

Program

TUESDAY, JULY 4, 2023

15:00–17:00 Registration

17:10–17:15 Opening Remarks: Yasushi OKADA

17:15–18:55 Plenary Lectures

Chair: Yasushi OKADA

17:15–18:05 [PL-1]

Kinesin superfamily molecular motors, KIFs and intracellular transport : from regulation of neuronal functions and development to related diseases16

Nobutaka HIROKAWA

(The University of Tokyo, Japan)

18:05–18:55 [PL-2]

The Ins and Outs of Microtubule Tip Control by Centrosomal and Ciliary Proteins20

Anna AKHMANOVA

(Faculty of Science, Utrecht University, The Netherlands)

19:00–20:30 Welcome Reception

WEDNESDAY, JULY 5, 2023

9:00–12:00 Session A

Microtubule Motors and Neuronal Morphogenesis

Chairs: Yasushi OKADA

Shinsuke NIWA

9:00–9:30 [A-1]

Comparative analysis of two *Caenorhabditis elegans* kinesins KLP-6 and UNC-104 reveals common and distinct activation mechanisms in kinesin-322

Shinsuke NIWA

(Tohoku University, Japan)

9:30–10:00 [A-2]

Microtubule detyrosination by VASH1/SVBP is regulated by the conformational state of tubulin in the lattice24

Kristen VERHEY

(University of Michigan, USA)

10:00–10:30 [A-3]

Tackling the Mystery of Velocity of Fast Axonal Transport26

Yasushi OKADA

(RIKEN BDR, Japan/Univ Tokyo, Grad Sch Med, Dept Cell Biol, Japan/
Univ Tokyo, Grad Sch Sci, Dept Physics, Japan)

10:30–11:00 Coffee Break

- 11:00–11:30 [A-4]
Stress induced vesicular assemblies of DLK are signaling hubs involved in kinase activation and neurodegeneration28
Casper HOOGENRAAD
 (Genentech, USA)
- 11:30–12:00 [A-5]
Establishing and maintain microtubule arrays in dendrites30
Kang SHEN
 (Stanford University, USA)
- 12:00–14:00 **Lunch/Group Photo Shooting**
- 14:00–17:00 **Session B**
Plant Microtubule
 Chairs: Yoshihisa ODA
 Staffan PERSSON
- 14:00–14:30 [B-1]
Plant cell wall synthesis is maintained by a microtubule-based mechanism during environmental stress32
Staffan PERSSON
 (University of Copenhagen, Denmark)
- 14:30–15:00 [B-2]
Plant KIF15 functions as a vesicle transporter for the cell plate formation during cytokinesis34
Moe YAMADA
 (Nagoya University, Japan)
- 15:00–15:30 [B-3]
Mechanism of microtubule formation in acentrosomal mitotic spindles of plant cells36
Takashi MURATA
 (Kanagawa Institute of Technology, Japan)
- 15:30–16:00 **Coffee Break**
- 16:00–16:30 [B-4]
Microtubule organization in xylem vessels40
Yoshihisa ODA
 (Nagoya University, Japan)
- 16:30–17:00 [B-5]
Elucidating molecular mechanisms of microtubule nucleation, severing, and regulation of microtubule dynamics during the organization of cortical microtubule arrays in plant44
Masayoshi NAKAMURA
 (Nagoya University, Japan)
- 17:00–18:10 **Short Talk I**
- 18:15–19:30 **Dinner**
- 19:30–21:00 **Poster Session I (Odd Number Posters)**

THURSDAY, JULY 6, 2023
9:00–12:00 Session C**Cilia and Related Molecules**

Chairs: Masahide KIKKAWA
Gaia PIGINO

- 9:00–9:30 [C-1]**
The Tubulin Code: How Cells Encode Spatiotemporal Information Into Their Microtubule Networks46
Antonina ROLL-MECAK
(National Institutes of Health, USA)
- 9:30–10:00 [C-2]**
New insights into the mechanism of dynein force generation48
Hiroshi IMAI
(Osaka University, Japan)
- 10:00–10:30 [C-3]**
Structure and logistics of intraflagellar transport trains in motile cilia50
Gaia PIGINO
(Structural Biology Research Centre, Human Technopole, Italy)

10:30–11:00 Coffee Break

- 11:00–11:30 [C-4]**
Sensory neurons dump a hyperactive ciliary kinesin for degradation54
Guangshuo OU
(Tsinghua University, China)
- 11:30–12:00 [C-5]**
Combination of cryo-EM and genetics for studying microtubule-binding proteins56
Masahide KIKKAWA
(The University of Tokyo, Japan)

12:00–14:00 Lunch**14:00–17:00 Session D****MAPs and Microtubule Motors, *in vitro***

Chairs: Ryo NITTA
Richard J MCKENNEY

- 14:00–14:30 [D-1]**
Looking under the hood of microtubule dynamics58
Luke RICE
(UT Southwestern Medical Center, USA)
- 14:30–15:00 [D-2]**
Microtubule dynamics regulation by CAMSAPs and Kinesin-460
Ryo NITTA
(Kobe University Graduate School of Medicine, Japan)

15:00–15:30 [D-3]
Anchoring geometry is a factor in determining the direction of kinesin-14 motility in both the parallel and perpendicular to the microtubule axis62
Junichiro YAJIMA
 (The University of Tokyo, Japan)

15:30–16:00 **Coffee Break**

16:00–16:30 [D-4]
Regulatory Mechanisms of Cargo Transport Kinesins66
Richard J MCKENNEY
 (University of California, Davis, USA)

16:30–17:00 [D-5]
The Mechanism and Regulation of Microtubule Motors68
Ahmet YILDIZ
 (University of California, Berkeley, USA)

17:00–18:10 **Short Talk II**

18:15–19:30 **Dinner**

19:30–21:00 **Poster Session II (Even Number Posters)**

FRIDAY, JULY 7, 2023

9:00–9:30 **Short Talk III**

9:30–11:45 **Session E**
Cell Division
 Chairs: Ken'ya FURUTA
Marileen DOGTEROM

9:30–10:00 [E-1]
Mechanisms of dynein-mediated mitotic spindle assembly and maintenance in somatic human cells and vertebrate early embryos
Tomomi KIYOMITSU
 (Okinawa Institute of Science and Technology Graduate University, Japan)

10:00–10:15 **Coffee Break**

10:15–10:45 [E-2]
Multivalent interactions facilitate motor-dependent protein accumulation at growing microtubule plus-ends
Marileen DOGTEROM
 (Delft University of Technology, The Netherlands)

10:45–11:15 [E-3]

Programmable molecular transport achieved by engineering protein motors to move on DNA nanotubes

Ken'ya FURUTA

(National Institute of Information and Communications Technology, Japan)

11:15–11:20

Information of Naito Grants

11:20–11:30

Announcement of Award Recipients

11:30–11:35

Closing Remarks: Yasushi OKADA

11:35–13:00

Lunch