

The 25th Plant Organelle Workshop —the structure and dynamism of plant organelles—

Date Tue., March 14, 13:00–18:50

Venue Room Z (hybrid)

Organizers (in alphabetical order): Hiroyuki Ishida (Tohoku University) / Masanori Izumi (RIKEN) / Yusuke Kato (Setsunan University) / Kensuke Kusumi (Kyushu University) / Yoshiki Nishimura (Kyoto University) / Junichi Obokata (Setsunan University) / Atsushi Takabayashi (Hokkaido University) / Tomohiro Uemura (Ochanomizu University) / Masaya Yamamoto (Tohoku University)

Cellular organelles play an important role in plant development, function, homeostasis, and environmental adaptation. This workshop aims to provide an opportunity for researchers from diverse fields to meet, exchange and discuss the latest findings, ideas, and related technologies on plant organelles. Participation for this workshop is free of charge. The registration at our website is encouraged.

13:00 : Opening remarks

Session 1

13:05 : Analysis of a phototropin signal transduction pathway in chloroplast movement
Noriyuki Suetsugu (The University of Tokyo)

13:45 : Insights into the mechanism of the plastid division ring
Yamato Yoshida (The University of Tokyo)

14:25 : Break

14:35 : Visualizing and manipulating chloroplasts
Yutaka Kodama (Utsunomiya Univ.)

15:15 : Functions of the nuclear lamina regulating nuclear morphology in plants
Yuki Sakamoto (Osaka University)

15:55 : Break

Session 2

16:05 : Live-cell imaging of the intracellular dynamics in plant zygotes
Minako Ueda (Tohoku University)

16:45 : Membrane traffic between the endoplasmic reticulum and Golgi apparatus in plants.
Junpei Takagi¹, Tomoo Shimada², Ikuko Hara-Nishimura³ (¹Hokkaido University, ²Kyoto University, ³Konan University)

17:25 : Break

Keynote lecture

17:40 : Towards a unified model of membrane traffic
Akihiko Nakano (RIKEN)

18:40 : General discussion

18:50 : Closing remarks

This workshop is open to all interested participants, but online registration in advance is encouraged.

(<http://www.rib.okayama-u.ac.jp/OWS/>).

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2nd Symposium on Phototropic Prokaryotes

Date Tue., March 14, 13:30–18:00 (Reception: 12:30–) **Venue** Room Y

Organizers: Jiro Harada (Kurume Univ. Sch. Med.) / Yusuke Tsukatani (JAMSTEC) / Chihiro Azai (Ritsumeikan Univ.)

Phototropic prokaryotes such as cyanobacteria and anoxygenic photosynthetic bacteria are now subjects for various fields of studies including biochemistry, molecular biology, structural biology, biophysics, bioorganic chemistry, and microbial ecology. This symposium invites speakers talking their latest achievements and provides new insights into studies on photosynthetic microorganisms including chloroplasts through discussion.

Entry form: <https://forms.gle/7SVKNj15xRrAJbzo6>



(Deadline: Fri., March 10)

Chairperson: Chihiro Azai

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| 13:30 | Opening remarks
Yusuke Tsukatani |
| 13:35 | Discovery of a phototrophic <i>Chloroflexota</i> member using a Type I reaction center sheds new light on the evolution and ecology of photosynthesis
Jackson M. Tsuji (The Institute of Low Temperature Science, Hokkaido University) |
| 14:05 | Origin and evolution of photosynthesis unraveled from genome analysis of prokaryotes
<u>Arisa Nishihara</u> ¹ , Yusuke Tsukatani ² , Chihiro Azai ³ , Masaru K. Nobu ⁴ [¹ Japan Collection of Microorganisms, RIKEN BioResource Research Center; ² Japan Agency for Marine-Earth Science and Technology (JAMSTEC); ³ Graduate School of Life Sciences, Ritsumeikan University; ⁴ National Institute of Advanced Industrial Science and Technology (AIST)] |
| 14:35 | Evolution of cyanobacteria and ancient biogeochemistry inferred from ancestral protein resurrection
Mariko Harada (Faculty of Life and Environmental Sciences, University of Tsukuba) |
| 15:05 | Coffee break |
| 15:30 | Molecular fossils of prokaryotic photosynthetic organisms and their distribution in earth history
Ryosuke Saito (Department of Geosphere Sciences, Yamaguchi University) |
| 16:00 | Development of expression vectors in cyanobacteria and establishment of useful substances production systems using these vectors
<u>Yutaka Sakamaki</u> , Satoru Watanabe (Department of Bioscience, Tokyo University of Agriculture) |
| 16:30 | Fluorescence spectroscopy under a microscope: intracellular photosynthetic analysis and single-particle spectroscopy
Yutaka Shibata (Chemistry Department, Graduate School of Science, Tohoku University) |
| 17:00 | Discussion
Jiro Harada |
| 18:00 | Banquet |

Phytohormones analysis workshop

Date Tue., March 14, 14:30–17:00

Venue Room X

Organizers: Masashi Asahina (Dept. Bisci., Teikyo University) / Izumi Mori (IPSR, Okayama University)

Phytohormones are a group of compounds that have important roles in many aspects of the life cycle. They are known to act at extremely low concentrations, less than a few ng~pg/mg DW. This workshop aims to introduce analytical techniques and fascinating research related to phytohormone analysis and provide an opportunity to discuss the technical basis, methodology, and development of phytohormone research.

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| 14:30 | Opening remarks
Masashi Asahina |
| 14:31 | Spatiotemporal plant hormone analysis using laser microdissection
Masashi Asahina (Dept. Bisci., Teikyo University) |
| 14:45 | Quantitative analyses of brassinosteroids and strigolactones
Takahito Nomura (Ctr. Biosci. Res. Educ., Utsunomiya University) |
| 15:10 | Have anyone seen cell-to-cell movement of auxins?
Yuichiro Tsuchiya (ITbM, Nagoya University) |
| 15:35 | Quantitative plant hormone analysis platform at Okayama University
Izumi Mori (IPSR, Okayama University) |
| 15:45 | Mechanism of gall formation: a hint from plant hormone analysis
Tomoko Hirano (Grad. Sch. Life and Envir. Sci., Kyoto Prefectural University)
(online presentation) |
| 16:10 | Evolutionary diversity in the contribution of plant hormones to sex determination in plants
Takashi Akagi (Grad. Sch. Environ. Life Sci., Okayama University) |
| 16:35 | General discussion |
| 16:55 | Closing remarks
Izumi Mori |

Affiliated meeting: Japanese Society for Young Plant Physiologists

Date Tue., March 14, 18:00–20:00

Venue Room X

Organizers: Konan Ishida / Rikako Hirata / Senri Yamamoto

At this year's event, under the theme 'What I have learnt from careers that seem straight and those that seem to take a diversion', lectures are planned to focus on the diversity of careers as a researcher. The speakers will be Masayuki Fujiwara (Yanmar Holdings Co.) and Naoko Yoshinaga (Kyoto University), who will deliver messages to young researchers based on their own experiences.

Chairperson: Rikako Hirata

18:00	Opening remarks
18:15	Caterpillars first, or daughters first? Naoko Yoshinaga (Grad. Sch Agric., Kyoto Univ.)
18:50	Biotech Research for Agricultural Equipment Manufacturers. Masayuki Fujiwara (Yanmar Holdings Co.)
19:25	Closing remarks

*An onsite social gathering is planned afterwards. If you wish to attend, please check the announcement from the website and SNS account of Japanese Society for Young Plant Physiologists and register in advance.

15th Plant Membrane Symposium

Date Fri., March 17, 15:00–16:30

Venue Room G

Organizers: Maki Katsuhara (IPSR, Okayama University) / Izumi Mori (IPSR, Okayama University)

In this meeting “Plant Membrane Symposium” series, we have symposia on plant membrane function and membrane transport mechanisms. This year, PCP editor, Dr. Tzyy-Jen CHIOU of Academia Sinica, Taiwan, will introduce the current status and prospects of phosphate transport system. Then, Professor Emeritus Tetsuro MIMURA of Kobe University, who has made significant contributions to research on plant membrane transport, will present a summary of his research results over the past 40 years.

Chairperson: Maki Katsuhara

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| 15:00 | Opening remarks
Maki Katsuhara |
| 15:05 | Regulation of vacuolar phosphate transporters and their impact on plant immunity
Tzyy-Jen CHIOU (Academia Sinica, Taiwan) |
| 15:45 | Forty years began with plant electrophysiology
Tetsuro Mimura (Col. Biosci. Biotech., National Cheng Kung Univ., Taiwan) |