

December 8, Saturday

Opening remarks; 9:30-9:40 Hitoshi Tamiaki (*Ritsumeikan Univ., Kusatsu*)

PL-1 9:40-10:40 (Chairperson: H. Tamiaki, *Ritsumeikan Univ.*)
Chlorophyll biosynthesis and its regulation
Samuel I. Beale
Brown Univ., Providence, USA

Coffee break: 10:40-11:00

O-1 11:00-11:30 (H. Tamiaki)
Characterization of the catalytic component of dark-operative protochlorophyllide reductase from *Rhodobacter capsulatus*
Jiro Nomata, Kozue Ebata, Takuro Ogawa, Kazuhito Inoue and Yuichi Fujita
Nagoya Univ., Nagoya, Japan; Univ. Tokyo, Tokyo, Japan; Kanagawa Univ., Hiratsuka, Japan

Short Talks by Poster Presenters 11:30-12:00

Lunch: 12:00-13:00

Poster session: 13:00-14:30 (K305)

O-2 14:30-15:00 (Chairperson: S. I. Beale, *Brown Univ.*)
Plastid signaling and tetrapyrrole intermediates
N. Mochizuki, R. Tanaka, A. Tanaka, T. Masuda and A. Nagatani
Kyoto Univ., Kyoto, Japan; Hokkaido Univ., Sapporo, Japan; Univ. Tokyo, Tokyo, Japan

O-3 15:00-15:30 (S. I. Beale)
SLR1923 of *Synechocystis* 6803 is inevitable for conversion of 3,8-divinylchlorophyll(ide) to 3-vinylchlorophyll(ide)
Md. Rafiqul Islam, Yasuhiro Kashino, Kazuhiko Satoh and Hiroyuki Koike
Univ. Hyogo, Kakogawa, Japan

O-4 15:30-16:00 (S. I. Beale)
Strategies for the identification of chlorophyll metabolic enzymes
Ayumi Tanaka
Hokkaido Univ., Sapporo, Japan

Coffee break: 16:00-16:30

O-5 16:30-17:00 (Chairperson: H. Scheer, *München Univ.*)
An essential role of galactolipids on chlorophyll accumulation and functional
chloroplast biogenesis

Koichi Kobayashi, Tatsuru Masuda and Hiroyuki Ohta
Univ. Tokyo, Tokyo, Japan; Tokyo Inst. Tech., Yokohama, Japan

O-6 17:00-17:30 (H. Scheer)
Blue-light control of bacterial photosystem synthesis

Shinji Masuda
Tokyo Inst. Tech., Yokohama, Japan

O-7 17:30-18:00 (H. Scheer)
Phototropin and LOV proteins

Masahiro Kasahara
Ritsumeikan Univ., Kusatsu, Japan

Break

Banquet: 18:30-

December 9, Sunday

PL-2 9:30-10:30 (Chairperson: A. Tanaka, *Hokkaido Univ.*)
Phycobiliprotein biosynthesis: the last steps

Hugo Scheer and Kai-Hong Zhao
München Univ., München, Germany; Huazhong Univ., Wuhan, China

Coffee break: 10:30-10:50

O-8 10:50-11:20 (A. Tanaka)
How phycobilins are synthesized from heme? – View from the crystal structure –

Masakazu Sugishima
Kurume Univ. School Med., Kurume, Japan

O-9 11:20-11:50 (A. Tanaka)
Primary and secondary acceptors in green sulfur and heliobacterial reaction centers

Hirozo Oh-oka
Osaka Univ., Toyonaka, Japan

Closing remarks; 11:50-12:00 Ayumi Tanaka (*Hokkaido Univ., Sapporo*)

Poster Session (K305)

- P1** Two homologous genes, *chlA_I* and *chlA_{II}*, are differentially involved in isocyclic ring formation of chlorophyll *a* in the cyanobacterium *Synechocystis* sp. PCC 6803
Kei Minamizaki, Tadashi Mizoguchi, Takeaki Goto, Hitoshi Tamiaki and Yuichi Fujita
Nagoya Univ., Nagoya, Japan; Ritsumeikan Univ., Kusatsu, Japan
- P2** Functional analysis of the geranylgeranyl reductase gene involved in the biosynthesis of Chl *a* possessing $\Delta 2,6$ -phytyadienol in *Chlorobium tepidum*
Jiro Harada, Shohei Miyago, Tadashi Mizoguchi, Kazuhito Inoue, Hitoshi Tamiaki and Hirozo Oh-oka
Ritsumeikan Univ., Kusatsu, Japan; Osaka Univ., Toyonaka, Japan; Kanagawa Univ., Hiratsuka, Japan
- P3** Synthesis and self-aggregation of amphiphilic chlorins possessing double long chains
Tomohiro Miyatake and Shunsuke Hasegawa
Ryukoku Univ., Otsu, Japan
- P4** Substituent effects on pheophytinization of chlorosomal bacteriochlorophylls in green sulfur photosynthetic bacteria
Yuki Hirai, Hitoshi Tamiaki and Yoshitaka Saga
Kinki Univ., Higashi-Osaka, Japan; Ritsumeikan Univ., Kusatsu, Japan
- P5** Compositional analysis of bacteriochlorophyll *a* produced by purple photosynthetic bacterium *Rhodospseudomonas* sp. Rits
Megumi Isaji, Tadashi Mizoguchi, Jiro Harada and Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P6** Enzymatic activity of BchU, a methyltransferase involved in bacteriochlorophyll *c* biosynthesis: implications for its substrate recognition
Hitoshi Tamiaki, Shunsuke Takahashi, Shigeaki Osumi, Jiro Harada, Yoshitaka Saga and Hirozo Oh-oka
Ritsumeikan Univ., Kusatsu, Japan; Kinki Univ., Higashi-Osaka, Japan; Osaka Univ., Toyonaka, Japan
- P7** Light green phenotype of a phototropin triple disruptant of *Physcomitrella patens*
Tsuneyasu Takemoto and Masahiro Kasahara
Ritsumeikan Univ., Kusatsu, Japan
- P8** Hormonal regulation on chlorophyll biosynthesis in the root
K. Kobayashi, S. Baba, M. Keränen, E. M. Aro, H. Ohta and T. Masuda
Univ. Tokyo, Tokyo, Japan; Tokyo Inst. Tech., Yokohama, Japan; Univ. Turku, Turku, Finland