

CLS, Tokyo Tech. International Forum 2018

Redox regulation of protein functions, transcription, translation and folding

Tokyo Tech Campus Innovation Center

March 4-5, 2018

Program

Schedule for CLS, Tokyo Tech. International Forum 2018

"Redox regulation of protein functions, transcription, translation and folding"

Oversea speakers: 35 min talk and 10 min discussion

Domestic speakers: 25 min talk and 5 min discussion

Program

March 4 (Sunday)

12:30-12:40 **Toru Hisabori (Tokyo Institute of Technology)**

Opening Remarks

Session I Chair: Toru Hisabori (Tokyo Institute of Technology)

12:40-13:10 **Mitsumasa Hanaoka (Chiba University)**

- Nuclear gene regulation by retrograde redox signals
- 13:10-13:40 **Yukako Hihara (Saitama University)**
- Identification of transcription factors interacting with thioredoxin in the cyanobacterium *Synechocystis* sp. PCC 6803
- 13:40-14:25 **Karl-Josef Dietz (Bielefeld University, Germany)**
- Retrograde control of transcription and translation in the high light response
- 14:25-14:40 Coffee Break
- Session II** Chair: Mitsumasa Hanaoka (Chiba University)
- 14:40-15:25 **Thomas Pfannschmidt (Univ. Grenoble-Alpes, France)**
- Photosynthetic redox control of transcription in plant cells
- 15:25-15:55 **Shigeki Ehira (Tokyo Metropolitan University)**
- Redox regulation of cellular differentiation in cyanobacteria
- 15:55-16:25 **Yasuomi Tada (Nagoya University)**
- Protein S-glutathionylation mediates systemic acquired resistance in Arabidopsis
- 16:25-16:40 Coffee Break
- 16:40-18:10 Poster Session
- 18:30-20:30 Banquet

March 5 (Monday)

Session III Chair: Shigeki Ehira (Tokyo Metropolitan University)

9:30-10:00 **Shinji Masuda (Tokyo Institute of Technology)**

H₂S-dependent transcriptional control through polysulfidation of
cystine residues: the role of reactive-sulfur species for signal sensing

10:00-10:30 **Yoshitaka Nishiyama (Saitama University)**

Redox regulation of translation and stress response of photosynthesis

10:30-10:40 Coffee Break

10:40-11:10 **Frederic Deschoenmaecker (Tokyo Institute of Technology)**

Proteomics can deeply unravel the Trx pathway and its specificity

11:10-11:55 **Jean-Pierre Jacquot (Université de Lorraine, France)**

Redox regulation of chloroplast enzymes: molecular and evolutionary
aspects

11:55-12:00 Group Photo

12:00-13:00 Lunch Break

Session IV Chair: Kenji Inaba (Tohoku University)

- 13:00-13:30 **Yayoi Onda (Ehime University)**
Disulfide bond formation: redox-based regulation of organelle development in plant cells
- 13:30-14:00 **Ryo Ushioda (Kyoto Sangyo University)**
Maintenance of ER Homeostasis through Disulfide Reductase ERdj5
- 14:00-14:45 **Roberto Sitia (Università Vita Salute San Raffaele, Italy)**
Modulating redox signaling: a persulfidation-based redoxstat controls H₂O₂ transport via aquaporin 8
- 14:45-15:00 Coffee Break
- Session V** Chair: Yoshidata Nishiyama (Saitama University)
- 15:00-15:30 **Kenji Inaba (Tohoku University)**
The Highly Dynamic Nature of ERdj5 Plays a Key Role in Efficient ER-associated Degradation of Aberrant Protein Oligomers
- 15:30-16:15 **Himadri Pakrasi (Washington University, USA)**
Redox modifications of proteins in cyanobacterial molecular machines
- 16:15-16:20 **Yoshitaka Nishiyama (Saitama University)**
Closing Remarks