Tue., March 22, 9:30–12:22 Room Y

Improvement of genomics and technologies upgrades the value of bioresources

Language: Japanese

Organizers: Yutaka Sato (National Institute of Genetics)
Masatomo Kobayashi (RIKEN BioResource Research Center)

● Chairperson: Yutaka Sato

09:30		Opnenig remarks Yutaka Sato
09:35	**S01-1**	Diverse Resources of Plant Cell Cultures and Quality Control for Their Advanced Utilization Toshihiro Kobayashi (RIKEN BRC)
09:53	**S01-2**	Non-model algal resources provide insights into the unexpected features in eukaryotes Shigekatsu Suzuki, Haruyo Yamaguchi, Masanobu Kawachi (NIES)
10:11	**S01-3**	Development of a nested association mapping population of hexaploidy wheat: from genetic resources to genetic resources Shuhei Nasuda (Grad. Sch. Agric., Kyoto Univ.)
10:29	**S01-4**	Progress of chromosome scale genome assembly methods in barley Kazuhiro Sato (IPSR, Okayama Univ.)

● Chairperson: Masatomo Kobayashi

10:47	**S01-5**	Utilization of wild rice genetic resources enabled by genome information and editing Katsutoshi Tsuda, Yutaka Sato (National Institute of Genetics · SOKENDAI)
11:05	**S01-6**	Genomic basis for environmental adaptation of *Lotus japonicus* revealed by applying NBRP resources Shusei Sato[1], Yusdar Mustamin[1], Masaru Bamba[1], Turgut Akyol[2], Stig Andersen[2], Masatsugu Hashiguchi[3,4], Takuyu Hashiguchi[4], Hidenori Tanaka[4], Ryo Akashi[4] ([1]Grad. Sch. Life Sci., Tohoku Univ., [2]Aarhus Univ., [3]Fac. Regional Innovation, Univ. of Miyazaki, [4]Fac. Agr., Univ. of Miyazaki)
11:23	**S01-7**	Molecular Genetics in *Chrysanthemum*: A Model Strain and its Whole Genome Sequence Makoto Kusaba, Michiharu Nakano, Toshiaki Kozuka, Kenji Taniguchi (Grad. Sch. Int. Sci. Life, Hiroshima Univ.)
11:41	**S01-8**	The Japanese morning glory: Our country's unique bioresource shines brightly with genome information Atsushi Hoshino[1,2], Eiji Nitasaka[3] ([1]NIBB, [2]Sch. Life Sci., SOKENDAI, [3]Grad. Sch. Sci., Kyushu Univ.)
11:59	**S01-9**	NBRP Tomato Historia, Current and Future Hiroshi Ezura (Fac. Life Environ. Sci., Univ. Tsukuba)
12:17		Closing remarks Masatomo Kobayashi

Co-sponsored by National BioResource Project, MEXT

Tue., March 22, 9:30–12:30 Room Z

Plant resilience mechanism for irregular environmental fluctuations over time

Language: Japanese

Organizers: Motoyuki Ashikari (Nagoya University)
Tomonao Matsushita (Kyoto University)

● Chairperson: Tomonao Matsushita

09:30 Opening remarks

● Chairperson: Toshinori Kinoshita

09:35 **S02-1** Regulatory mechanisms of plant growth phase transition in response to nitrogen nutrient deficiency
Miho Sanagi[1], Akio Kubo[1], Junpei Takagi[2], Takeo Sato[2] ([1]Grad. Sch. Life Sci., Hokkaido Univ., [2]Fac. Sci., Hokkaido Univ.)

10:00 **S02-2** Stage-gates for response to submergence in roots
Mikio Nakazono[1], Takaki Yamauchi[2], Hirokazu Takahashi[1] ([1]Graduate School of Bioagricultural Sciences, Nagoya University, [2]Bioscience and Biotechnology Center, Nagoya University)

10:25 **S02-3** Stagegate of rice stem elongation under submergence
Motoyuki Ashikari, Keisuke Nagai (Nagoya University)

● Chairperson: Motoyuki Ashikari

10:50 **S02-4** Plant resilience mechanism for heat stress
Teruaki Taji (Dept. Bio., Tokyo Univ. Agriculture)

11:15 **S02-5** Regulation of stomatal movement and flowering under fluctuating environments
Toshinori Kinoshita[1], Takato Imaizumi[2,3] ([1]ITbM, Nagoya Univ., [2]Dept. Biol., Univ. Washington, [3]Ctr. Gene Res., Nagoya Univ)

11:40 **S02-6** Molecular mechanism of wound-induced responses as a strategy of plant resilience
Akira Iwase[1], Alice Lambolez[1,2], Yu Chen[1,2], Duncan Coleman[1], David Favero[1], Keiko Sugimoto[1,2] ([1]RIKEN CSRS, [2]Grad. Sch. Sci., Univ. Tokyo)

12:05 **S02-7** Robust regulation of a flowering repressor *FLC* under fluctuating environments
Haruki Nishio[1,2], Hiroshi Kudoh[2] ([1]DS center, Shiga Univ., [2]CER, Kyoto Univ.)

Co-sponsored by Grant-in-Aid for Transformative Research Areas (A), Multi-layered regulatory system of plant resilience under fluctuating environment

Tue., March 22, 13:45–16:40 Room Y

The forefront of plant RNA molecular biology: Sequence, structure and function

Language: Japanese

Organizers: Yui Yamashita (Grad. Sch. Agr., Hokkaido Univ.)
Masayuki Tsuzuki (Grad. Sch. Arts Sci., Univ. Tokyo)

● Chairperson: Yui Yamashita

13:45 Opening remarks

13:50 **S03-1** How genes are transcribed and processed: the importance of UsnRNP function in plants
Ippei Yamasaki[1], Yuka Hatanaka[2], Hirokazu Takahashi[2], Misato Ohtani[1,2,3] ([1]Grad. Sch. Front. Sci., Univ. Tokyo, [2]Div. Biol. Sci., NAIST, [3]RIKEN, CSRS)

14:10 **S03-2** The mechanisms of secondary siRNA biogenesis in plants
Hiro-oki Iwakawa (Institute for Quantitative Biosciences, The University of Tokyo)

14:30 **S03-3** The function and mechanism of non-coding RNA transcription in plants
Masayuki Tsuzuki (Grad. Sch. Arts. Sci., Univ. Tokyo)

14:50 **S03-4** Structures insight into the C-to-U RNA editing enzyme in plant organelles suggests a unique regulation principal
Mizuki Takenaka[1], Sachi Takenaka[1], Brody Frink[1], Ayako Maeda[1], Tenghua Wang[1], Gert Weber[2] ([1]Grad. Sch. Sci., Kyoto Univ., [2]Helmholtz-Zentrum Berlin für Materialien und Energie)

15:10 Short break

● Chairperson: Masayuki Tsuzuki

15:15 **S03-5** What are characteristics of plant NMD targets?
Yukio Kurihara (RIKEN CSRS)

15:35 **S03-6** Coordinated regulation of translational and transcriptional expression of transporter genes in response to boron concentration
Mayuki Tanaka, Toru Fujiwara (Grad. Sch. Agri. Life Sci.)

15:55 **S03-7** Mechanistic specificity of ribosome stalling involved in ER-stress response in plants
Tomoya Imamichi[1], Nao Kusumoto[2], Seidai Takamatsu[2], Yugo Honda[1], Shiori Muraoka[1], Hitoshi Onouchi[1], Satoshi Naito[1], Yui Yamashita[1] ([1]Grad. Schl. Agr., Hokkaido Univ., [2]Grad. Schl. Life Sci., Hokkaido Univ.)

16:15 **S03-8** Detailed analysis of mRNA sequence revealed relationship between mRNA sequence variants and translational control
Shotaro Yamasaki, Ko Kato (Div. Biol. Sci., NAIST)

16:35 Closing remarks

Tue., March 22, 13:45–16:45 Room Z

Sensors and actuators in biology and architecture

Language: Japanese

Organizers: Masatsugu Toyota (Dept. Biochem. & Mol. Biol., Saitama Univ.)
Haruko Ueda (Dept. Biol., Konan Univ.)

● Chairperson: Masatsugu Toyota

13:45 Openning remarks
Masatsugu Toyota

13:50 **S04-1** Application Of Sensor And Actuator Technologies To Spatial Structures
Susumu Yoshinaka (WASEDA University)

14:15 **S04-2** Bio-inspired architecture
Yosuke Nakaso (IIS, The Univ. of Tokyo)

14:40 **S04-3** Dynamic microtubule reorganization as a sensor and actuator of growth fluctuation and stabilization
Shogo Takatani[1], Hiroyasu Motose[2], Olivier Hamant[1] ([1]ENS de Lyon, INRAE, RDP, [2]Grad. Sch. Nat. Sci., Okayama Univ.)

● Chairperson: Haruko Ueda

15:05 **S04-4** Photosensor-induced changes in leaf anatomy
Eiji Gotoh (Fac. Agric., Kyuhsu Univ.)

15:30 **S04-5** Sensors and actuators regulating the fast movement of the Venus flytrap
Hiraku Suda[1], Yuuki Asakawa[2], Satoru Tsugawa[3], Masatsugu Toyota[1,4,5] ([1]Grad. Sch. Sci. Eng., Saitama Univ., [2]Fac. Sci., Saitama Univ., [3]Grad. Sch. Sys. Sci. Tech., Akita Prefectural Univ., [4]Suntory Rising Stars Encouragement Program in Life Sciences (SunRiSE), [5]Department of Botany, University of Wisconsin-Madison)

15:55 **S04-6** How a growing brain is constructed: sensing and actuation by densely packed cells
Takaki Miyata (Nagoya Uviv. Grad. Sch. Med.)

16:20 Discussion and Closing remarks
Haruko Ueda

Cosponsor: Plant-Structure Optimization Strategy

Wed., March 23, 9:00–11:40 Room Y

Toward understanding the unique features of plant stem cells

Language: English

Organizers: Masaaki Umeda (NAIST)
Hitoshi Sakakibara (Nagoya Univ.)

● Chairperson: Hitoshi Sakakibara

09:00		Opening remarks Masaaki Umeda
09:05	**S05-1**	Genome Maintenance Strategies in Plant Stem Cells Masaaki Umeda, Shiori S. Aki, Naoki Takahashi (Grad. Sch. Sci. Technol., NAIST)
09:20	**S05-2**	Analyses of stem cell genome diversity in long-lived plants Akiko Satake (Dept. Biol., Kyushu Univ.)
09:35	**S05-3**	Regulation of nodule initiation in legumes Makoto Hayashi (RIKEN CSRS)
09:50	**S05-4**	Evolutionary conserved mechanisms of stem cell proliferation in land plants Kimitsune Ishizaki (Grad. Sch. Sci., Kobe Univ.)
10:05	**S05-5**	Control of vegetative reproduction by KL signaling in *Marchantia polymorpha* Junko Kyozuka, Aino Komatsu, Kyoichi Kodama, Kazato Kumagai, Hidemasa Suzuki (Tohoku, Life Sciences)

● Chairperson: Masaaki Umeda

10:20	**S05-6**	Role of cytokinin biosynthesis and translocation in the maintenance of shoot apical stem cells Hitoshi Sakakibara (Grad Sch Bioagric Sci, Nagoya Univ)
10:35	**S05-7**	Regulation of stem cell production by a cytochrome P450-derived signal in plants Kodai Takemoto, Kiyoshi Mashiguchi, Shinjiro Yamaguchi (Inst. Chem. Res., Kyoto Univ.)
10:50	**S05-8**	Analysis on the establishment of apical-basal axis and stem cells in rice embryo Yutaka Sato (National Institute of Genetics)
11:05	**S05-9**	Deceleration of cell cycle underpins a switch from proliferative to terminal division in plant stomatal lineage Akie Shimotohno[1], Soon-Ki Han[1], Arvid Herrmann[2,3], Jiyuan Yang[2,3], Rie Iwasaki[1], Tomoaki Sakamoto[4], Seisuke Kimura[4], Eun-Deok Kim[2,3], Keiko Torii U.[1,2,3] ([1]Institute of Transformative Bio-Molecules (WPI-ITbM), Nagoya University, [2]Howard Hughes Medical Institute, University of Texas at Austin, [3]Department of Molecular Biosciences, University of Texas at Austin, [4]Department of Industrial Life Sciences and Center for Plant Sciences, Kyoto Sangyo University)
11:20	**S05-10**	Competitive action among BES/BZR transcription factors enables the robust control of vascular stem cells Tomoyuki Furuya, Yuki Kondo (Grad. Sch. Sci., Kobe Univ.)
11:35		Closing remarks Masaaki Umeda

Co-sponsored by Grant-in-Aid for Scientific Research on Innovative Areas
'Principles of pluripotent stem cells underlying plant vitality'

Wed., March 23, 13:15–16:15 Room Y

Chemical signals that control parasitism, symbiosis, defense, and infection in plants

Language: Japanese

Organizers: Masami Hirai (RIKEN CSRS)
Masaharu Mizutani (Kobe University)
Akifumi Sugiyama (Kyoto University)

● Chairperson: Masami Hirai

13:15 Opening remarks

13:20 **S06-1** Mycorrhizal cheating mediated by signaling molecules
Kenji Suetsugu (Graduate School of Science, Kobe Univ.)

13:40 **S06-2** Regulation of arbuscular mycorrhizal fungi by plant-derived compounds
Hiromu Kameoka[1,2] ([1]Grad. Sch., Life Sci., Tohoku Univ., [2]JST PRESTO)

14:00 **S06-3** Parasitic strategies of *Ralstonia solanecearum* on fungi as well as plants
Kenji Kai (Grad. Sch. Life & Envi. Sci., Osaka Pref. Univ.)

● Chairperson: Masaharu Mizutani

14:20 **S06-4** Identification of plant attractant of parasitic nematode, M. incognita
Shinichiro Sawa (Kumamoto University, IRCAEB)

14:40 Break

14:45 **S06-5** Plant defense system coordinated by herbivore's oral secretion components
Gen-ichiro Arimura (Dept. Biol. Sci. Technol., Tokyo Univ. Sci.)

● Chairperson: Akifumi Sugiyama

15:05 **S06-6** Counter-adaptation and physiological mechanisms of insects to gardenia defense substances
Naoko Yoshinaga, Naoki Mori (Grad. Sch. Ag., Kyoto Univ.)

15:25 **S06-7** The mystery of Insect Gall formation is being elucidated
Tomoko Hirano, Masa H. Sato (Grad. Sch. Life and Envir. Sci., Kyoto Prefectural University)

15:45 **S06-8** The influence toward undergraound interactions of plant communication on above ground by VOCs
Kaori Shiojiri[1], Akira Yamawo[2] ([1]Ryukoku Univ. Agriculture, [2]Hirosaki Univ. Agriculture and Life Science)

● Chairperson: Masaharu Mizutani

16:05 Discussion

Wed., March 23, 13:15–16:15 Room Z

A multifaceted approach to uncovering the mechanism and dynamics of the plant-microbe holobiont

Language: Japanese

Organizers: Shunsuke Miyashima (NAIST)
Kei Hiruma (The Tokyo University)
Akira Mine (Kyoto University)

13:15 Opening remarks
Kei Hiruma

● Chairperson: Kei Hiruma

13:20 **S07-1** Fluorescence lifetime imaging reveals spatiotemporal activation of immune response in Arabidopsis root
Shunsuke Miyashima[1,2] ([1]NAIST, [2]JST PRESTO)

13:50 **S07-2** Minerals and photosynthates dynamics in root using radioisotope imaging
Ryohei Sugita[1], Natsuko I. Kobayashi[2], Tomoko M. Nakanishi[2], Keitaro Tanoi[2] ([1]Radioisotope Research Center, Nagoya University, [2]Graduate School of Agricultural and Life Sciences, The University of Tokyo)

14:10 **S07-3** Development of quantification techniques to unravel the plant physiological response
Yosuke Toda[1,2] ([1]phytometrics, [2]ITbM, Nagoya Univ.)

14:30 Break

● Chairperson: Akira Mine

14:35 **S07-4** Detecting beneficial organisms for rice by reconstructing ecological interaction networks under field conditions
Masayuki Ushio[1,2] ([1]Hakubi Center, Kyoto University, [2]Center for Ecological Research, Kyoto University)

15:10 **S07-5** Diagnosis and surveillance of wheat stem rust using field transcriptomic data
Ayako Tsushima[1], Clare M. Lewis[1], Kerstin Flath[2], Stephen Kildea[3], Diane G.O. Saunders[1] ([1]John Innes Centre, [2]Institute for Plant Protection in Field Crops and Grassland, Julius-Kuehn-Institut (JKI), [3]Teagasc)

● Chairperson: Shunsuke Miyashima

15:35 **S07-6** Plant-microbiota "remote" interactions via secreted compounds manipulating host root growth-defense coordination
Jana Hucklenbroich[1], Arpan Kumar Basak[2,3], Kenji Yamada[3], Ryohei Thomas Nakano[1] ([1]Max Planck Institute for Plant Breeding Research, Cologne, Germany, [2]Faculty of Biology, Jagiellonian University, Krakow, Poland, [3]Malopolska Centre of Biotechnology, Jagiellonian University, Krakow, Poland)

16:10 Closing remarks
Akira Mine

Co-sponsored by Co-creation of plant adaptive traits via assembly of plant-microbe holobiont