PCP sponsored symposium

Intercellular and Inter-organismal Communication

日 時　3月14日（金）9:30–12:25　　会 場　X会場

Organizers: Russinova Jenny (VIB-UGent Cent. Plant Sytem. Biol.) / Tetsuya Higashiyama (Grad. Sch. Sci., Univ. Tokyo)

This symposium focuses on intercellular and inter-organismal communication, a key research area highlighted in four recent and upcoming special issues of Plant and Cell Physiology (PCP). Editors of PCP associated with these topics and special issues will come together to present their research, exploring the similarities and differences in the cellular and molecular genetic bases underlying various biological phenomena. Attendees will gain cutting-edge insights into this field, learn about the related PCP special issues, and have an opportunity to connect with editors in this area.

9:30　Opening Remarks
Miki Matoba (Oxford Univ. Press)

9:35　Introduction of PCP's Upcoming Special Issues
Lili Costa (Oxford Univ. Press)

Chairperson: Tetsuya Higashiyama

9:40　S01-1　Brassinosteroids in Transit: The Role of Short-Distance Transport in Maintaining Brassinosteroid Homeostasis
Eugenia Russinova[1,2] ([1]Department of Plant Biotechnology and Bioinformatics, Ghent University, 9052 Ghent, Belgium, [2]Center for Plant Systems Biology, VIB, 9052 Ghent, Belgium)

Chairperson: Eugenia Russinova

10:10　S01-2　Cell-to-cell communication in Sexual Reproduction
Tetsuya Higashiyama (Grad. Sch. Sci., Univ. Tokyo)

10:40　Break

10:50　S01-3　The form of plant vascular biology to come
Koh Aoki[1,11], Yuki Kondo[2,11], Michitaka Notaguchi[3,11], Misato Ohtani[4,11], Masatsugu Toyota[5,11], Masashi Asahina[6,11], Tomomichi Fujita[7,11], Tomoyuki Furuya[2,11], Takahiro Hamada[8,11], Kensuke Kawade[5,11], Ken-ichi Kurotani[9,11], Kazuki Motomura[10,11], Kyoko Ohashi-Ito[4,11] ([1]Grad. Sch. Agric., Osaka Metro. Univ., [2]Osaka Univ., [3]Kyoto Univ., [4]Univ. of Tokyo, [5]Saitama Univ., [6]Teikyo Univ., [7]Hokkaido Univ., [8]Okayama Univ. of Sci., [9]Nagoya Univ., [10]Ritsumeikan Univ., [11]PVB2025 Local Org. Com.)

11:20　S01-4　The biology of parasitic plants – kin recognition in plant-plant interactions
Satoko Yoshida (NAIST Bio)

Chairperson: Tetsuya Higashiyama

11:50　S01-5　Local and systemic regulation of nodulation in *Medicago truncatula*
Florian Frugier (Institute of Plant Sciences - Paris Saclay (IPS2), CNRS, Paris-Saclay University, France)

12:20　Closing Remarks
Eugenia Russinova

To be or not to be: intricate controls on developmental fate determination

日 時　3月14日（金）9:30–12:30　　会 場　Y会場

Organizers: Momoko Ikeuchi (Nara Institute of Science and Technology) / Makoto Shirakawa (Nara Institute of Science and Technology)

The appropriate control on developmental decisions are among key survival strategies for plants. Recent advances in revolutionary technologies including single-cell omics and live imaging have enabled us to describe developmental events with unprecedented spatiotemporal resolution. Mathematical and computational approaches have proven powerful in interpreting these high-resolution data. In this symposium, we will highlight interdisciplinary approaches to understanding the key principles of developmental fate decisions.

9:30　Introduction
Momoko Ikeuchi

Chairperson: Momoko Ikeuchi

9:35　S02-1　START domains generate paralog-specific regulons from a single network architecture
Aman Husbands (University of Pennsylvania)

10:00　S02-2　Vascular cell fate bifurcation: Xylem or Phloem?
Shunji Shimadzu, Yuki Kondo (Grad. Sch. Sci., Osaka Univ.)

10:25　S02-3　Florigen relay in rice shoot apical meristem
Moeko Sato[1], Hiroyuki Tsuji[1,2] ([1]Kihara Institute for Biological Research, Yokohama City University, [2]Bioscience and Biotechnology Center, Nagoya Univ.)

10:50　S02-4　Co-option and neofunctionalization of stomatal executors for defense against herbivores in Brassicales
Makoto Shirakawa (Nara Institute of Science and Technology)

11:10　Break

Chairperson: Makoto Shirakawa

11:15　S02-5　Mechanical interactions between tissue layers underlie plant morphogenesis
Daniel Kierzkowski[1], Sylvia Silveira[1], Loann Collet[1], Sahil Haque[1], Luc Lapierre[1], Agnieszka Bagniewska-Zadworna[3], Frederick Gosselin[2], Richard Simon Smith[4], Anne-Lise Routier-Kierzkowska[1] ([1]University of Montreal, Canada, [2]Politechnique Montreal, Canada, [3]Adam Mickiewicz University, Poland, [4]John Innes Center, UK)

11:40　S02-6　Modelling growth constraints of plant organ shape and arrangement
Koichi Fujimoto[1], Naoya Kamamoto[1], Motohiro Fujiwara[2] ([1]Hiroshima Univ., [2]RIKEN BDR)

12:05　S02-7　Cell fate specification and self-organization during shoot regeneration
Momoko Ikeuchi, Yuki Doll (NAIST, bio)

12:25　Concluding remarks
Makoto Shirakawa

New horizon of plant cell biology: novel insights into organization, dynamics, and functions of plant cell cortex

日 時　3月14日（金）9:30–12:30　　会 場　Z会場

Organizers: Yoshihisa Oda (Grad. Sch. Sci., Nagoya Univ.) / Masayoshi Nakamura (ITbM, Nagoya Univ.)

The plant cell cortex is occupied by characteristic structures and molecules that play important roles in plant development and physiological responses. In recent years, new findings have been reported that challenge conventional models of their organization, dynamics, and signaling at the plant cell cortex. This symposium will focus on the emerging trend that marks a new era in plant cell biology.

9:30　Introduction
Yoshihisa Oda

Chairperson: Yoshihisa Oda

9:35　S03-1　Polaritome: Proteomic identification of cell polarization factors in plants
Akira Yoshinari[1,2] ([1]IAR, Nagoya Univ., [2]WPI-ITbM, Nagoya Univ.)

10:00　S03-2　The role of motor-mediated intracellular transport in de novo formation of the plant cell cortex
Moe Yamada (Grad. Sch. Sci., Nagoya Univ.)

10:25　S03-3　Microtubule nucleation apparatus in plant cells
Masayoshi Nakamura (Nagoya University, ITbM)

10:50　Break

Chairperson: Masayoshi Nakamura

11:05　S03-4　Control of plasma membrane-associated actin polymerization specifies the pattern of the cell wall in xylem vessels
Saku Kijima[1], Takema Sasaki[2], Yuichiro Kikushima[2], Daisuke Inoue[3], Shingo Sakamoto[1], Yuki Kondo[4], Soichi Inagaki[5], Masatoshi Yamaguchi[6], Nobutaka Mitsuda[1], Yoshihisa Oda[2] ([1]AIST, Bioproduct. Res. Inst., [2]Nagoya Univ., Grad. Sci., [3]Kyushu Univ., Fac. Des., [4]Osaka Univ., Grad. Sci., [5]Univ. Tokyo, Biol. Sci., [6]Saitama Univ., Sci. Eng.)

11:30　S03-5　Temporal changes in surface tension guide the accurate asymmetric division of Arabidopsis zygotes
Satoru Tsugawa[1], Zichen Kang[1], Sakumi Nakagawa[2], Hikari Matsumoto[2], Yukitaka Ishimoto[3], Tomonobu Nonoyama[1], Yuga Hanaki[2], Minako Ueda[2] ([1]Mech. Eng., Akita Pref. Univ., [2]Grad. Sch. Life. Sci., Tohoku Univ., [3]Sci. Eng., Saga Univ.)

11:55　S03-6　The regulatory platform for auxin transport at the cell cortex determined by organelle position
Miyo T. Morita, Shogo Mori, Hiromasa Shikata, Takeshi Nishimura (NIBB)

12:20　Discussion
Masayoshi Nakamura

Underground Chatter: The hidden but lively exchange at the root-soil interface

日 時　3月14日（金）14:00–16:45　　会 場　X会場

Organizers: Ryohei Thomas Nakano (Hokkaido Univ.)

Plant immunity plays a significant role in interactions not only with pathogens but also with commensal microbial communities (plant microbiota). While the mechanisms of plant immunity in aerial tissues have been extensively studied, much remains unknown about how immunity functions in underground tissues. This symposium aims to explore the functions of root immunity from multiple aspects.

14:00　Opening Remark
Ryohei Thomas Nakano

Chairperson: Hiroaki Adachi

14:05　S04-1　Pipecolic Acid at the Crossroads: Orchestrating Microbiota Dynamics and Immunity Along the Root-Shoot Axis
Ruidong Huang, Yuxin Ren, Kenichi Tsuda (Huazhong Agricultural University)

14:35　S04-2　The role of root immunity in root-commensal interactions
Ryohei Thomas Nakano (Faculty of Science, Hokkaido Univ)

Chairperson: Ryohei Thomas Nakano

15:05　S04-3　Root-Nematode interaction: How do cyst nematodes regulate the host system?
Mina Ohtsu[1,2] ([1]NAIST, Bio Sci., [2]JST Sakigake)

15:35　S04-4　Molecular evolution of plant NLR immune receptors to recognize pathogens
Hiroaki Adachi (Grad. Sch. Agri., Kyoto Univ.)

16:05　S04-5　Root immune components mediate microbiome feedbacks in Arabidopsis
Klaus Schlaeppi (University of Basel, Switzerland)

16:35　Closing Remark
Ryohei Thomas Nakano

Toward Elucidating PHYTOCOSM: Multiscale Symbioses Between Photosynthetic and Heterotrophic Organisms on Earth

日 時　3月14日（金）14:00–16:45　　会 場　Z会場

Organizers: Kei Hiruma (Univ. Tokyo) / Makoto Hayashi (RIKEN) / Akira Mine (Kyoto. Univ)

In this symposium, we introduce the concept of “Phytocosm,” a multiscale symbiotic system between photosynthetic organisms and microbes that emerges across diverse terrestrial and aquatic environments. Utilizing advanced techniques such as radioisotope imaging, metabolomics, and metagenomics, we aim to elucidate the mechanisms underlying the formation and function of the Phytocosms.

Chairperson: Kei Hiruma

14:00　Opening remark
Kei Hiruma

14:05　S05-1　Regulation of root symbioses in legumes
Makoto Hayashi (RIKEN Center for Sustainable Resource Science)

Chairperson: Makoto Hayashi

14:30　S05-2　Toward understanding the mechanisms of nutrient exchange between plants, fungi, and bacteria within root systems
Kei Hiruma (Grad. Sch. Art. Sci., Univ. Tokyo)

14:50　S05-3　Phosphate transport and response mechanisms revealed by micro-regional tracer imaging
Satomi Kanno (IAR., Nagoya Univ.)

15:15　Break

Chairperson: Akira Mine

15:25　S05-4　ファイトコズムにおける化合物動態の可視化に向けたメタボロミクスの活用
櫻井望[1]，森哲哉[2]（[1]かずさDNA研・藻類代謝エンジニアリングチーム，[2]理化学研究所・CSRS）

15:50　S05-5　珪藻におけるバクテリアが介在するウイルス抵抗性：植物プランクトンとウイルスの相互作用における重要なシステム
木村圭（佐賀大・農）

16:15　S05-6　Adaptation of aquatic microbes to oligotrophic environments through photosymbiosis
Shin-ya Miyagishima[1,2], Ayumi Sato[1,2], Kaoru Okada[1,2] ([1]Natl. Inst. of Genet., [2]SOKENDAI)

16:40　Closing remark

Multi-signal processing mechanisms: how plants simultaneously deal with different stimuli?

日 時　3月15日（土）9:00–11:50　　会 場　X会場

Organizers: Ryuichi Nishihama (Tokyo University of Science) / Dolf Weijers (Wageningen University & Research)

Plants always face to various stimuli from the environment and process information of multiple signals at the same time via integration or distinction to optimize their growth or environmental responses. Recent studies reveal mechanisms by which plants do this at different levels in a signaling pathway, such as membrane receptors and cytoplasmic protein kinases, and even at the final enzyme level. This symposium showcases several examples of multi-signal processing mechanisms and provides a platform for discussion on strategies plants take to cope with various stimuli.

9:00　Opening remarks
Ryuichi Nishihama

Chairperson: Ryuichi Nishihama

9:05　S06-1　The regulatory mechanism of plasma membrane H^+-ATPase activity through multi-signal processing in light-induced stomatal opening
Saashia Fuji, Atsushi Takemiya (Grad. Sch. Sci. Tech. Innov., Yamaguchi Univ.)

9:30　S06-2　Phosphoproteomic screening for Raf36 substrates to elucidate the growth-stress tradeoff in Arabidopsis
Hinano Takase, Aina Nagano, Yoshiaki Kamiyama, Kota Yamashita, Sotaro Katagiri, Yangdan Li, Taishi Umezawa (Tokyo University of Agriculture and Technology)

9:55　S06-3　Comparative analysis identified deeply conserved mediators of rapid signaling
Dolf Weijers (Wageningen University, Laboratory of Biochemistry, the Netherlands)

Chairperson: Dolf Weijers

10:25　S06-4　Multi-signal processing of growth-promoting and stress-derived cues through granule formation of the B4 Raf-like kinase PRAF
Ryuichi Nishihama, Shota Yamauchi (Dept. Appl. Biol. Sci., Fac. Sci. Tech., Tokyo Univ. Sci.)

10:50　S06-5　Evolution and Divergence of ABA Signaling Regulation Through the Ethylene Receptor/RAF Complex
Yoichi Sakata (Dept. Bioscience, Tokyo Univ. Agricuture)

11:15　S06-6　Secrets of signalling specificity and crosstalk
Yan Ma (Gregor Mendel Institute, Vienna, Austria)

11:45　Closing remarks
Dolf Weijers

Advanced plant -omics in plant sustainability and environmental resilience

日 時　3月15日（土）9:00–12:00　　会 場　Y会場

Organizers: Yuki Nakamura (RIKEN CSRS) / Pao-Yang Chen (IPMB, Academia Sinica)

This symposium will bring together scientists using cutting-edge omics approaches at spatial, single-cell, and tissue levels to investigate plant sustainability and environmental resilience. The speakers will discuss recent advances in multi-omics technology, including transcriptomics, epigenomics, lipidomics, and proteomics, integrated into multidisciplinary systems to study plant function and its underlying mechanisms from genetics, epigenetics to downstream metabolites.

9:00　Opening remarks
Yuki Nakamura

Chairperson: Yuki Nakamura

9:10　S07-1　A spatial understanding of metabolic cooperation between plastids and ER in plant seed oil accumulation
Yuki Nakamura[1,2], Van Nguyen[1], Niña Alyssa M Barroga[1], Artik Elisa Angkawijaya[1] ([1]RIKEN CSRS, [2]Grad Sch Sci, U Tokyo)

9:25　S07-2　Lipid rhytmicity in *Arabidopsis thaliana* leaves and its importance in plant growth control
Artik Elisa Angkawijaya[1], Van Nguyen[1], Katharina Gutbrod[2], Helga Peisker[2], Peter Dörmann[2], Yuki Nakamura[1,3] ([1]Center for Sustainable Resource Science, RIKEN, Yokohama, 230-0045 Japan., [2]Institute of Molecular Physiology and Biotechnology of Plants, University of Bonn, D-53115 Bonn, Germany., [3]Department of Biological Sciences, Graduate School of Science, The University of Tokyo, Tokyo, 113-8654 Japan)

9:40　S07-3　Lipidomic dynamics in duckweeds under abiotic stress conditions
Yasuyo Yamaoka (Dept. of Biotechnology, The Catholic University of Korea)

9:55　S07-4　Detecting the Interplay Between DNA Methylation and Lipid Production in Plants
Jo-Wei Hsieh[1], Kuan-Lin Chen[1], Chia-Yen Wu[1], Van Nguyen[2], Anh H. Ngo[2], Nguyen M. Linh[2], Kuan-Ting Hsin[1], Yuki Nakamura[2], Paoyang Chen[1] ([1]Institute of Plant and Microbial Biology, Academia Sinica, Taipei, Taiwan, [2]RIKEN Center for Sustainable Resource Science, Yokohama, Japan)

10:10　S07-5　The unique biological properties of AGO1 reveal the autonomy of gene regulation in RNA silencing
Shih-Shun Lin, Zhao-Jun Pan, Wei-Lun Wei, Phuong-Anh Tran (Institute of Biotechnology, National Taiwan University)

10:25　Break

Chairperson: Pao-Yang Chen

10:45　S07-6　Epigenetic-Driven Synergistic Regulation of Transposons in Arabidopsis
Jo-Wei Hsieh[1,2], Ming-Ren Yen[1], Fuyu Hung[3,4], Keqiang Wu[3], Paoyang Chen[1,2] ([1]Institute of Plant and Microbial Biology, Academia Sinica, Taipei 115201, Taiwan, [2]Genome and Systems Biology Degree Program, Academia Sinica and National Taiwan University, Taipei 10617, Taiwan, [3]Institute of Plant Biology, National Taiwan University, Taipei 10617, Taiwan, [4]RIKEN Center for Sustainable Resource Science, Yokohama 230-0045, Japan)

11:00　S07-7　Auxin fluctuation and PIN polarization in moss leaf cell reprogramming
Han Tang[1], Jiri Friml[2] ([1]Graduate Institute of Biochemistry, NCHU, [2]Institute of Science and Technology, Austria)

11:15　S07-8　Single-cell transcriptomics unveils xylem cell development and evolution
Chia-Chun Tung[1], Shang-Che Kuo[2], Chia-Ling Yang[3], Jhong-He Yu[1], Chia-En Huang[1], Pin-Chien Liou[1], Ying-Hsuan Sun[4], Peng Shuai[5], Jung-Chen Su[6], Chuan Ku[2,3], Ying-Chung Jimmy Lin[1,2] ([1]Department of Life Science and Institute of Plant Biology, National Taiwan University, Taipei 10617, Taiwan, [2]Genome and Systems Biology Degree Program, National Taiwan University and Academia Sinica, Taipei 10617, Taiwan, [3]Institute of Plant and Microbial Biology, Academia Sinica, Taipei 11529, Taiwan, [4]Department of Forestry, National Chung Hsing University, Taichung 40227, Taiwan, [5]College of Forestry, Fujian Agriculture and Forestry University, Fuzhou 350002, China, [6]Department of Pharmacy, National Yang Ming Chiao Tung University, Taipei 11221, Taiwan)

11:30　S07-9　Divergence in Plasmodesmata Composition: A Proteomic Analysis Reveals Low Conservation Between Marchantia and Arabidopsis
Kuan Ju Lu, Hui Yu Chang (Grad. Inst. Biotech., Nat. Chung Hsing Univ.)

11:45　General discussion and closing remarks
Pao-Yang Chen

原核光合成生物 ザ・シンポジウム

日 時　3月15日（土）9:00–12:00　　会 場　Z会場

オーガナイザー：原田 二朗（久留米大・医）／塚谷 祐介（海洋研究開発機構・海洋機能利用部門）／浅井 智広（中央大・理工）

光合成微生物を用いた研究は，異なる分野や学会に分散している傾向にあるため，今回『原核光合成生物』といういわば研究材料を冠したシンポジウムを開催することで，分野横断的・学会横断的な交流が広がり，さらにその先には新たな共同研究などに発展することを期待しております．なお本シンポジウムは，これまで9年間，植物生理学会年会の関連集会として毎年開催してきた原核光合成生物シンポジウム / ワークショップの第10回目という位置付けとします．

9:00　はじめに
原田 二朗

座 長　浅井 智広

9:05　S08-1　ヘリオバクテリアの反応中心：構造，機能，特性
大岡宏造（大阪大学全学教育推進機構）

9:30　S08-2　シアノバクテリアにおける光化学系Ⅱ表在性タンパク質の脂質修飾
河合（久保田）寿子[1]，鴛海茉由子[2]，水澤直樹[2,3]（[1]山形大・理学，[2]法政大・院理工学，[3]法政大・ナノテク）

9:45　S08-3　光化学系II リポタンパク質による酸素発生複合体の安定化
鴛海茉由子[1]，河合-久保田寿子[2]，水澤直樹[1,3]（[1]法政大・院理工学，[2]山形大・理学，[3]法政大・ナノテク）

10:00　S08-4　シアノバクテリア *Acaryochloris marina* NIES2412 の長波長成分は何に起因するのか？
渡辺麻衣（都立大・理・生命）

座 長　塚谷 祐介

10:20　S08-5　タンパク質立体構造の類似性による集光性色素合成酵素群の網羅的発掘および光環境と分子進化の関係性
三宅敬太[1]，今野直輝[2]，岩崎渉[2,3]（[1]東京大・院総合文化，[2]東京大・院理，[3]東京大・院新領域）

10:40　S08-6　光合成微生物 The Circadian Clock
寺内一姫（立命館大学生命科学部）

11:05　S08-7　生命と光合成の共進化
延優[1]，西原亜理沙[2]，塚谷祐介[3]，浅井智広[4]（[1]海洋研究開発機構・超先鋭研究開発部門，[2]産業技術総合研究所・生物プロセス部門，[3]海洋研究開発機構・生物地球化学センター，[4]中央大学・生命科学科）

11:30　S08-8　真核藻類における光合成喪失と非光合成性色素体機能の多様性
佐野奎志郎，神川龍馬（京都大学大学院農学研究科）

11:55　おわりに
塚谷 祐介

集光性アンテナ複合体研究の特異点

日 時　3月16日（日）9:00–12:00　　会 場　Y会場

共 催　学術変革領域研究A「光合成ユビキティ：あらゆる地球環境で光合成を可能とする超分子構造制御」
学術変革領域研究B「復元細胞機能学：集光性アンテナ複合体の復元」

オーガナイザー：日原 由香子（埼玉大院・理工）／渡辺 智（東京農大・バイオ）

地球が誕生して以来，大きく変わり続ける光環境のもと，光合成生物は集光性アンテナ複合体を多様かつ柔軟に進化させ，たくましくその生息域を広げてきた．本シンポジウムでは，惑星科学，情報科学，植物生理学，生化学，合成生物学など，様々な切り口からこの集光性アンテナ複合体の進化と多様性の問題に挑む研究者が結集し，最新の知見を紹介・討論することで，学術領域を変革する特異点の現出を目指す．

9:00　はじめに
日原由香子・渡辺智

座 長　小川 敬子

9:05　S09-1　緑色植物における集光システムの最適化メカニズムを理解するための学際的アプローチ
金恩哲[1]，西谷雄大[2]，Daekyung Lee[3]，坂本想一[4]，Heetae Kim[3]，石崎章仁[4]，山本大輔[2]，皆川純[1]
（[1]基礎生物学研究所，[2]福岡大学，[3]Korea Institute of Energy Technology，[4]分子科学研究所）

9:25　S09-2　分子系統樹と機械学習で解析する光合成複合体の環境適応メカニズム
嶺井隆平[1]，大森聡[1]，土方敦司[2]，土屋裕子[3]，白井剛[1]（[1]長浜バイオ大・バイオサイエンス，[2]東薬大・生命科学，[3]AIST・人工知能）

9:50　S09-3　緑の海仮説：シアノバクテリアと表層環境の共進化
松尾太郎[1]，三輪久美子[1]，藤井悠里[2]，菅野里美[3]，吉山洋子[4]，三宅敬太[5]，今野直輝[6]，宮下英明[2]
（[1]名大・院理学，[2]京大・院人間環境，[3]名大・高等研究院，[4]龍谷大学農学部，[5]東京大学総合文化研究科，[6]東京大学理学研究科）

座 長　金 恩哲

10:15　S09-4　メタトランスクリプトームデータから明らかになった自然環境下でのアンテナ複合体の動態
小川敬子[1]，皆川純[2]，日原由香子[1]（[1]埼玉大院・理工，[2]基生研）

10:35　S09-5　光色および鉄イオンに応答して制御される複数のフィコビリソーム
久布白睦実，濱田雅子，浴俊彦，河合繁，広瀬侑（豊橋技科大・院工）

座 長　広瀬 侑

10:55　S09-6　ビリン合成制御によるシアノバクテリアのフィコビリソームの機能改変
岩田みさき[1]，佐藤瑞穂[1]，川口毅[1]，前田海成[2]，渡辺麻衣[3]，池内昌彦[4]，成川礼[3]，渡辺智[1]（[1]東京農大・バイオ，[2]科学大・化生研，[3]都立大・理，[4]東大院・総合文化）

11:15　S09-7　集光性アンテナ複合体の in vitro 構築を目指した DNA ナノ構造体活用戦略
中田栄司[1]，小松原風汰[1]，近藤隆之介[1]，Peng Lin[1]，森井孝[1,2]（[1]京都大学・エネルギー理工学研究所，[2]京都光華女子大学）

座 長　日原 由香子

11:40　パネルディスカッション

Spatial sensing, design, production control and functional analysis of plant molecules

日 時　3月16日（日）9:00–12:00　　会 場　Z会場

共 催　JST さきがけ

Organizers: Kazuhiko Nishitani (Kanagawa Univ.) / Kanako Sekimoto (Yokohama City Univ.) / Yasuyuki Yamada (Kobe Pharma. Univ.)

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，それを軸として，生体内及び生態系内の生命現象の解明と，その有効利用に資する基礎的知見の創出と革新技術の構築に向けた学祭的な研究を推進しています．本シンポジウムでは，植物分子の空間測定から代謝経路の設計・制御，受容と生理機能の解明についての最近の成果を6名のさきがけ研究者が発表します．

Chairperson: Yasuyuki Yamada

9:00　S10-1　Spatiotemporal imaging of volatile molecules emitted from plants into the atmosphere
Kanako Sekimoto (Yokohama City Univ.)

9:30　S10-2　Molecular mechanisms of carbon dioxide sensing and signal transduction in plants
Yohei Takahashi (Nagoya Univ., ITbM)

10:00　S10-3　Mechanistic investigation and functional modification of terpene cyclases and oxidases using Computational Chemistry
Hajime Sato (Tokyo Univ., Grad. Sch. Agri. & Life Sci.)

Chairperson: Kanako Sekimoto

10:30　S10-4　Metabolic engineering of plant-specialized metabolism based on the diversified regulatory mechanisms
Yasuyuki Yamada (Kobe Pharma. Univ.)

11:00　S10-5　Integrated analysis of the cell wall-cuticle continuum: relationship between chemical structure, composition and transcriptional regulation
Yoshimi Oshima (AIST, Bioprod. Res. Inst.)

11:30　S10-6　Development of an artificial control system for seed germination: the application of germination-suppressing factors broken by the germination-inducing chemical
Kosuke Fukui (TUS, Applied Chemistry)