Frontiers in Developing Climate-Resilient and Socially Accepted Plants

日 時　3月13日（金）9:30-12:30　　会 場　X会場

共 催　国立研究開発法人科学技術振興機構

Organizers: Motoaki Seki (RIKEN CSRS) / Atsushi Takemiya (Grad. Sch. Sci. Tech. Innov., Yamaguchi Univ.)

本シンポジウムは，植物のレジリエンス強化と植物バイオエコノミーの発展を目指す2つのJST ASPIRE/NSF Global Centersプロジェクトの連携により開催される．これら国際プロジェクトの最新の成果を共有することで，国際的な研究協力を促進し，研究ネットワークを強化するとともに，若手研究者の育成を支援することを目的としている．これらの取り組みを通じて，気候変動に強く社会的受容性の高い作物の創出を推進することを目指している．

9:30　Opening Remarks
Motoaki Seki (RIKEN CSRS)

Chairperson: Atsushi Takemiya

9:37　S01-1　Accelerating Functional Discovery of Plant-Derived Small Molecules for Enhancing Agricultural Resilience
Seung Rhee[1,2,3,4], Miriam Goodman[5], Emily Fryer[5] ([1]Plant Resilience Institute, Michigan State University, USA, [2]Department of Biochemistry and Molecular Biology, Michigan State University, USA, [3]Department of Plant Biology, Michigan State University, USA, [4]Department of Plant, Soil, and Microbial Sciences, Michigan State University, USA, [5]Department of Molecular and Cellular Physiology, Stanford University, USA)

10:03　S01-2　Manipulating stomatal responses to improve water use efficiency
Tracy Lawson (University of Illinois)

10:29　S01-3　Enhancing plant resilience by chemical, epigenetic and genome regulations
Motoaki Seki[1,2,3] ([1]RIKEN CSRS, [2]KIBR, Yokohama City Univ., [3]Graduate Sch. Sci. Eng., Saitama Univ.)

Chairperson: Motoaki Seki

10:55　S01-4　Molecular basis of stomatal opening for improved plant water use efficiency
Atsushi Takemiya (Grad. Sch. Sci. Tech. Innov., Yamaguchi Univ.)

11:21　S01-5　Stomatal mechanisms: Molecular insights driving plant resilience and productivity
Toshinori Kinoshita (ITbM, Nagoya University)

11:47　S01-6　Molecular insights into ABA signaling: implications for plant stress resilience
Taishi Umezawa (AIS, Tokyo Univ. Agric. Tech.)

12:13　Closing Remarks
Atsushi Takemiya (Grad. Sch. Sci. Tech. Innov., Yamaguchi Univ.)

Unlocking New Frontiers in Plant Physiology with Mass Spectrometry

日 時　3月13日（金）9:30-12:30　　会 場　Y会場

Organizer: Kanako Bessho-Uehara (Tohoku University)

Recent mass spectrometry (MS) innovations are opening new frontiers in plant physiology. MS allows multifaceted analyses, from proteomics and metabolomics to PTM dynamics, imaging, and single-cell studies. This symposium features leading researchers using cutting-edge MS to discover novel plant systems. We aim to share the view of MS not just as a tool, but as a powerful "engine of discovery" shaping plant science.

9:30　Opening Remarks
Kanako Bessho-Uehara (Tohoku University)

Chairperson: Kanako Bessho-Uehara

9:35　S02-1　High-throughput, in-depth plant phosphoproteomics and N-glycoproteomics
Chin-Wen Chen, Ting-An Chen, Pei-Yi Lin, Chuan-Chih Hsu (Institute of Plant and Microbial Biology, Academia Sinica)

10:00　S02-2　Exploration of Phospho-Switches regulating growth and environmental responses in *Arabidopsis* using ^{15}N metabolic labeling–based phosphoproteomics
Yuri Ohkubo, Natsuki Tada, Yuki Kato, Saki Noda, Yoshikatsu Matsubayashi (Grad. Sch. Sci., Nagoya University)

Chairperson: Yuri Ohkubo

10:25　S02-3　Phosphoproteomic insights into brassinosteroid-regulated sugar metabolism
Kanako Bessho-Uehara[1], Hongliang Zhang[2], Yalikunjiang Aizezi[2], Ajeet Chaudhary[2], Cao Son Trinh[2], Shou-Ling Xu[2], Zhi-Yong Wang[2] ([1]Tohoku University, [2]Carnegie Institution)

Chairperson: Kanako Bessho-Uehara

10:50　S02-4　Activity-based high-throughput screening and MS-based proteomics for identifying site-specific proteases in plants
Sayaka Matsui[1], Yoshikatsu Matsubayashi[2], Yuki Hirakawa[1] ([1]Grad. Sch. Integr. Sci. Life, Hiroshima Univ., [2]Grad. Sch. Sci., Nagoya Univ.)

11:15　S02-5　Search for signaling factors in the self-incompatibility of Brassicaceae plants using BioID
Maki Hayashi (Grad. Sch. Life Sci., Tohoku Univ.)

11:40　S02-6　MS imaging and live single-cell MS analyses revealed spatially organized transcellular alkaloid metabolism
Kotaro Yamamoto (Sch. Sci. Yokohama City Univ.)

12:05　Closing Remarks
Kanako Bessho-Uehara (Tohoku University)

Advances in Engineering and Regulation of Plastids and Photosynthesis

日 時　3月13日（金）9:30-12:30　　会 場　Z会場

Co-sponsored by Grants-in-Aid for Transformative Research Areas (A), [Cytoplasmic Genome Regulation] & [Photosynthetic Ubiquity], and, JSPS Core-to-Core program [Plant Organelle Research]

Organizers: Wataru Yamori (The University of Tokyo) / Mizuki Takenaka (Kyoto University) / Hsou-min Li (Academia Sinica) / Wataru Sakamoto (Okayama University) / Shin-ichi Arimura (The University of Tokyo)

From chloroplast genome editing to Rubisco engineering and photosynthetic regulation, this symposium presents cutting-edge advances in plastid and photosynthesis research. By integrating molecular, structural, imaging, and synthetic biology approaches, it explores new strategies to engineer photosynthesis for future crop improvement.

Chairperson: Mizuki Takenaka

9:30　S03-1　Targeted Base Editing for the Chloroplast Genome
Shin-ichi Arimura, Issei Nakazato (Graduate School of Agricultural and Life Sciences, The University of Tokyo, Japan)

9:50　S03-2　Taming Plastids for Biotechnology and Synthetic Biology
Ralph Bock (Max Planck Institute of Molecular Plant Physiology, Germany)

10:20　S03-3　Real-Time Monitoring of Plant Physiological Dynamics with Hyperspectral Imaging
Kaori Kohzuma (Graduate School of Agriculture, Kyoto University, Japan)

10:40　Break

Chairperson: Wataru Sakamoto

10:45　S03-4　Rewriting Rubisco's evolutionary script for the next generation in crop CO_2 fixation
Spencer Whitney (Research School of Biology, The Australian National University, Australia)

11:15　S03-5　Next-Generation Strategies for Boosting Photosynthesis through Rubisco Engineering and Chemical Screening
Wataru Yamori (Graduate School of Agricultural and Life Sciences, The University of Tokyo, Japan)

11:35　S03-6　Protein import into chloroplasts
Hsou-min Li (Institute of Molecular Biology, Academia Sinica, Taiwan)

12:05　S03-7　Structural Insights into the pH-Dependent Functional Regulation of the Cytochrome b_6f Complex
Genji Kurisu (Institute for Protein Research, Osaka University, Japan)

PCP sponsored symposium

Priming and Memory of Plants in Facing Environmental Changes

日 時　3月13日（金）14:00-17:00　　会 場　X会場

Organizers: Nobutoshi Yamaguchi (NAIST) / Yee-yung Charng (Academia Sinica)

This symposium focuses on plant stress memory and priming, a key research area highlighted in recent and upcoming special issues of Plant and Cell Physiology (PCP) on environmental responses and stress adaptation. Editors of PCP associated with these topics and special issues will come together to present their research, exploring how chromatin-based regulation, transcriptional reprogramming, and persistent physiological and metabolic changes underlie memory of heat, cold, and other abiotic and biotic stresses. Attendees will gain cutting-edge insights into how prior stress experiences shape subsequent responses, learn about the related PCP special issues, and have an opportunity to connect with editors working at the forefront of plant stress memory research.

Chairperson: Nobutoshi Yamaguchi

14:00　Opening Remarks by OUP
Miki Matoba (Oxford Univ. Press)

14:03　PCP's Upcoming special issue
Liliana Costa (Oxford Univ. Press)

14:10　S04-1　Regulatory Circuits for Maintaining Plant Stress Memories
Yee-yung Charng (Agricultural Biotechnology Research Center, Academia Sinica, Taiwan)

14:40　S04-2　Epigenetic Regulation of Cold Stress Response and Memory in *Arabidopsis*
Munissa Sadykova, Hidetoshi Saze (Plant Epigenetics Unit, OIST)

15:00　S04-3　How do plants remember a stressful day? – Interplay of transcription factors and chromatin to regulate heat stress memory
Isabel Baurle (Institute of Biochemistry and Biology, University of Potsdam, Potsdam, Germany)

15:30　Break

Chairperson: Yee-yung Charng

15:40　S04-4　Decoding Ethanol-Activated Stress Tolerance Pathways and Their Persistence
Kaori Sako[1,2], Daisuke Todaka[2], Motoaki Seki[2] ([1]Dep. Adv. Bio., Kindai Univ., [2]CSRS, RIKEN)

15:55　S04-5　Proteins for Chromatin Organization Contribute to Heat Stress Memory
Yilang Li[1], Hikaru Sato[1], Yuki Hayashi[2], Toshinori Kinoshita[2], Nobutoshi Yamaguchi[3], Takuya Sakamoto[4], Sachihiro Matsunaga[1] ([1]Grad. Sch. Frontier Sci., Univ. Tokyo, [2]Grad. Sch. Sci., Nagoya Univ., [3]Grad. Sch. Biological Sci., NAIST, [4]Grad. Sch. Sci., Kanagawa Univ.)

16:10　S04-6　When plants remember the heat: The sweet mechanics of thermomemory
Ashverya Laxmi, Halidev Krishna Botta, Harsha Samtani (National Institute of Plant Genome Research, New Delhi)

16:40　S04-7　Transcription Factor and Epigenetic Regulator-Mediated Heat Stress Memory in Plants
Nobutoshi Yamaguchi (NAIST)

16:55　Closing Remarks
Yee-yung Charng (Academia Sinica)

Advances in Cellular and Molecular Signaling in Response to Internal and External Stimuli from Algae to Plants

日 時　3月13日（金）14:00-17:00　　会 場　Y会場

Organizers: Yasuyo Yamaoka (The Catholic University of Korea) / Kuan-Ju Lu (National Chung Hsing University)

This symposium aims to promote international collaboration among leading researchers from Taiwan, Korea, and Japan by exploring the frontiers of regulatory mechanisms in plant and algal biology. It will highlight recent advances in understanding how plants and algae modulate their cellular and molecular signaling in response to environmental stimuli, developmental programs, and how they adopt to evolutionary pressures. By discussing diverse types of molecular regulatory mechanisms in a broad spectrum of algae and plant species, the symposium will provide an intellectually stimulating and interdisciplinary platform.

14:00　Opening Remarks
Kuan-Ju Lu (National Chung Hsing University), Yasuyo Yamaoka (The Catholic University of Korea)

Chairperson: Kuan-Ju Lu

14:05　S05-1　Cosmopolitan microalgae: genomic biology and regulation of key players in global carbon cycling
Chuan Ku (Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan)

14:25　S05-2　How cells die matters in microalgae through IRE1-dependent lipid remodeling
Yasuyo Yamaoka (Dept. of Biotechnology, The Catholic University of Korea)

14:45　S05-3　Heat Shock Transcription Factor B1 Orchestrates Transcriptional Network for Land Plant Adaptation
Ting-Ying Wu (Institute of Plant and Microbial Biology, Academia Sinica)

15:05　S05-4　An acidophilic fungus promotes prey digestion in a carnivorous plant
Isheng Jason Tsai (Biodiversity Research Center, Academia Sinica Taiwan)

Chairperson: Yasuyo Yamaoka

15:25　S05-5　Plasticity and Evolution of Xylem Cell Identity Revealed by Single-Cell and Spatial Multi-Omics
Jo-Wei Allison Hsieh[1,2], Te-Lun Mai[2], Ying-Lan Chen[3,4], Ying-Chung Jimmy Lin[5] ([1]Genome Center, University of California, Davis, Davis, CA, USA, [2]Department of Life Science, National Taiwan University, Taipei, Taiwan, [3]Department of Biotechnology and Bioindustry Sciences, National Cheng Kung University, Tainan, Taiwan, [4]Graduate Program in Translational Agricultural Sciences, National Cheng Kung University and Academia Sinica, Tainan, Taiwan, [5]Department of Life Science and Institute of Plant Biology, National Taiwan University, Taipei, Taiwan)

15:45　S05-6　Ribosome as a Signalling Hub: rRNA Modification Modulates Signal Perception Sensitivity in Xylem Differentiation
Donghwi Ko (Sainsbury Laboratory, University of Cambridge, UK)

16:05　S05-7　Molecular Mechanisms of Epidermal Reprogramming Triggered by Wounding in Arabidopsis
Jung-Min Lee[1], Woo-Taek Jeon[1], Minsoo Han[1], Min-Soo Choi[1], Myung Kwon[1], Kyungyoon Kim[2], Sujeong Je[3], Hoon Jung[2], Geon Heo[1], Youngsung Joo[1], Yasuyo Yamaoka[3], Yuree Lee[1] ([1]School of Biological Sciences, Seoul National University, Republic of Korea, [2]Research Institute of Basic Sciences, Seoul National University, Republic of Korea, [3]Department of Biotechnology, The Catholic University of Korea, Republic of Korea)

16:25　S05-8　A role of phospholipid-binding in regulating the function of Arabidopsis Phosphatidylethanolamine-Binding Proteins (PEBP)
Yuki Nakamura[1,2,5,6], Ying-Chen Lin[2,3,4], Yu-chi Liu[2], Artik Elisa Angkawijaya[1] ([1]RIKEN Center for Sustainable Resource Sciences (CSRS), [2]Institute of Plant and Microbial Biology, Academia Sinica, [3]Molecular and Biological Agricultural Sciences Program, Taiwan International Graduate Program, Academia Sinica and National Chung Hsing University, [4]Graduate Institute of Biotechnology, National Chung Hsing University, [5]Department of Biological Sciences, Graduate School of Science, The University of Tokyo, [6]Biotechnology Center, National Chung Hsing University)

16:45　Closing Remarks
Yasuyo Yamaoka (The Catholic University of Korea), Kuan-Ju Lu (National Chung Hsing University)

Underlying molecular antagonisms as drivers of plant diversification and ecological adaption

日 時　3月13日（金）14:00-17:00　　会 場　Z会場

Organizers: Sota Fujii (Univ Tokyo, Grad Sch Agric Life Sci) / Reina Komiya (RIKEN)

Plants have internalized molecular antagonisms that maintain and expand diversity, such as factors controlling hybridization during reproduction, host genome and transposable elements, and mechanisms governing intercellular developmental regulation. This symposium will highlight cross-scale research that extends molecular-level processes to an integrated understanding of plant adaptation to ecosystems.

14:00　opening remarks
Sota Fujii (Univ Tokyo, Grad Sch Agric Life Sci)

Chairperson: Reina Komiya

14:05　S06-1　The molecular basis of floral adaptations to promote outbreeding
Michael Lenhard (University of Potsdam, Germany)

14:35　S06-2　Molecular evolution of mechanisms involved in antagonistic pollen-pistil interactions in plants
Sota Fujii[1,2] ([1]Univ Tokyo, Gra Sch Agric Life Sci, [2]Suntory SunRiSE)

15:00　S06-3　Epigenetic basis of parental genomic antagonism underlying endosperm-based hybridization barriers
Kaoru Tonosaki (Kihara Inst. Biol. Res., Yokohama City Univ.)

15:25　break

Chairperson: Sota Fujii

15:35　S06-4　Environmental Response–Dependent RNA Regulatory System in Rice Reproduction
Reina Komiya (RIKEN・CSRS)

16:00　S06-5　Molecular antagonisms promoting diversity of the epigenome in natural *Arabidopsis thaliana* populations
Eriko Sasaki (Dept. Biol., Kyushu Univ.)

16:25　S06-6　Transposon-Mediated Environmental Regulation: Catalyst for Adaptive Responses?
Leandro Quadrana (Institute of Plant Science Paris-Saclay (IPS2), Gif-sur-Yvette, France)

16:55　closing remarks
Reina Komiya (RIKEN)

Frontiers in Plant Science Revealed by Space Environments: From Molecular Mechanisms to Future Horizons

日 時　3月14日（土）9:00-12:00　　会 場　X会場

Co-organized by Research Center for Space Agriculture and Horticulture, Chiba University

Organizers: Tomomichi Fujita (Hokkaido University) / Jun Hidema (Chiba University)

This symposium highlights recent plant experiments on the International Space Station and other microgravity platforms by Japanese PIs in our society, revealing hidden plant functions in gravity sensing, combined stress responses, and cell division. Four Japanese PIs and two international collaborators from Australia, who are planning new missions, will present and discuss future directions for space-based plant research.

Chairperson: Jun Hidema

9:00　Introduction
Jun Hidema (Chiba University)

9:05　S07-1　Plant space biology and its application to space farming
Hideyuki Takahashi (Research Center for Space Agriculture and Horticulture, Graduate School of Horticulture, Chiba University)

9:30　S07-2　Moss in space: How do they respond, grow, and how much can they tolerate?
Tomomichi Fujita[1], Yuko T. Hanba[2], Hiroyuki Kamachi[3], Yusuke Onoda[4], Ichirou Karahara[3], Yuji Hiwatashi[5], Atsushi Kume[6] ([1]Grad. Sch. Sci., Hokkaido Univ., [2]Dept. Applied Biol., Kyoto Inst. Tech., [3]Fac. Sci., Univ. Toyama, [4]Grad. Sch. Agr., Kyoto Univ., [5]Sch. Food ind. Sci., Miyagi Univ., [6]Fac. Agri., Kyushu Univ.)

9:55　S07-3　Space Experiment Plant UV-B: Combined Stress Response to Microgravity and Ultraviolet-B Radiation
Xi Chen[2], Kaoru Yoshiyama[2], Genji Kamada[3], Haruo Kasahara[4], Toru Shimazu[5], Kana Kuriyama[6], Kazumi Koga[7], Tomokazu Yamazaki[7], Noriko Matsuzaki[7], Akira Higashibata[7], Jun Hidema[1] ([1]RC for Space Agri. and Horti., Chiba Univ., [2]Grad. Sch. Life Sci., Tohoku Univ., [3]AES, [4]JAMSS, [5]Space Life Sci. International LLC, [6]Japan Space Forum, [7]JAXA)

10:20　Break

Chairperson: Tomomichi Fujita

10:30　S07-4　Plant Cell Division space experiment - Elucidation of the effects of the microgravity environment on plant cell division -
Daisuke Tamaoki[1], Mayuka Naruse[2], Mizuki Yamada[2], Naoya Taguchi[2], Micahl Rivkintsuji[3], Hiroki Yasuhara[4], Shizuka Koshimizu[5], Takumi Nishiuchi[6], Ichirou Karahara[1], Kouichi Soga[7] ([1]Fac. Sci., Univ. Toyama, [2]Grad. Sch. Sci. Eng., Univ. Toyama, [3]Dept. Biol., Fac. Sci., Univ. Toyama, [4]Fac. Chem. Mater. Bioeng., Kansai Univ., [5]NIG, [6]ReCEMHD, Kanazawa Univ., [7]Grad. Sch. Sci., OMU)

10:55　S07-5　Zero waste plants for controlled environments in Space and on Earth
Kim Johnson[1], Mathew Lewsey[1], Michelle Watt[2] ([1]La Trobe University, School of Agriculture Biomedicine and Environment, [2]University of Melbourne)

11:25　S07-6　From Suborbital Spaceflight to the Moon: Plant Cell Wall Remodelling in Response to Altered Gravity
Mortimer Jenny[1,2,6], Jens Hauslage[2,3], Sebastian Feles[3], Tommy Zheng Gong[1,2], Mathew Lewsey[1,4,6], Matthew Gilliham[1,2], Alison Gill[1,2,6], Bryony Hodge[1,2,6], Christine Chamberlain[1,5,6] ([1]ARC Centre of Excellence in Plants for Space (P4S), [2]Adelaide University, SA 5064, Australia, [3]Aeromedical FabLab, Institute of Aerospace Medicine, German Aerospace Center (DLR), [4]La Trobe University, Victoria, Australia, [5]Space Lab Technology, Colorado, USA, [6]Luna Effects on Agricultural Flora (LEAF) consortium)

11:55　Discussion
Tomomichi Fujita (Hokkaido University)

Nuclear Architecture as a Scaffold: Structural Views on Gene Regulation and Cellular Function in Plants and Beyond

日 時　3月14日（土）9:00-12:00　　会 場　Y会場

Organizers: Takuya Sakamoto (Kanagawa University) / Noriko Inada (Osaka Metropolitan University)

Gene expression is regulated not only by DNA, transcription factors, and chromatin modifications but also by nuclear structures acting as scaffolds that support and spatially coordinate nuclear events. Nuclear temperature has emerged as another key regulator. This symposium presents new insights into how these factors are integrated to shape gene expression and cellular functions in plants and animals.

Chairperson: Takuya Sakamoto

9:00		Opening remarks Takuya Sakamoto (Kanagawa University)
9:05	S08-1	Regulation of Plant Chromatin Organization by Actin and Actin-binding Proteins Noriko Inada[1], Tomoko Matsumoto[1], Fumiya Nakano[1], Yayoi Inui[2], Kota Higashi[3], Shizue Yoshihara[3], Sachihiro Matsunaga[2] ([1]Grad. Sch. Agri., Osaka Metropol. Univ., [2]Grad. Sch. Front. Sci., Univ. of Tokyo, [3]Grad. Sch. Sci., Osaka Metropol. Univ.)
9:30	S08-2	From Plants to Cancer: Rapid Cell Division Is Regulated at the Nuclear Pore Yangnan Gu (Univ. California, Berkeley, USA)
10:00	S08-3	Rapid changes in transcriptional activity and chromatin structure during pollen tube growth Mio K. Shibuta (Fac. of Sci., Yamagata Univ.)

Chairperson: Noriko Inada

10:30	S08-4	Thermal signaling in the nucleus: A mechanism of cellular function driven by spontaneous heat production Kohki Okabe (Grad. Sch. Pharm. Sci., Univ. Tokyo)
11:00	S08-5	Exploring the functional implications of centromere arrangements in Arabidopsis Takuya Sakamoto (Fac. Sci., Kanagawa Univ.)
11:20	S08-6	Chromosomal Organisation of Plant Biosynthetic Gene Clusters Hans-Wilhelm Nuetzmann (Dep. Biosci., Univ. Exeter, UK)
11:50		Closing remarks Noriko Inada (Osaka Metropolitan University)

植物の構造とシグナルの非対称性

日 時　3月14日（土）9:00-12:00　　会 場　Z会場

共 催　JST さきがけ「植物分子の機能と制御」研究領域

オーガナイザー：白川 一（中央研究院・植物微生物学研究所）／野元 美佳（名古屋大・遺伝子）

JST さきがけ「植物分子」では植物由来化合物及びその関連遺伝子を「植物分子」と定義して，生体内及び生態系内での植物分子の機能解明と制御技術開発に関する学際的な研究を進めてしています．本シンポジウムでは生体内での植物分子の動態に焦点を当て，「植物の構造とシグナルの非対称性」という切り口で5名のさきがけ研究者が最新の研究成果を発表します．

座 長　野元 美佳

9:00　はじめに

9:10　S09-1　転写因子ネットワークの微細な変化が生む細胞運命の非対称性
白川一[1,2]（[1]植物微生物学研究所，[2]JST さきがけ）

9:40　S09-2　植物の細胞極性を制御する分子基盤の解明
吉成晃[1,2]（[1]名大・WPI-ITbM，[2]JST さきがけ）

10:10　S09-3　植物進化におけるオーキシン輸送戦略の変遷と分子メカニズム解析
楢本悟史[1,2]（[1]北大・院理，[2]JST さきがけ）

10:40　休憩

座 長　白川 一

10:50　S09-4　トライコーム非対称屈曲による組織内対称的シグナル伝播機構の解析
野元美佳[1,2,3]，斉藤雄[2]，河島真冬[2]，鈴木智子[1,4]，石橋正光[5]，森太志[2]，豊岡公徳[6]，杉山純玲[1]，永田典子[4]，佐藤繭子[6]，金子康子[7]，徳永誠[8]，後藤栄治[5]，松本健郎[9]，星野真人[10]，多田安臣[1,2]（[1]名古屋大・遺伝子，[2]名古屋大・院理，[3]JST さきがけ，[4]日本女子大・理，[5]九州大・院農，[6]理研・環境資源研セ，[7]埼玉大・教育，[8]埼玉大・科学分析セ，[9]名古屋大・院工，[10]JASRI/SPring-8）

11:20　S09-5　特化代謝のリサイクル経路がもたらす C/N/S 循環システムの理解
杉山龍介[1,2,3,4]（[1]千葉大院薬，[2]千葉大植物分子科学セ，[3]理研 CSRS，[4]JST さきがけ）

11:50　総合討論

ASPB-JSPP Joint Symposium—Plant resilience and plasticity powered by dynamic cellular responses

日 時　3月15日（日）9:00-11:00　　会 場　X会場

Co-organized by the JSPP International Committee and the ASPB International Committee

Organizers: Ryohei Thomas Nakano (Hokkaido Univ.) / Momoko Ikeuchi (NAIST) / Keiko Torii (Univ. Texas Austin/HHMI/ITbM)

Remarkable plasticity of plant cells enables drastic morphological and physiological changes that lay the groundwork for plant resilience, while its underlying mechanisms remain poorly characterized. In this symposium, outstanding international speakers will present their cutting-edge research on dynamic cellular behaviors observed during reproduction, embryonic and post-embryonic development, and regeneration.

Chairperson: Ryohei Thomas Nakano

9:00　Opening Remark
Ryohei Thomas Nakano (Hokkaido Univ.)

9:02　S10-1　Cell fate determination and tissue organization in leaf development
Kimmy Ho (Institute of Plant and Microbial Biology, Academia Sinica)

9:25　S10-2　Multicellular Dynamics of WUS-Expressing Cells During *De Novo* Shoot Regeneration in Arabidopsis
Yuki Doll, Momoko Ikeuchi (Div. Bio. Sci., Grad. Sch. Sci. Tech., NAIST)

9:42　S10-3　Barrier Integrity Is Monitored By Gas Diffusion In *Arabidopsis* Mature Roots
Hiroyuki Iida[1], Isidro Abreu[2], Jennifer López Ortiz[1], Lucas León Peralta Ogorek[1,3], Vinay Shukla[2], Meeri Mäkelä[1], Munan Lyu[1], Alexey Shapiguzov[1,4], Francesco Licausi[2], Ari Pekka Mähönen[1] ([1]FBES., University of Helsinki, [2]Dept of Bio., University of Oxford, [3]Sch of Biosci., University of Nottingham, [4]Luke)

Chairperson: Momoko Ikeuchi

9:59　S10-4　A novel actin isoform regulates seed size by controlling nuclear movement in Arabidopsis coenocytic endosperm
Tomokazu Kawashima (Department of Plant and Soil Sciences, University of Kentucky, Kentucky USA)

10:16　S10-5　Emergence of Robust Axis Formation from Stochastic Cell Behaviors in Rice Embryogenesis
Atsuko Kinoshita (Tokyo Metropolitan Univ.)

10:33　S10-6　The Distributive Germline: A developmental strategy to restrict the spread of new mutations
Brad Nelms (University of Georgia, USA)

10:58　Closing Remarks
Kent D. Chapman (University of North Texas, ASPB President)

Next-Trend of Plant Biology in Japan and Taiwan

日 時　3月15日（日）13:30-16:30　　会 場　X会場

Organizers: Katsutoshi Tsuda (Nagoya University) / Misato Ohtani (The University of Tokyo) / Ying-Chung Jimmy Lin (National Taiwan University) / Su-Chiung Fang (Academia Sinica)

This Japan–Taiwan joint symposium showcases emerging, innovative plant biology research led by young scientists in both countries. By focusing on challenging and unique approaches across diverse fields, it provides a platform to exchange novel ideas and build new collaborations. We expect it will strengthen the network of next-generation plant biologists and open new opportunities for long-term collaboration.

13:30　Opening remarks
Katsutoshi Tsuda (Nagoya University)

Chairperson: Ying-Chung Jimmy Lin

13:35　S11-1　Semi-*in vivo* analysis of motile sperm–archegonial cell interactions and fertilization-related factors in *Cycas revoluta*
Yukiho Toyama[1], Satohiro Okuda[1], Takamasa Suzuki[2], Keiko Kano[3], Emi Mishiro-Sato[3], Shinya Sato[3], Yasuko Ito-Inaba[4], Tetsuya Higashiyama[1] ([1]Dept. of Biol. Sci., Grad. Sch. Sci., Univ. Tokyo, [2]Coll. Biosci. Biotechnol., Chubu Univ., [3]Mol. Struct. Cent., WPI-ITbM, Nagoya Univ., [4]Fac. Agric., Univ. of Miyazaki)

13:55　S11-2　The phytocytokine CAPE9 and its receptor CAPER1 function on plant systemic stomatal immunity
Chi-Hsin Chang, Kai-Tan Cheng, Fan-Wei Lin, Yet-Ran Chen (Agricultural Biotechnology Research Center, Academia Sinica)

14:15　S11-3　Diverse mechanisms of stomatal manipulation by phyllosphere bacteria
Rikako Hirata (Grad. Sch. Agr., Kyoto Univ.)

14:35　S11-4　Evolutionarily Conserved Eukaryotic Initiation Factor-Gated Translation Initiation Drives Plant Stress Response
Jhen-Cheng Fang[1], Li An Ly[1], Wei Xiong Henry Eo[2], Chung-Yuan Lin[1], Chun-Jui Li[1], Zhuan Yi Neoh[1], Yu-Sen Wang[3], Chin-Mei Lee[3], Ting-Ying Wu[2], Ming-Jung Liu[1,4] ([1]Biotechnology Center in Southern Taiwan, Academia Sinica, Tainan, Taiwan, [2]Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan, [3]Department of Life Science, National Taiwan University, Taipei, Taiwan, [4]Agricultural Biotechnology Research Center, Academia Sinica, Taipei, Taiwan)

14:55　Break

Chairperson: Katsutoshi Tsuda

15:05　S11-5　Translation mechanism regulated by SPA kinases in photomorphogenesis and heat stress response
Hui-Hsien Chang, Mei-Chun Cheng (Department of Biochemical Science & Technology, National Taiwan University)

15:25　S11-6　Live-imaging and modeling of the leaf primordium of rice
Yoshiki Tokuyama (Res. Fac. Agr. Hokkaido U.)

15:45　S11-7　Genetic architecture and molecular biology of heterostyly in common buckwheat
Ryoma Takeshima (Department of Biochemistry and Molecular Biology, Saitama University)

16:05　S11-8　Multiplex Genetic Engineering Improves *Agrobacterium*-mediated Plant Transformation and CRISPR-based Genome Editing
Teng-Kuei Huang, Tsen-Hsi Liao, Mao-Sen Liu, Yi-Chieh Wang, Si-Chong Wang, Chih-Hang Wu, Chih-Horng Kuo, Erh-Min Lai (Institute of Plant and Microbial Biology, Academia Sinica)

16:25　Closing remarks
Ying-Chung Jimmy Lin (National Taiwan University)

Recent Advances in the Regulation of Photosynthetic Electron Transport and the Roles of Alternative Electron Flows

日 時　3月15日（日）13:30-16:30　　会 場　Y会場

Organizers: Chikahiro Miyake (Kobe University) / Ginga Shimakawa (Kobe University) / Kaori Kozuma (Kyoto University)

Efficient CO_2 assimilation in plants requires coordinated light and dark reactions. Under fluctuating environments, stomatal closure limits CO_2, causing over-reduction of the electron transport chain, excess electrons on ferredoxin, and ROS formation. To avoid oxidative stress, plants activate alternative electron pathways such as PSI-cyclic flow via FQR and NDH, PTOX, and mitochondrial O_2 reduction. This symposium presents recent advances on their molecular mechanisms and physiological roles.

13:30　Opening Remarks
Chikahiro Miyake (Kobe University)

Chairperson: Kaori Kozuma

13:40　S12-1　New insights into the role of cyclic electron transfer in photosynthesis
Matt Johnson (Plants, Photosynthesis & Soil, School of Biosciences, University of Sheffield, Sheffield, S10 2TN, United Kingdom.)

14:10　S12-2　Redox regulation of photosynthetic electron transport
Anja Krieger-Liszkay (Institute for Integrative Biology of the Cell (I2BC), CEA, CNRS, Université Paris-Saclay, 91198 Gif-sur-Yvette cedex, France)

Chairperson: Ginga Shimakawa

14:40　S12-3　When PSI-Cyclic Electron Transport Peaks: Growth Light Intensity Defines Its Kinetic Mode
Hayato Satoh[1], Arisa Ueda[1], Guy Hanke[2], Ko Takeuchi[3], Kentaro Ifuku[3], Ginga Shimakawa[1], Kenichi Morigaki[1], Yuji Suzuki[4], Amane Makino[5,6], Chikahiro Miyake[1] ([1]Grad. Agri. Sci., Kobe Univ., [2]Sch. Biochem. Chem., QMUL, [3]Grad. Agri., Kyoto Univ., [4]Iwate Univ., Fac. Agri., [5]Grad. Agri. Sci., Tohoku Univ., [6]Inst. Excel. Higher Edu., Tohoku Univ.)

15:05　S12-4　NDH-PSI Supercomplex Ensures Proper Redox State of Plastquinone Pool in Thylakoid Membranes
Kaori Kohzuma, Kentaro Ifuku (Grad. Sch. Agri., Kyoto Univ.)

Chairperson: Chikahiro Miyake

15:30　S12-5　Is photosynthesis just about fixing CO_2?
Ginga Shimakawa (Kobe University)

15:55　S12-6　Roles of the mitochondrial respiratory chain in photosynthetic induction
Ko Noguchi[1], Tatsuhisa Konishi[1], Yusuke Mizokami[1], Kintake Sonoike[2] ([1]Sch Life Sci, Tokyo Univ Pharm Life Sci, [2]Fac Edu Integr Art Sci, Waseda Univ)

16:20　Closing Remarks
Kentaro Ifuku (Kyoto Univ.)