

## Program

Nov. 2 (Thu)

### 12:30-12:40 **Welcome speech**

Gen Sobue (Nagoya University)

### 12:40-14:30 **Molecular bases of brain protein aging (1)**

Moderator: Jaime Grutzendler, Osamu Onodera

12:40-13:20 Jaime Grutzendler (Yale School of Medicine)

Uncovering the cellular basis of dementia with in vivo optical imaging

13:20-13:50 Osamu Onodera (Niigata University)

How are neurovascular units maintained in aging? : from the study of hereditary cerebral small vessel disease

13:50-14:30 Benjamin Wolozin (Boston University)

Membrane-less organelles and neurodegeneration: The biological underpinnings of neurodegeneration

14:30-14:40 Coffee break & Poster viewing

### 14:40-16:30 **Molecular mechanisms of the propagation**

Moderator: James W. Ironside, Tetsuyuki Kitamoto

14:40-15:00 Hideki Mochizuki (Osaka University)

Structure and Function of  $\alpha$ -synuclein

15:00-15:20 Masato Hasegawa (Tokyo Metropolitan Institute of Medical Science)

$\alpha$ -Synuclein prions

15:20-15:40 Tetsuyuki Kitamoto (Tohoku University)

Prion transmissibility; Lessons given by the iatrogenic Creutzfeldt-Jakob diseases

15:40-16:20 James W. Ironside (National CJD Research and Surveillance Unit, University of Edinburgh)

Amyloid- $\beta$  accumulation in the brain and cerebral blood vessels of human growth hormone recipients in the UK

16:20-16:30 Coffee break & Poster viewing

### 16:30-17:30 **Brain Protein Aging and Development of therapy**

Moderator: Kazuhiko Yanai

16:30-17:00 Gen Sobue (Nagoya University)

Molecular mechanism and therapeutic approach for FUS-mediated FTLD/ALS

17:00-17:30 Hideyuki Okano (Keio University)

Investigation of human neurodegenerative disorders using iPSCs and genetically modified non-human primates

### 17:30-18:10 **Poster viewing**

### 18:10 **Information exchange meeting**

## Program

Nov. 3 (Fri)

9:00-9:30

### Visualization of molecular mechanism

Moderator: Masato Hasegawa

9:00-9:15

Kazuki Tainaka (Niigata University)

CUBIC: Whole-organ, whole-body imaging with single-cell resolution using chemical cocktails

9:15-9:30

Hiroko Bannai (JST PRESTO/RIKEN)

The dynamics of membrane molecules: Insights into synaptic function and neuropathological disease

9:30-10:40

### Keynote Lectures

Moderator: Michael J Strong, Yadong Huang, Gen Sobue

9:30-10:10

Yadong Huang (University of California, San Francisco)

ApoE4 disrupts hippocampal signatures of memory replay

10:10-10:40

Michael J Strong (Western University (ON, Canada))

Frontotemporal syndromes of ALS. Clinical and molecular insights

10:40-12:00

### Poster discussion and Lunch

12:00-13:30

### Molecular bases of brain protein aging (2)

Moderator: Nicholas M. Kanaan, Akihiko Takashima

12:00-12:30

Akihiko Takashima (Gakushuin University)

Function of tau in physiological and disease state

12:30-13:10

Nicholas M. Kanaan (Michigan State University)

Exploring recent insights into tau misfolding and neurotoxicity in tauopathies

13:10-13:30

Yoshitaka Nagai (Osaka University)

Regulatory role of TDP-43 as an RNA chaperone for RNA aggregation and repeat-associated translation in SCA31

13:30-13:45

Coffee break & Poster viewing

13:45-16:25

### Visualization of brain protein aging

Moderator: Mony J de Leon, Naruhiko Sahara

13:45-15:25

Mony J de Leon (NYU Medical Center)

The impaired clearance of CSF in Alzheimer Disease

15:25-15:55

Kazuhiko Yanai (Tohoku University)

Imaging protein misfolding and neuroinflammation in neurodegenerative diseases

15:55-16:25

Naruhiko Sahara (National Institute of Radiological Science)

In vivo visualisation of tau pathology, neurodegeneration and neuroinflammation for developing a diagnostic platform of tauopathy

16:25

### Closing remarks