

Exploratory genomic evolutions and reproductive adaptations in plants

Date Wed., March 15, 9:30–12:30

Venue Room X

Co-sponsored by Grant-in-Aid for Transformative Research Areas (A) “Genomic dynamics underlying the plastic hermaphroditism in plants: the basis of exploratory reproductive adaptations”

Organizers: Keiko Sakakibara (Rikkyo Univ, Dep Lif Sci) / Sota Fujii (Univ Tokyo, Grad Sch Agric Lif Sci)

Plants cannot move on their own, and therefore have variable reproductive strategies to adapt to their saprophytic environment. This symposium invites researchers working with diverse plant groups in fields ranging from molecular to ecological to present the latest topics on innovative genome evolution and mechanisms found in the factors responsible for plant reproduction.

09:30 Opening remarks

Chairperson: Keiko Sakakibara

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- 09:35 S01-1 Toward a molecular understanding of haploid sex determination using monoecious *Physcomitrium patens*
Emiko Yoro¹, Seiya Suzuki¹, Rumiko Kofuji², Keiko Sakakibara¹ (¹Dept. Life Sci., Rikkyo Univ., ²Coll. Sci. & Engr., Kanazawa Univ.)
- 09:55 S01-2 Identification of a factor involved in plant spermatogenesis — molecular evolution of a basal body protein BLD10 —
Shizuka Koshimizu (NIG · Biological Networks)
- 10:15 S01-3 Diverse mechanisms of germ cell attraction in seed plants
Satohiro Okuda¹, Yukiho Toyama¹, Haruto Yahiro², Yakumo Watanabe¹, Naohiro Matsuda³, Takuya Nagae⁴, Yuta Sunakawa², Ryo Suda², Xingyue Jin¹, Takamasa Suzuki⁵, Tetsuya Higashiyama¹ (¹Grad. Sch. Sci., UTokyo, ²Dept. Biol. Sci., Fac. Sci., UTokyo, ³Dept. Biol. Sci., Fac. Sci., Nagoya Univ., ⁴Grad. Sch. Sci., Nagoya Univ., ⁵Grad. Sch. Biosci. Biotech., Chubu Univ.)
- 10:35 S01-4 Molecular dynamics of the male-female cellular interaction in plant reproduction
Sota Fujii^{1,2} (¹U Tokyo, Grad Sch Agric Lif Sci, ²Suntory SunRiSE)
- 10:55 Break

Chairperson: Sota Fujii

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- 11:00 S01-5 Seasonal regulation of plant reproduction in the natural environment
Akane Kubota¹, Yoshinori Kondo¹, Shigeo S Sugano², Tomoaki Muranaka³, Motomu Endo¹, Takato Imaizumi⁴ (¹Dev. of Bioscience, NAIST, ²Bioproduction Research Institute, AIST, ³Fac. of Agriculture, Kagoshima Univ., ⁴Dept. of Biol., Univ. of Washington)
- 11:20 S01-6 Spatial control of ARGONAUTE-mediated RNA silencing in anther development
Reina Komiya (OIST)
- 11:40 S01-7 Breaking the mold: innovative plant sex chromosome evolution
Takashi Akagi (Grad Sch Environ Life Sci, Okayama University)
- 12:00 S01-8 Evolutionary genetics of adaptation and diversification of floral scents that control pollinators
Yudai Okuyama (National Museum of Nature and Science)
- 12:25 Closing remarks

Plant Strategies for Survival Revealed from Regulatory System of Resource Allocation

Date Wed., March 15, 9:30–12:30

Venue Room Y

Organizers: Tomohiro Uemura (Grad. Sch. Humanities and Sciences, Ochanomizu University) / Hiroyuki Tsuji (Biosci. Biotechnol. Center, Nagoya Univ.) / Kyoko Miwa (Grad. Sch. Environ. Sci., Hokkaido Univ.)

When we take into consideration plants' characteristics, such as longevity and the potential to reach giant sizes, we suggest that plants are a sustainable system to operate resources allocation, which is summarized as "production – transport – utilization". In this symposium, we will rethink plant responses to environmental conditions, as well as their growth, development and metabolism, as the matter of control for resource allocation.

Chairperson: Kyoko Miwa

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| 09:30 | Introduction |
| 09:35 | S02-1 Plant strategies for environmental responses driven by regulatory system of resource allocation
<u>Masami Yokota Hirai</u> ^{1,2} , Ryosuke Sugiyama ^{3,4} (¹ RIKEN CSRS, ² Grad. Sch. Bioagric. Sci., Nagoya Univ., ³ Grad. Sch. Pharm. Sci., Chiba Univ., ⁴ PRESTO, JST) |
| 09:54 | S02-2 Developmental phase transition of the resource allocation
<u>Hiroyuki Tsuji</u> ^{1,2} (¹ Biosci. Biotechnol. Center, Nagoya Univ., ² Kihara Inst. Biol. Res., Yokohama City Univ.) |
| 10:13 | S02-3 Resource Management in Operations Research and Its Application to Plant Resource Allocation Strategies
<u>Shoji Kasahara</u> (Div. Info. Sci., NAIST) |

Chairperson: Tomohiro Uemura

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| 10:32 | S02-4 Regulatory system for xylem vessel function determining plant resource allocation
<u>Misato Ohtani</u> ^{1,2,3} , Taku Demura ^{2,3} (¹ Grad. Sch. Front. Sci., Univ. Tokyo, ² Div. Biol. Sci., NASIT, ³ RIKEN, CSRS) |
| 10:51 | S02-5 Long-distance signaling via phloem
<u>Michitaka Notaguchi</u> (Bioscience and Biotechnology Center, Nagoya University) |
| 11:10 | S02-6 Imaging of symplastic/apoplastic resource allocation in plants
<u>Masatsugu Toyota</u> ^{1,2,3} (¹ Dept. Biochem. Mol. Biol., Saitama Univ., ² Suntory Foundation for Life Sciences, ³ Dept. Bot., UW-Madison) |

Chairperson: Hiroyuki Tsuji

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| 11:29 | S02-7 Carbon Resource Partitioning in Microalgae and Cyanobacteria Quantitatively Elucidated by Metabolome Analysis
<u>Yuichi Kato</u> ^{1,2} , Tomohisa Hasunuma ^{1,2} (¹ Eng. Biol. Res. Ctr., Kobe Univ., ² Grad. Sch. Sci. Technol. Innov., Kobe Univ.) |
| 11:48 | S02-8 Dynamics of resources transport controlled by TGN
<u>Tomohiro Uemura</u> (Graduate School of Humanities and Sciences, Ochanomizu University) |
| 12:07 | S02-9 Regulatory mechanisms for resource allocation in plant response to mineral nutrient availability
<u>Kyoko Miwa</u> (Grad. Sch. Environ. Sci., Hokkaido Univ.) |
| 12:26 | Conclusion
Tomohiro Uemura |

Current development of genome editing: From various novel tools to potential applications

Date Wed., March 15, 9:30–12:30

Venue Room Z

Co-sponsored by Cross-ministerial Strategic Innovation Promotion Program (SIP)

Organizers: Masaki Endo (NARO) / Ayako Nishizawa-Yokoi (NARO) / Daisuke Miki (Chinese Academy of Sciences)

CRISPR/Cas9 and other genome editing technologies are very powerful tools from both research and application aspects. In addition to Cas9, new genome editing technologies have been developed in Japan, including the TiD system, Cas9 with improved PAM sequence recognition, and base editors. In this symposium, recent advances and applications of genome editing technologies and delivery of genome editing tools will be presented, including future prospects.

Chairperson: Daisuke Miki

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| 09:30 | Opnenig remarks
Masaki Endo |
| 09:35 | S03-1 Improvement of genome editing efficiency using proxy-CRISPR
<u>Masaki Endo</u> ^{1,2,3,4} , Katsuya Negishi ⁵ , Seiichi Toki ^{1,3,4,6} (Institute of Agrobiological Sciences, NARO, ² Research Center for Agricultural Information Technology, NARO, ³ Grad. Sch. Nanobio., Yokohama City Univ., ⁴ Kihara Inst. Biol. Res., Yokohama City Univ., ⁵ Institute of Fruit Tree and Tea Science, NARO, ⁶ Fac. Agr., Ryukoku Univ.) |
| 09:55 | S03-2 TiD genome editing platform for plant genetic engineering
<u>Yuriko Osakabe</u> (Sch. Life Sci. & Tech, Tokyo Tech) |
| 10:15 | S03-3 Genome editing methods for chloroplasts and mitochondria
Issei Nakazato, Chang Zhou, Nanami Kosaka, Yoshiki Harada, Ayako Hosoda, <u>Shin-ichi Arimura</u> (Graduate School of Agricultural and Life Sciences, University of Tokyo) |

Chairperson: Masaki Endo

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| 10:35 | S03-4 Precise genome editing with DNA or RNA templates in rice
<u>Ayako Nishizawa-Yokoi</u> (Institute of Agrobiological Sciences, NARO) |
| 10:55 | break |
| 11:05 | S03-5 CRISPR/Cas9-mediated gene targeting in Arabidopsis
<u>Daisuke Miki</u> (PSC, Chinese Academy of Sciences) |
| 11:25 | S03-6 Biolistic delivery of genome-editing enzymes into pollen and development of the peripheral technologies
<u>Yoko Mizuta</u> ¹ , Sachi Minagawa ² , Saeko Tanaka ³ , Hiroshi Ezura ⁴ (Nagoya Univ., IAR, ITbM, ² NIPPON, Co., Ltd., ³ FASMAC, Co., Ltd., ⁴ Univ. Tsukuba, Facul. Life Env. Sci., T-PIRC) |

Chairperson: Ayako Nishizawa-Yokoi

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| 11:45 | S03-7 Plant Gene Editing Using Virus Vectors
<u>Kazuhiro Ishibashi</u> , Tetsuya Yoshida (Institute of Agrobiological Sciences, NARO) |
| 12:05 | S03-8 Introducing the <i>in planta</i> Particle Bombardment (iPB) — No culture, no DNA, and no time-to-waste method for crop genome editing
<u>Ryozi Imai</u> ^{1,2} (¹ NARO Inst. Agrobiol. ci., ² Fac. Life Environ. Sci) |
| 12:25 | Closing remarks
Ayako Nishizawa-Yokoi |

Artificial designs of plant-soil-microbe relationships stop global warming

Date Wed., March 15, 14:00–17:00

Venue Room X

Organizer: Satoshi Ohkubo (Grad Sch of Life Sci, Tohoku Univ)

Chemical fertilizers and expanding farmland have accelerated increase in greenhouse gases, nitrous oxide and methane. The Moonshot project, “Mitigation of greenhouse gas emissions from agricultural lands by optimizing nitrogen and carbon cycles,” aims to design new ecosystems by combining the functions of plants, soil, and microorganisms. Four topics from the project will be presented at this symposium.

Chairperson: Satoshi Ohkubo

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| 14:00 | Opening remarks |
| 14:15 | S04-1 Elucidating soil functions and designing soil aggregate for climate change mitigation
Rota Wagai, Kaori Matsuoka (Institute for Agro-Environmental Sciences, NARO) |
| 14:45 | S04-2 Optimizing root nodule symbiosis to create N ₂ O reduced soybean cultivation systems
Haruko Imaizumi-Anraku (NIAS, NARO) |
| 15:15 | Break |

Chairperson: Yuichi Aoki

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| 15:30 | S04-3 Root Design: Toward the development of low methane-emitting rice
Yusaku Uga (Institute of Crop Science, NARO) |
| 16:00 | S04-4 Exploring greenhouse gas-reducing microbes by the Citizen Science
Satoshi Ohkubo (Grad. Sch. Life Sci., Tohoku Univ.) |
| 16:30 | Discussion |

Circadian and Seasonal Mechanisms in Plant Development and Physiology

Date Wed., March 15, 14:00–17:00

Venue Room Z

Organizers: Takato Imaizumi (Dept. Biol, Univ. Washington) / Marcelo Javier Yanovsky (Fundacion Instituto Leloir)

Being adapted to 24-hour-changing worlds, various plant responses are subjected to circadian regulation. Circadian mechanisms also constitute the core of seasonal regulation. This symposium showcases how major environmental factors (light and temperature) are integrated into circadian and seasonal mechanisms to control crucial development and physiological processes at the molecular levels.

Chairperson: Takato Imaizumi

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| 14:00 | Opening remarks
Miki Matoba (Oxford Univ. Press), Takato Imaizumi |
| 14:05 | S05-1 Circadian clock regulates root hair elongation in <i>Arabidopsis</i>
Akane Kubota ¹ , Hikari Ikeda ¹ , Taiga Uchikawa ¹ , Takuma Shishikui ¹ , Nozomu Takahashi ^{1,2} , Yohei Kondo ³ , Masaaki K. Watahiki ⁴ , <u>Motomu Endo</u> ¹ (¹ Dev. of Bioscience, NAIST, ² JST PRESTO, ³ ExCELLS, NINS, ⁴ Faculty of Sci., Hokkaido Univ.) |
| 14:20 | S05-2 The molecular mechanism of temperature compensation in <i>Arabidopsis</i>
<u>Akari Maeda</u> ¹ , Hiromi Matsuo ¹ , Yoshikatsu Matsubayashi ² , Toshinori Kinoshita ^{2,3} , Norihito Nakamichi ¹ (¹ Grad. Sch. Bio-Agric., Nagoya Univ., ² Grad. Sch. Sci., Nagoya Univ., ³ ITbM., Nagoya Univ.) |
| 14:35 | S05-3 The spliceosome assembly machinery component pICLn ensures proper adaptation to light and temperature changes in plants
<u>Marcelo Javier Yanovsky</u> (Fundacion Instituto Leloir - Argentina) |
| 15:00 | S05-4 Unraveling the clock protein LWD1 complexes in circadian gene expression regulation and photoperiodic flowering control
<u>Shu-Hsing Wu</u> , Chun-Kai Huang (Institute of Plant and Microbial Biology, Academia Sinica, Taiwan) |
| 15:25 | Break |

Chairperson: Marcelo Javier Yanovsky

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| 15:30 | S05-5 Integration of theoretical and empirical approaches on starch metabolism to unravel the adaptive mechanism for seasonal environmental change in plants
<u>Shuichi Kudo</u> ¹ , Anthony Artins ² , Carolina Bello ² , Camila Caldana ² , Akiko Satake ¹ (¹ Dept. Biology., Kyushu Univ., ² Max Planck Inst.) |
| 15:45 | S05-6 Flower induction of a rootless duckweed, <i>Wolffiella hyalina</i> : photoperiodism and plant-to-plant communication
<u>Minako Isoda</u> ¹ , Hajime Ono ² , Tokitaka Oyama ¹ (¹ Grad. Sch. Sci., Kyoto Univ., ² Grad. Sch. Agric., Kyoto Univ.) |
| 16:00 | S05-7 Transcriptome analysis of florigen-expressing cells revealed the presence of another flowering-inducing protein
<u>Takato Imaizumi</u> (Dept. Biol., Univ. Washington) |
| 16:25 | S05-8 Ambient temperature controls Ghd7 repressor activity in rice photoperiodic flowering
<u>Takeshi Izawa</u> (Grad. Sch. Agri. U-Tokyo) |
| 16:50 | Closing remarks
Marcelo Javier Yanovsky |

A look at the world of environmental stress through the perspective of P700 oxidation

Date Thu., March 16, 9:00–11:10

Venue Room X

Co-sponsored by JST-CREST (Robustness in Plants) “Development of in vivo analysis system to evaluate suppression activity of reactive oxygen species (ROS) production: Early diagnosis of oxidative stress in plants” (JPMJCR1503)

Organizers: Yuji Suzuki (Fac. Agr., Iwate Univ.) / Chikahiro Miyake (Grad. Sch. Agr. Sci., Kobe Univ.)

Oxidation of the reaction center chlorophyll of PSI, P700, is induced by environmental stresses via robust “P700 oxidation system” and protects PSI from oxidative stress. P700 oxidation system has changed along with the evolution of photosynthetic organisms. Measurements of P700 oxidation is expected to be useful for breeding and cultivation management of crops. These aspects of P700 oxidation are presented in this session.

Chairperson: Yuji Suzuki

09:00	Opnening remarks Yuji Suzuki
09:05	S06-1 Physiological function of P700 oxidation in PSI and its induction mechanism <u>Chikahiro Miyake</u> (Grad. Sch. Agr. Sci., Kobe Univ.)
09:30	S06-2 Chilling-induced damage and P700 oxidation in cucumber <u>Kentaro Ifuku</u> ¹ , Ko Takeuchi ² , Yufen Che ² , Takeshi Nakano ² (¹ Grad. Sch. Agr., Kyoto Univ., ² Grad. Sch. Biostudies, Kyoto Univ.)
09:55	S06-3 Responses and robustness of photosystem I to low N stress in rice leaves <u>Ko Noguchi</u> ¹ , Hiroshi Ozaki ¹ , Yusuke Mizokami ¹ , Daisuke Sugiura ² , Takayuki Sohtome ³ , Chikahiro Miyake ⁴ , Hidemitsu Sakai ⁵ (¹ Sch. Life Sci., Tokyo Univ. Pharm. Life Sci., ² Grad. Sch. Bioagr. Sci., Nagoya Univ., ³ Bunkokeiki Co., Ltd., ⁴ Grad. Sch. Agr. Sci., Kobe Univ., ⁵ Inst. Agro-Environ. Sci., NARO)

Chairperson: Chikahiro Miyake

10:15	S06-4 P700 oxidation caused by environmental or endogenous stress in rice: case studies from drought stress and leaf senescence <u>Yuji Suzuki</u> (Fac. Agr., Iwate Univ.)
10:40	S06-5 Evolution and diversity of photosynthetic organisms based on the strategy for P700 oxidation <u>Ginga Shimakawa</u> (Sch. Biol. Environ. Sci., Kwansei-Gakuin Univ.)
11:05	Closing remarks Amane Makino (Grad. Sch. Agr. Sci., Tohoku Univ.)

Japan-Singapore Binational Symposium: Plant Science & Precision Agriculture

Date Thu., March 16, 9:00–11:50**Venue** Room Z**Organizers:** Misato Ohtani (Univ Tokyo, Japan) / Daisuke Urano (TLL, Singapore)

Academic and industrial research has become increasingly intertwined, even where basic biological science is concerned, leading to higher expectations for research findings to be translated to real world applications. This Japan-Singapore binational symposium introduces a substantial breakthrough from the fundamental genetic discoveries to the technological advancements that can be translated into precision agriculture.

Chairperson: Misato Ohtani

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| 09:00 | Opening remarks
Nam-Hai Chua (Temasek Life Sciences Laboratory Ltd, Singapore) |
| 09:05 | S07-1 Micro, nano, and optical technologies for precision agriculture and plant science
Daisuke Urano (Temasek Life Sciences Laboratory Ltd, Singapore) |

Chairperson: Daisuke Urano

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| 09:25 | S07-2 The challenge of RIKEN CSRS for the establishment of Sustainable Resource Science
Kazuki Saito (RIKEN Center for Sustainable Resource Science, Japan) |
| 09:35 | S07-3 Computational metabolomics to investigate the plant phytochemical diversity
Hiroshi Tsugawa (Tokyo University of Agriculture and Technology, Japan) |

Chairperson: Misato Ohtani

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| 09:55 | S07-4 Sensor Tools for plant metabolic profiling
Rajani Sarojam (Temasek Life Sciences Laboratory Ltd, Singapore) |
| 10:15 | Break |

Chairperson: Daisuke Urano

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| 10:30 | S07-5 Chemical manipulation of epigenome towards flowering control
Toshiro Ito (Nara Institute of Science and Technology, Japan) |
| 10:50 | S07-6 Effects of nitrogen on cesium allocation in rice plants (<i>Oryza sativa</i>)
Natsuko Kinoshita, Louis Irving, Barry Lustig, Jun Furukawa (University of Tsukuba, Japan) |

Chairperson: Misato Ohtani

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| 11:10 | S07-7 Generation of low-arsenic and low-cadmium rice
Zhongchao Yin (Temasek Life Sciences Laboratory Ltd, Singapore) |
| 11:30 | S07-8 MEDIATOR15 positively regulates thermomorphogenesis through gibberellic acid pathway
Naohiko Ohama ¹ , Teck Lim Moo ¹ , KwiMi Chung ² , Nobutaka Mitsuda ² , Kulaporn Boonyaves ¹ , Daisuke Urano ¹ , Nam-Hai Chua ¹ (¹ Temasek Life Sciences Laboratory Ltd, Singapore, ² National Institute of Advanced Industrial Science and Technology, Japan) |

Plant biology in the era of single-cell omics

Date Fri., March 17, 9:00–12:00

Venue Room X

Organizers: Momoko Ikeuchi (NAIST) / Yuki Kondo (Kobe Univ.)

Phenotypic characteristics of plants are most often the outcome of the population-level behavior of plant cells. Single-cell analyses are highly awaited to provide precise understandings of biological events of our interest. In this symposium, we will introduce a variety of cutting-edge single-cell technologies that produce omics data at cellular resolution. We will discuss future perspectives and potential applications of these technologies in broad areas of plant sciences.

09:00	<p>Opening remarks Yuki Kondo</p> <p>Chairperson: Momoko Ikeuchi</p>
09:05	<p>S08-1 Characterization of cambium stem cells using single nuclear RNA-seq analysis identifies stem cell-specific signatures <u>Dongbo Shi</u>^{1,2,3,4}, Jiao Zhao¹, Ayako Kawamura², Hatsune Morinaka², Akira Iwase^{2,3}, Satoko Yoshida^{3,5}, Kerstin Kaufmann⁶, Keiko Sugimoto², Thomas Greb¹ (¹COS, Heidelberg University, ²RIKEN CSRS, ³JST PRESTO, ⁴IBB, University of Potsdam, ⁵NAIST, ⁶Humboldt-University Berlin)</p>
09:30	<p>S08-2 Spatio-temporal imaging of cell fate dynamics at the single cell level using luminescence microscope <u>Shunji Shimadzu</u>^{1,2}, Yuki Kondo² (¹Grad. Sch. Sci., Univ. of Tokyo, ²Grad. Sch. Sci., Kobe Univ.)</p>
09:50	<p>S08-3 Evolution of shoot apical meristem revealed by single-nuclei RNA-seq on <i>Physcomitrium patens</i> <u>Yuki Hata</u>¹, Nicola Hetherington⁴, Kai Battenberg³, Atsuko Hirota³, Aki Minoda^{2,4}, Makoto Hayashi³, Junko Kyoizuka¹ (¹Grad. Sch. Life Sci., Tohoku Univ., ²RIKEN IMS, ³RIKEN CSRS, ⁴RIMLS Radboud Univ.)</p>
10:10	<p>S08-4 Symbiosis-specific chromosome remodelling in <i>Lotus japonicus</i> roots found through single-nucleus ATACseq <u>Kai Battenberg</u>¹, Atsuko Hirota¹, Nicola Hetherington², Aki Minoda², Makoto Hayashi¹ (¹CSRS, RIKEN, ²Department of Cell Biology, Faculty of Science, Radboud Institute for Molecular, Life Sciences, Radboud University)</p>
10:35	<p>Break</p> <p>Chairperson: Yuki Kondo</p>
10:40	<p>S08-5 Single cell RNA-seq approach toward understanding regulatory mechanisms of shoot regeneration <u>Momoko Ikeuchi</u> (Nara Institute of Science and Technology)</p>
11:05	<p>S08-6 Development of a live cell RNA-seq method to link fluctuating gene networks with cellular phenotype causation <u>Koutarou Torii</u>¹, Keiko Watanabe¹, Kaori Nishikawa¹, Asuka Takeishi², Hirofumi Shintaku¹ (¹CPR, Wako Inst., Riken, ²CBS, Wako Inst., Riken)</p>
11:30	<p>S08-7 Time-resolved single-cell gene regulatory atlas of plants under pathogen attack <u>Tatsuya Nobori</u>¹, Alexander Monell², Travis Lee¹, Joseph Ecker¹ (¹Salk Institute, ²UC San Diego)</p>
11:55	<p>Closing remarks Yuki Kondo</p>

A frontier in plant sensing and receptor research

Date Fri., March 17, 13:30–16:30

Venue Room X

Organizers: Masanori Okamoto (Utsunomiya Univ./RIKEN) / Yusuke Saijo (NAIST)

Plants have thrived on the land by acquiring sensing mechanisms to diverse external stimuli. To elucidate the principle of environmental sensing in plants, it is necessary to uncover the molecular mechanism that enables the diversification and refinement of the environmental sensing. In this symposium, we will introduce new findings on sensing mechanisms and signal transduction of various external stimuli and discuss future perspective.

Chairperson: Yusuke Saijo

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| 13:30 | Opening remarks |
| 13:35 | S09-1 Gravity signaling mechanism in Arabidopsis gravitropism
Takeshi Nishimura ¹ , Yoshinori Hirano ³ , Masahiko Furutani ² , Moritaka Nakamura ¹ , Toshio Hakoshima ⁴ ,
<u>Miyo, T. Morita</u> ¹ (¹ NIBB, ² Kumamoto Univ., IROAST, ³ Grad. Sch. Pharma. Sci., The Univ. Tokyo, ⁴ NASIT) |
| 13:55 | S09-2 Electrophysiology of the mechanosensitive channels in Arabidopsis
<u>Kenjiro Yoshimura</u> (Col. Sys. Eng. Sci., Shibaura Inst. Technol.) |
| 14:15 | S09-3 Environmental sensing and intracellular signal transduction in stomatal guard cells
<u>Yohei Takahashi</u> (ITbM, Nagoya University) |
| 14:35 | S09-4 Plant Raf-like protein kinases are involved in growth regulation under drought stress
<u>Taishi Umezawa</u> (BASE, TUAT) |
| 14:55 | Break time |

Chairperson: Masanori Okamoto

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| 15:00 | S09-5 Mechanosensory network responsible for the onset of plant immunity
<u>Mika Nomoto</u> ^{1,2,3} , Yasuomi Tada ^{1,2} (¹ Centr. Gene Res., Nagoya Univ., ² Grad. Sch. Sci., Nagoya Univ.,
³ PRESTO, JST) |
| 15:20 | S09-6 New advances in understanding the mechanism and roles of nitrate signaling in plants
<u>Shuichi Yanagisawa</u> (AgTech, Graduate School of Agricultural and Life Sciences, The University of Tokyo) |
| 15:40 | S09-7 What is the biological significance of the structural diversity of strigolactones?
<u>Shinjiro Yamaguchi</u> , Kiyoshi Mashiguchi (Inst. Chem. Res., Kyoto Univ.) |
| 16:00 | S09-8 Modulation of damage-associated pattern recognition receptor signaling during plant adaptation to phosphate deficiency
<u>Yusuke Saijo</u> (Nara Institute of Science and Technology) |
| 16:20 | General discussion & Closing remarks |