¹ Hosei CPS; ² AJINOMOTO; ³ Shizuoka Univ

P3-26

A study on metabolites by the growth stage period of Korea cabbage and the interaction between virulence of cabbage soft rot

Su Hyeon Han¹, Ho Song Ji¹, Min A Son¹, Yun Ju Lee¹, Hyun Gi Kong¹

¹ Department of plant medicine, College of Agriculture, Life & Environment Sciences, Chungbuk National University

P3-27

A study on the metabolites by the growth stage of Korean cabbage and the interaction between virulence of cabbage black rot

Min A Son¹, Yun Ju Lee¹, Ji Ho Song¹, Su Hyeon Han¹, Hyun Gi Kong¹

¹ Department of plant medicine, College of Agriculture, Life & Environment Sciences, Chungbuk National University

P3-28

Functional analyses of novel two-component signal transduction system-related proteins in *Xanthomonas oryzae* pv. *oryzae*.

Shiori Nakao¹, Miyuki Minami¹, Yumi Ikawa¹, Seiji Tsuge¹

¹ Kyoto Pref. Univ.

P3-29

Estimation of race 4-specific pathogenicity related genes based on comparative genome analysis of *Ralstonia pseudosolanacearum*

Kazuhiro Iiyama¹, Monami Takehara¹, Runa Yamaguchi¹, Kenichi Tsuchiya¹, Mitsuo Horita², Naruto Furuya¹

¹ Faculty of Agriculture, Kyushu University; ² Institute for Agro-Environmental Sciences, National Agriculture and Food Research Organization (NARO)

P3-30

Involvement of the race 4-specific polygalacturonase gene *pehD* in the virulence of *Ralstonia pseudosolanacearum*

Ryuma Fuchiwaki¹, Natsuki Juukurogi², Monami Takehara¹, Runa Yamaguchi¹, Kazuhiro Iiyama¹, Kenichi Tsuchiya¹, Mitsuo Horita³, Naruto Furuya¹

¹ Kyushu Univ.; ² TOTO Ltd; ³ NARO

P3-31

Recognition mechanism of *hrp*-inducing plant signals by *Ralstonia pseudosolanacearum*

Kouhei Ohnishi¹, Yuzhu Cao², Masayuki Tsuzuki¹, Akinori Kiba¹, Yasufumi Hikichi¹

¹ Kochi Univ.; ² Ehime Univ.

P3-32

Two paralogous Fur proteins have distinct iron-dependent gene regulatory functions in *Ralstonia pseudosolanacearum* strain OE1-1

Sora Tateda¹, Tatsuya Ueyama¹, Akinori Kiba¹, Kouhei Ohnishi¹, Yasufumi Hikichi¹, Masayuki Tsuzuki¹

¹ Fac. Agric. and Mar. Sci., Kochi Univ.

P3-33

A novel AcrR-type transcriptional regulator RSp0599 negatively regulates virulence of *Ralstonia pseudosolanacearum* strain OE1-1

Tatsuya Ueyama¹, Sora Tateda¹, Akinori Kiba¹, Kouhei Ohnishi¹, Yasufumi Hikichi¹, Masayuki Tsuzuki¹

¹ Fac. of Agric. and Mar. Sci., Kochi Univ.

P3-34

Possible Role of the *Ralstonia pseudosolanacearum* Effector Clone100 in planta

Yutaro Ikemura¹, Mayu Takakusu¹, Yuki Tsuchiya¹, Miki Edaki¹, Masato Kitamura¹, Yoshito Taguchi¹, Hirofumi Yoshioka², Susumu Mochizuki¹, Kazuya Akimitsu¹, Kazuya Ichimura¹

¹ Facult. Agri., Kagawa Univ; ² Grad. Sch. Bioagri. Sci., Nagoya Univ

P3-35

Effects of calcium ions and viral RNA silencing suppressors on jasmonic acid and salicylic acid induced genes

Kenzie Sachisiva Anindita¹, Eun Jin Jeon¹, Masanao Sato¹, Kenji Nakahara¹

¹ Graduate School of Agriculture, Hokkaido University

P3-36

Systemic infectivity of *Plantago asiatica* mosaic virus (PIAMV) *Viola* isolate and its mutant in *Arabidopsis* natural accessions

Nami Minato^{1,2}, Daisuke Nakamura¹, Masaaki Moridaira², Ken Komatsu³, Shin-ichi Fuji⁴

¹ Graduate School of Science and Technology, Niigata University; ² Faculty of Agriculture, Niigata University; ³ Graduate School of Agriculture, Tokyo University of Agriculture and Technology (TUAT); ⁴ Faculty of Bioresource Science, Akita Prefectural University

P3-37

Co-option of host V-ATPase and autophagy pathways for the replication of a plant RNA virus

Kiwamu Hyodo¹, Ku Sudo¹, Hideki Kondo¹, Nobuhiro Suzuki¹

¹ Institute of Plant Science and Resources, Okayama University

IV: Molecular Mechanisms of Resistance

P4-1

A trehalase-derived MAMP triggers LecRK-V-mediated immune responses in *Arabidopsis*

Erika Iino^{1,2}, Yasuhiro Kadota¹, Noriko Maki¹, Erika Ono¹, Kazuki Sato¹, Nobuaki Ishihama¹,

Bruno Pok Man Ngou¹, Marc W Schmid³, Takamasa Suzuki⁴, Taketo Uehara⁵, Ken Shirasu^{1,2}

¹ RIKEN CSRS; ² Graduate school of Science, The University of Tokyo; ³ MW Schmid GmbH; ⁴ Chubu University;

⁵ National Agriculture and Food Research Organization

P4-2

Structure determination of the extracellular region of CARD1/HLA1 by cryo-EM

Nobuaki Ishihama¹, Yohta Fukuda², Yumiko Shirano³, Kaori Takizawa¹, Ryoko Hiroyama¹, Kazuhiro Fujimoto³, Hiroki Ito⁴, Mayumi Nishimura⁴, Takeshi Yanai³, Tsuyoshi Inoue², Anuphon Laohavisit³, Ken Shirasu¹

¹ RIKEN CSRS; ² Grad Sch Pharma Sci, Osaka Univ; ³ WPI-ITbM, Nagoya Univ; ⁴ THERS Technical Center, Nagoya Univ

P4-3

Exploring LRR-Type Immune Receptors Recognizing Pathogen-Derived Molecules in Non-Model Plants

Erika Ono¹, Bruno Pok Man Ngou¹, Michele Wyler², Marc W Schmid², Yasuhiro Kadota¹, Ken Shirasu^{1,3}

¹ RIKEN CSRS; ² MWSchmid GmbH; ³ Grad. Sch. of Sci., The Univ. of Tokyo

P4-4

Search for glycosyltransferase enzymes in *Arabidopsis thaliana* that use *N*-hydroxypipicolinic acid as a substrate

Jiyuan Bao¹, Taiga Uchiyama¹, Kazuki Kusunoki¹, Yuka Shinohara¹, Yurika Tanigawa², Megumi Watanabe¹, Nanami Sakata^{1,2}, Hidenori Matsui^{1,2}, Yuki Ichinose^{1,2}, Kazuhiro Toyoda^{1,2}, Nobuaki Ishihama³, Ken Shirasu³, Yoshiteru Noutoshi^{1,2}

¹ Graduate School of Environmental, Life, Natural Science and Technology, Okayama Univ.; ² Faculty of Agriculture, Okayama Univ.; ³ RIKEN CSRS

P4-5

Characterization of JAZ family proteins based on degradation monitoring by using a bioluminescence reporter system

Harukazu Koyama¹, Hiromi Nakai¹, Hirotaka Ishida¹, Rieko Ogura², Kazuyuki Hiratsuka¹

¹ YNU; ² YBT

P4-6

Calcium-dependent protein kinases regulate ROS production downstream of helper NLR.

Yuta Hino¹, Mitsuhiro Yada¹, Miki Yoshioka¹, Hiroaki Adachi^{2,3}, Hirofumi Yoshioka¹

¹ Grad. Sch. Bioagr. Sci., Nagoya Univ.; ² Grad. Sch. Agri., Kyoto Univ.; ³ JST PRESTO

P4-7

Synergistic effects of rice OsRLCK and OsCDPK on ROS burst via phosphorylation of OsRBOHL.

Miki Yoshioka¹, Koji Yamaguchi², Satomi Yoshimura², Masayuki Fujiwara³, Takaki Yamauchi¹, Mikio Nakazono¹, Tsutomu Kawasaki², Hirofumi Yoshioka¹

¹ Grad. Sch. of Bioagricultural Sciences, Nagoya Univ.; ² Grad. Sch. of Agriculture, Kinki Univ.; ³ YANMAR HOLDINGS Co. Ltd.

P4-8

Identification and characterization of *CmCERK1* required for chitin-triggered ROS generation in melon

Chun Yu Suen¹

¹ Laboratory of Plant Pathology, Graduate School of Agriculture, Kyoto University

P4-9

Functional evaluation of plant-derived extracellular vesicles according to different infection strategies of pathogenic fungi

Ryoichiro Fukuhara¹, Naomi Konishi¹, Hideki Nishimura¹, Natsuko Ono¹, Yoji Kawano¹, Fumi Fukada¹

¹ Okayama Univ. IPSR

P4-10

Induced systemic resistance triggered by *Trichoderma* primarily independent of the chitin-mediated signaling pathway in Arabidopsis

Ayae Sakai¹, Hisako Yamagata¹, Keigo Naito¹, Mai Yoshioka², Takaya Tominaga³, Shinsuke Ifuku^{4,5}, Hironori Kaminaka²

¹ Dept. Agr. Sci., Grad. Sch. Sust. Sci., Tottori Univ.; ² Fac. Agr., Tottori Univ.; ³ United Grad. Sch. Agr.; ⁴ Grad. Schl. Eng., Tottori Univ.; ⁵ RISH, Kyoto Univ.

P4-11

Single-cell analysis of HR cell death using a laser-assisted thermal-expansion microinjection technique

Masaya Okahisa¹, Shoya Ogawa¹, Kappei Kobayashi¹, Yu Ayukawa¹, Takashi Yaeno¹

¹ Fac. Agri. Ehime University

P4-12

Understanding the loss of function of *SMN1/RPS6* in *smn2/hen2* mutant by a reverse genetic approach

Kanako Segoshi¹, Erika Kawando², Suzuna Nagai², Momoko Takagi³, Susumu Mochizuki², Ken Shirasu⁴, Kazuya Ichimura²

¹ Facult. Sch. Agri., Kagawa Univ.; ² Grad. Sch. Agri., Kagawa Univ.; ³ Grad. Sch. Arts and Sci., Tokyo Univ.; ⁴ RIKEN CSRS

P4-13

Enzymatic characterization of rice OsG6PDH1 involved in reactive oxygen species accumulation

Keishi Wada¹, Kana Hagihara¹, Shunsuke Ura¹, Aya Asai¹, Natsuki Ohtani¹, Ayaka Aki¹, Akihito Kano¹, Takeshi Fukumoto¹, Ken Izumori^{1,2}, Akihito Yoshihara^{1,2}, Hiromi Yoshida^{2,3}, Kazuya Ichimura^{1,2}, Kazuya Akimitsu^{1,2}, Susumu Mochizuki^{1,2}

¹ Faculty of Agriculture, Kagawa University; ² International Institute of Rare Sugar Research and Education, Kagawa University; ³ Faculty of Medicine, Kagawa University

P4-14

A role of rice sugar transporters OsMST and OsSWEET in rare sugar effects

Yuna Matsuoka¹, Maho Takezaki¹, Saki Ejima¹, Akihito Kano¹, Ken Izumori¹, Susumu Mochizuki¹, Kazuyo Kamitori², Kazuya Ichimura¹, Kenji Gomi¹, Kazuya Akimitsu¹

¹ Kagawa Univ., Fac. of Agr.; ² Kagawa Univ., Fac. of Med.

P4-15

Arabidopsis MTK1 regulates JAZ5 and JAZ10 via MTK5 and MTK7 to activate resistance against *Pseudomonas syringae* pv. *tomato* DC3000

Kazuma Sugimoto¹, Keishi Yamanaka¹, Mitsuo Shintani¹, Kohei Yokota¹, Masaya Nagata¹, Misato Matsumura¹, Masako Nakamura¹, Kaori Takizawa², Naoto Kawakami⁴, Daisuke Matsuoka³, Kazuo Shinozaki², Ken Shirasu², Susumu Mochizuki¹, Kazuya Akimitsu¹, Kazuya Ichimura¹

¹ Facult. Sch. Agri., Kagawa Univ.; ² RIKEN CSRS; ³ Grad. Sch. Agri. Sci, Kobe Univ.; ⁴ Facult. Agri., Meiji Univ.

P4-16

An Investigation on the Resistance of Antibiotics to Cabbage Soft Rot

Yun Ju Lee¹, Ji Ho Song¹, Min A Son¹, Suh Yeon Han¹, Hyun Gi Kong¹

¹ Department of plant medicine, College of Agriculture, Life & Environment Sciences, Chungbuk National University

P4-17

Characterization of the esterase activity of HSR203J associated with salicylic acid biosynthesis

Momoho Osada¹, Shinpei Katou¹

¹ Graduate school of science and technology, Shinshu Univ.

P4-18

Comparative analysis of five strains of *Pseudomonas amygdali* pv. *tabaci* about their virulence on *Nicotiana benthamiana*

Yuna Nakao¹, Shinpei Katou¹

¹ Graduate school of medicine, science and technology, Shinshu University

P4-19

Functional analysis of the paralogs of *CNL* and *CHD* associated with salicylic acid biosynthesis

Kazumi Murata¹, Momoho Osada², Kosuke Tasaki², Shinpei Katou^{1,2}

¹ Grad School of Medicine, Science and Technology, Shinshu Univ.; ² Grad School of Science and Technology, Shinshu Univ.

P4-20

Suppression of movement of *Ralstonia pseudosolanacearum* race 4 in mango ginger leaves

Moka Imai¹, Ryota Sakai¹, Kazuhiro Iiyama¹, Kenichi Tsuchiya¹, Mitsuo Horita², Naruto Furuya¹

¹ Kyushu Univ; ² NARO

P4-21

Analysis of Immunoregulatory Roles of CBP60g and SARD1 in Tobacco Plants Harboring N¹ Resistance Gene

Houssam Eddine Said Bensedira¹, Okon Odiong Unung¹, Yuta Shinomura², Honoka Matsuzaki², Takashi Yaeno^{1,2}, Hidetaka Kaya^{1,2}, Kappei Kobayashi^{1,2}

¹ UGAS, Ehime Univ; ² Faculty of Agriculture Ehime Univ

P4-22

Overexpression of *MDP92* encoding MYB transcription factor negatively regulates N-mediated resistance to tobamovirus infection

Munehisa Yoshikawa¹, Yasuhiko Matsushita^{1,2,3}, Nobumitsu Sasaki^{1,2}

¹ United sch. of Agri., Tokyo Univ. of Agri. and Tech.; ² Inst. of Agri., Tokyo Univ. of Agri. and Tech.; ³ Gene research center, Tokyo Univ. of Agri. and Tech.

V: Others

P5-1

Plant growth promotion via syntrophic interactions between TCH3-2 and Synthetic community members

Hyojun Seo¹, Ju Hui Kim¹, Kantika Noppakhun¹, Sang-Moo Lee², Jae Hyeon Noh¹, Seon-Woo Lee^{1,2}

¹ Department of Applied Bioscience, Dong-A University; ² Institute of Agricultural Life Science, Dong-A University

P5-2

***Flavobacterium dauae* TCH3-2, with a synthetic community, upregulates phytosterol-related genes and promotes plant growth.**

Ju Hui Kim¹, Sang-Moo Lee², Hyun-Hee Lee³, So Eon Kim¹, Jungwook Park³, Young-Su Seo³, Seon-Woo Lee^{1,2}

¹ Department of Applied Bioscience, Dong-A University; ² Institute of Agricultural Life Science, Dong-A University;

³ Department of Systems Plant Microbiology, Pusan National University

P5-3

***STT3A* is required for pathogen-derived sphingolipid recognition in *Arabidopsis thaliana*.**

Seowon Choi¹, Motoki Shimizu², Akira Abe², Nobuaki Ishihama³, Yuko Ishikawa¹, Daigo Takemoto⁴, Ken Shirasu³, Yoshitaka Takano¹, Ryohei Terauchi^{1,2}, Hiroaki Kato¹

¹ Kyoto University; ² IBRC; ³ RIKEN; ⁴ Nagoya University

P5-4

Study of rice phosphoglucomutase for phosphorylated rare sugar utilization

Haru Terao¹, Maho Takezaki¹, Saki Ejima¹, Yusei Shimamura¹, Akihito Kano¹, Takeshi Fukumoto¹, Akihede Yoshihara¹, Ken Izumori¹, Kenji Gomi¹, Kazuya Ichimura¹, Susumu Mochizuki¹, Kazuya Akimitsu¹

¹ Kagawa Univ., Fac. of Agr.

P5-5

Attempt to generate banana/plantain resistant to *Fusarium oxysporum* f. sp. *cubense* by irradiation-induced mutagenesis

Nobumitsu Sasaki¹, Rosa Cabrera-Pintado², Sakura Takahashi¹, Jingai Che¹, Sakae Suzuki¹, Toshiyuki Fukuhara¹, Tomoko Abe³, Dina Gutiérrez-Reynoso², Lilliana Aragón-Caballero⁴, Tsutomu Arie¹

¹ TUAT; ² INIA; ³ RIKEN; ⁴ UNALM

P5-6

Development of a simple method for horizontal chromosome transfer in *Fusarium oxysporum*

Yu Ayukawa¹, Nanami Misawa², Takashi Yaeno¹

¹ Graduate School of Agriculture, Ehime University; ² Department of Food Production Science, Ehime University

P5-7

Pathogenicity differentiation of *Fusarium* spp. causing Fusarium basal rot and wilt disease in *Allium* spp.

Kosei Sakane¹, Shin-ichi Ito², Kazunori Sasaki²

¹ Ishikawa prefectural university; ² Yamaguchi University

P5-8

Hyperspectral assessment of interaction of *Heterodera trifolii* and *Verticillium dahliae* on Kimchi cabbage

Sekeun Park¹, Byeong-Yong Park¹, Hyoung-Rai Ko¹, Natesan Karthi¹, Sohee Park¹, Eunhwa Kim¹

¹ National Institute of Agricultural Sciences

P5-9

Identification and pathogenicity of *Colletotrichum* spp. isolated from diseased pepper fruits

Sohyeon An¹, Aeoyeon Lee¹, Yongjin Cho¹, Jiwoo Jeong¹, Heungtae Kim¹

¹ Chungbuk National University

P5-10

Analysis of the infection pattern of *Lasiodiplodia* sp. on the clonal plant Japanese knotweed

Miki Nakano¹, Jun-ichiro Suzuki¹, Toshiko Furukawa¹

¹ Biological Sciences, Graduate School of Science, Tokyo Metropolitan University

P5-11

Unraveling the Foliar Disease Affecting Bamboo (*Bambusa vulgaris*) in Laguna, Philippines

Mary Joy Lapitan¹, Julie Ann Matalog¹, Roberto Geli¹, Regine Candano¹

¹ National Crop Protection Center, College of Agriculture and Food Science, University of the Philippines Los Baños

P5-12

The distribution and antimicrobial susceptibility of the pathogenic bacteria of onion rot in Japan

Mizue Tsuji¹, Shin-ichi Fuji², Hiroshi Yokota³, Hatsumi Kumagai³, Yutaka Iwamoto⁴, Shinji Nishiguchi⁴, Youichi Ide⁵, Akiko Furuta⁵, Hayashi Satoshi⁶, Ikuo Kadota⁷

¹ Tohoku Agricultural Research Center, National Agriculture and Food Research Organization (TARC, NARO); ² Akita Prefectural University (APU); ³ Iwate Agricultural Research Center (IARC); ⁴ Hyogo Prefectural Technology Center for Agriculture, Forestry and Fisheries (HTCAFF); ⁵ Saga Agricultural Research Center (SARC); ⁶ Rakuno Gakuen University (RGU); ⁷ Japan Plant Protection Association (JPPA)

P5-13

Genomic and Virulence Analysis of Heart Rot Bacteria: First Report of *Dickeya oryzae* Infecting Pineapple in the Philippines

Signabon Freddiewebb^{1,2}, Encabo Jaymee³, Takemoto Daigo⁴, Sato Ikuo⁴, Chiba Sotaru^{2,4}

¹ National Crop Protection Center, College of Agriculture and Food Science, University of the Philippines Los Baños;

² Nagoya University Asian Satellite Campuses Institute – Philippine Campus, University of the Philippines Los Baños;

³ Microbiology Division, Institute of Biological Sciences, College of Arts and Sciences, University of the Philippines Los Baños; ⁴ Graduate School of Bioagricultural Sciences, Nagoya University

P5-14

Two novel phages with a broad host range demonstrate the diversity of *Pectobacterium* spp. causing wasabi soft rot

Kanata Kuwahara¹, Noi Inamoto¹, Sayuri Uematsu², Ryota Moriuchi³, Hideo Dohra^{2,3}, Masayoshi Hashimoto^{1,2}, Yuichi Takikawa¹, Shinji Tsuyumu¹, Hisae Hirata^{1,2}

¹ Fac. of Agri, Shizuoka Univ.; ² Grad. Sch. of Integ. Sci. and Tech., Shizuoka Univ.; ³ Shizuoka Inst. Anal. Ctr., Shizuoka Univ.

P5-15

Incidence and distribution of 14 plant viruses managed in agricultural fields of Korea in 2020-2024

Bong Choon Lee¹, Hae-Ryun Kwak¹, Hee-Seong Byun¹, Jong-Yoon Choi², Moon Jong Kim³, Eunsol Yeon⁴, Hyun Sook Kim⁵, Deok-Ryeol Lee⁶, Hyo-Jeong Kim⁷, Won-Kown Jung⁸, Dong-Wan Kang⁹, Hyo-Jeong Kim¹⁰

¹ Crop Protection Division, National Institute of Agricultural Sciences, Rural Development Administration, ² Gyeonggi-do Agricultural Research and Extension Services (ARES), ³ Gangwon-do ARES, ⁴ Chungcheongbuk-do ARES, ⁵ Chungcheongnam-do ARES, Yesan, Republic of Korea; ⁶ Jeollabuk-do ARES, Iksan, ⁷ Jeollanam-do ARES, Naju, Republic of Korea; ⁸ Gyeongsangbuk-do ARES, ⁹ Gyeongsangnam-do ARES, ¹⁰ Jeju-do ARES

P5-16

Evidence for the replication of a bipartite plant rhabdovirus in its arthropod mite

Hideki Kondo¹, Kiwamu Hyodo¹, Nobuhiro Suzuki¹

¹ IPSR, Okayama Univ.

P5-17

Development of anaerobic soil disinfestation method against foot rot disease of sweet potato in seedbeds

Koji Nomiya¹, Kirara Saito², Yusuke Arakawa², Hiroshi Kajisa^{3,5}, Akinori Hirata³, Yasushi Yoshimoto³, Akira Wada⁴, Shigenobu Yoshida¹

¹ Institute for Plant Protection, NARO; ² Kyushu Okinawa Agricultural Research Center, NARO; ³ SUNUS Co., Ltd.;

⁴ SANWA Co., Ltd.; ⁵ SUMMIT AGRI-BUSINESS CORPORATION

P5-18

Rapid detection of cucumber green mottle mosaic virus using RT-MIRA combined with lateral flow strip assay

Bong Geun Oh¹, Ji Yeong Bang², Ju-Yeon Yoon^{2,3}, Ho-Jong Ju^{1,2}

¹ Department of Agricultural Biology, Jeonbuk National University; ² Department of Plant protection and Quarantine, Jeonbuk National University; ³ Department of Agricultural Convergence Technology, Jeonbuk National University

P5-19

Climate-Based Metadata Analysis for Crop Damage and Disease Correlation

Ji Ho Song¹, Min A Son¹, Yun Ju Lee¹, Suh Yeon Han¹, Hyun Gi Kong¹

¹ Department of plant medicine, College of Agriculture, Life & Environment Sciences, Chungbuk National University

P5-20

'Database of Plant Diseases in Japan' in the Genebank project

Mamoru Satou¹, Tamaki Uehara-Ichiki¹, Shihomi Uzuhashi¹, Yusuke Takashima¹, Fukuhiro Yamasaki¹

¹ Research Center of Genetic Resources, National Agriculture and Food Research Organization

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Fire blight management system in Korea

Yong Hwan Lee¹ and Hyeonheui Ham¹

¹ Plant disease Division, National Institute of Agricultural Science, Rural Development Administration

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