[Day 1] December 1 (Sat.)

13:00-13:10 Introduction for Fujihara Foundation
13:10-13:15 Welcome Message
Speaker: Nobutaka Hirokawa
13:15-13:30 Opening Remarks
Speaker: Hidehiro Mizusawa

13:30-14:05
D1 Cerebellar Loops 1
"The Basal Ganglia and the Cerebellum: Nodes in an Integrated Network"
Speaker: Peter L. Strick
(Thomas Detre Professor & Chair of Neurobiology, Scientific Director,
University of Pittsburgh Brain Institute, University of Pittsburgh)

14:05-14:30
D2 Cerebellar Loops 2
"Roles of subcortical preparatory signals in self-timing"
Speaker: Masaki Tanaka
(Department of Physiology, Hokkaido University)

14:30-15:05
E1 Complex Spikes 1
"Learning from the past: a reverberation of past errors in the cerebellar climbing fiber signal"
Speaker: Peter Their
(Learning from the past: a reverberation of past errors in the cerebellar climbing fiber signal)

15:05-15:40 Coffee Break

15:40-16:15
E2 Complex Spikes 2
"Population coding in the cerebellum"
Speaker: Reza Shadmehr
(Biomedical Engineering, Johns Hopkins University)

16:15-16:40

A1 Evolution and Development of the Cerebellum 1

"Origin and evolution of the cerebellum"

Speaker: Yasunori Murakami

(Graduate School of Science and Engineering, Ehime University)

16:40-17:05

A2 Evolution and Development of the Cerebellum 2

"The cerebellum of ray-finned fishes: specific features and diversity"

Speaker: Naoyuki Yamamoto

(Laboratory of Fish Biology, Graduate School of Bioagricultural Sciences, Nagoya University)

17:05-17:30

A3 Evolution and Development of the Cerebellum 3

"Mechanisms underlying climbing fiber synapse elimination during postnatal cerebellar development"

Speaker: Masanobu Kano

(Department of Neurophysiology, Graduate School of Medicine, The University of Tokyo/International Research Center for Neurointelligence (WPI-IRCN), The University of Tokyo Institutes for Advanced Study (UTIAS), The University of Tokyo)

17:30-17:55

C1 Neurotransmission and Information Processing in the Cerebellum 1

"Computations in the rabbit's cerebellar flocculus"

Speaker: John I. Simpson

(Department Neuroscience & Physiology, NYU Medical School, New York

17:55-18:15

C2 Neurotransmission and Information Processing in the Cerebellum 2

"Input-output organization of posterior vermal and fastigial regions in relation to saccadic eye and head movements"

Speaker: Mayu Takahashi

(Department of Systems Neurophysiology, Tokyo Medical and Dental University)

[Day 2] December 2 (Sun.)

9:00-9:35

F1 Cerebellar Plasticity 1

"Delving more deeply into the details of cerebellar learning"

Speaker: Stephen G. Lisberger

(Department of Neurobiology, Duke University School of Medicine, Durham, NC, USA)

9:35-10:00

F2 Cerebellar Plasticity 2

"New approaches to old problems to understand cerebellar LTD/LTP"

Speaker: Michisuke Yuzaki

(Department of Physiology, Keio University School of Medicine, Tokyo, Japan)

10:00-10:25

F3 Cerebellar Plasticity 3

"Role of cerebellum in acquisition and consolidation of memory of motor learning"

Speaker: Soichi Nagao

(Laboratory for Integrative Brain Functions, Nozomi Hospital, Ina, Saitama, Japan)

10:35-11:00

G1 Models of Cerebellar Functions 1

"The cerebellum as a predictor in movement and cognition"

Speaker: R. Chris Miall

(Behavioural Brain Sciences, School of Psychology, University of Birmingham, Edgbaston, Birmingham, United Kingdom)

11:00-11:25

G2 Models of Cerebellar Functions 2

"Cerebellar role in predictive control of eye movement in fish and humans"

Speaker: Yutaka Hirata

(Neural Cybernetics Laboratory, Department. Robotics Science and Technology, Chubu University College of Engineering)

11:25-11:50
G3 Models of Cerebellar Functions 3
"Contribution of internal models on sensorimotor control"
Speaker: Hiroaki Gomi
(NTT Communication Science Labs)

11:50-13:20 Lunch/Poster Presentation

13:20-13:55
D3 Cerebellar Loops 3
"Neural substrates of cerebrocerebellar loop"
Speaker: Yoshikazu Shinoda
(Department of Systems Neurophysiology, Graduate School of Medicine, Tokyo Medical and Dental University)

13:55-14:30
H1 Cerebellar Disorders and Their Evaluation 1
"Systems neuroscience and clinical neurology of cerebellar cognition"
Speaker: Jeremy D. Schmahmann
(Professor of Neurology, Harvard Medical School
Founding Director, Ataxia Unit
Cognitive Behavioral Neurology Unit
Director, Laboratory for Neuroanatomy and Cerebellar Neurobiology
Department of Neurology, Massachusetts General Hospital and Harvard Medical School)

14:30-15:05
I1 Mechanisms and Models of SCD 1
"Targeting mutant ATXN2 to restore cerebellar function in the SCA2 mouse"
Speaker: Stefan Pulst
(Department of Neurology, University of Utah)

15:05-15:40 Coffee Break

15:40-16:15
E3 Complex Spikes 3

"Reward signalling in cerebellar cortex"
Speaker: Michael Häusser
(Professor of Neuroscience, University College London)

16:15-16:40
E4 Complex Spikes 4
"Error signals in the cerebral cortex, the red nucleus and the cerebellum that drive adaptation in reaching"
Speaker: Shigeru Kitazawa
(Graduate School of Frontier Biosciences, Osaka University
Graduate School of Medicine, Osaka University
Center for Information and Neural Networks (CiNet), Osaka University)

16:40-17:05
H2 Cerebellar Disorders and Their Evaluation 2
"The cerebellum and autism: From structure to function"
Speaker: Catherine J. Stoodley
(Associate Professor, Psychology
Director, Undergraduate Program in Neuroscience American University, USA)

17:05-17:30
I2 AM Mechanisms and Models of SCD 2
"In vitro models of cerebellar development and spinocerebellar degeneration utilizing human iPSCs"
Speaker: Keiko Muguruma
(Department iPS Cell Applied Medicine, Kansai Medical University/ RIKEN (BDR))

17:30-17:55
I3 Mechanisms and Models of SCD 3
"Genetic modifiers of SCA in mainland China"
Speaker: Hong Jiang
(Xiangya Hospital, Central South University)

17:55-18:20
C3 Neurotransmission and Information Processing in the Cerebellum 3
"Signals for motor control and action prediction in Purkinje cells"
Speaker: Javier F. Medina

(Department of Neuroscience, Baylor College of Medicine, Houston, TX, USA)

18:20-18:40

C4 Neurotransmission and Information Processing in the Cerebellum 4

"Neural mechanisms generating cerebellar output in the cerebro-cerebellar communication loop"

Speaker: Takahiro Ishikawa

(Movement Disorders Project, Tokyo Metropolitan Inst of Med Sci, Tokyo)

[Day 3] December 3

(Mon.)

9:00-9:35

B1 Anatomy, Connections and Neuroimaging of the Cerebellum 1

"Cerebellar Purkinje cell zones. Where and why."

Speaker: Jan Voogd

(Department of Neuroscience Erasmus mc Rotterdam, The Netherlands)

9:35-10:00

B2 Anatomy, Connections and Neuroimaging of the Cerebellum 2

"Structural magnetic resonance imaging (MRI) of the cerebellar nuclei in hereditary ataxias"

Speaker: Dagmar Timmann

(Department of Neurology, Essen University Hospital, University of Duisburg-Essen

10:00-10:25

B3 Anatomy, Connections and Neuroimaging of the Cerebellum 3

"The lobular and striped organization of the cerebellar hemisphere in relation to projection patterns of afferent and efferent axons in rodents, with a special focus on crus I"

Speaker: Izumi Sugihara

(Department of Systems Neurophysiology, Tokyo Medical and Dental University)

10:35-11:00

I3 Mechanisms and Models of SCD 4

"Mouse models of cerebellar ataxia using AAV-PHP.B, a capsid variant highly permeable to the blood brain barrier"

Speaker: Hirokazu Hirai

(Gunma University Graduate School of Medicine)

11:00-11:25

I5 Mechanisms and Models of SCD 5

"Developmental YAPdeltaC determines adult pathology of spinocerebellar ataxia type 1"

Speaker: Hitoshi Okazawa

(Department of Neuropathology, Tokyo Medical and Dental University)

11:25-11:50

I6 Mechanisms and Models of

SCD 6 Speaker: Christopher E.

Pearson

11:50-13:20 Lunch/Poster Presentation

13:20-13:55

E5 Complex Spikes 5

"Purkinje cell error and kinematic representations in cerebellar-dependent motor behaviors"

Speaker: Timothy J. Ebner

(Department of Neuroscience, University of Minnesota)

13:55-14:20

E6 Complex Spikes 6

"Distributed population coding by cerebellar complex spikes"

Speaker: Takayuki Michikawa

(Biotechnological Optics Research Team, RIKEN Center for Advanced Photonics, 2-1 Hirosawa, Wako, Saitama 351-0198 Japan)

14:20-14:45

H3 Cerebellar Disorders and Their

Evaluation 3 Speaker: Hidehiro Mizusawa

(President, National Center of Neurology and Psychiatry)

14:45-15:10

H4 Cerebellar Disorders and Their Evaluation 4

"Single strand DNA break repair and ataxias:

lesson from Ataxia with oculomotor apraxia 1 / Early-onset ataxia with ocular motor apraxia and hypoalbuminemia (AOA1/EAOH)"

Speaker: Osamu Onodera

(Department of Neurology, Clinical Neuroscience Branch, Brain Research Institute, Niigata University, Japan)

15:40-16:05

F4 Cerebellar Plasticity 4

"Contribution of excitatory and inhibitory synaptic plasticity in a Purkinje neuron to oculomotor learning paradigms"

Speaker: Tomoo Hirano

(Department of Biophysics, Graduate School of Science, Kyoto University)

16:05-16:30

F5 Cerebellar Plasticity 5

"Temporal memory in cerebellar Purkinje cells"

Speaker: Germund Hesslow

(Associative Learning Group, Department of Experimental Medical Science)

16:30-16:55

H5 Cerebellar Disorders and Their Evaluation 5

"Essential Tremor and the Cerebellum"

Speaker: Sheng-Han Kuo

(Department of Neurology, Columbia University)

16:55-17:20

H6 Cerebellar Disorders and Their Evaluation 6

"Cerebellar reserve and immune-mediated cerebellar ataxias"

Speaker: Hiroshi Mitoma

(Department of Medical Education, Tokyo Medical University, Japan)

17:20-17:45

G4 Models of Cerebellar Functions 4

"Neural evidence of the cerebellum as a state predictor"

Speaker: Hirokazu Tanaka

17:45-18:10

G5 Models of Cerebellar Functions 5

"Computer simulation of a monkey-scale cerebellum with 8 billion spiking neurons in realtime and its applications"

Speaker: Tadashi Yamazaki

(Graduate School of Informatics and Engineering, The University of Electro-Communications, Tokyo, Japan)

[Day 4] December 4 (Tue.)

9:00-9:35

D4 Cerebellar Loops 4

"How the cerebellum can help us the way we think"

Speaker: Chris I. De Zeeuw

(Netherlands Institute of Neuroscience, Royal Dutch Academy of Arts and Sciences)

9:35-10:00

D5 Cerebellar Loops 5

"Involvement of cerebello-cerebral functional networks and cognitive decline in multiple system atrophy"

Speaker: Gen Sobue

(Nagoya University Graduate School of Medicine, Brain and Mind Research Center)

10:00-10:25

D6 Cerebellar Loops 6

"The three cornerstones of cerebellar ataxia"

Speaker: Mario Manto

(Service des Neurosciences, Université de Mons, Belgium.
Service de Neurologie, CHU-Charleroi, Belgium)

10:35-11:00

J1 New Treatments for SCD 1

"Molecular-targeted therapy for polyglutamine diseases."

Speaker: Yoshitaka Nagai

(Department of Neurotherapeutics, Osaka University Graduate School of Medicine)

11:00-11:25

J2 New Treatments for SCD 2

"Introduction to a clinical trial with mesenchymal stem cell transplantation for SCA"

Speaker: Bing-Wen Soong

(Department of Neurology, Taipei Medical University-Shuang-Ho Hospital, Taipei, Taiwan)

11:25-11:50

J3 New Treatments for SCD 3

"Mesenchymal stem cells as a potential therapeutic candidate of multiple system atrophy-cerebellar type"

Speaker: Phil Hyu Lee

(Department of Neurology, Yonsei University College of Medicine, Seoul, Korea
Severance Biomedical Science Institute, Yonsei University, Seoul, Korea)

11:50-13:20 Lunch

13:20-13:45

F6 Cerebellar Plasticity 6

"Heterogeneity of cerebellar plasticity rules"

Speaker: Jennifer L Raymond

(Department of Neurobiology, Stanford School of Medicine)

13:45-14:10

F7 Cerebellar Plasticity 7

"Mechanisms of long-term synaptic plasticity in the cerebellar Purkinje cell"

Speaker: Kazuhiko Yamaguchi

(Lab. for Behavioral Genetics, CBS RIKEN)

14:10-:14:35

F8 Cerebellar Plasticity 8

"Perineuronal nets in the deep cerebellar nuclei regulate GABAergic transmission and delay eyeblink conditioning"

Speaker: Moritoshi Hirono

(Graduate School of Brain Science, Doshisha University, Kyoto, Japan)

14:35-15:00

H7 Cerebellar Disorders and Their Evaluation 7

"Molecular pathogenesis of SCA6 and SCA31"

Speaker: Kinya Ishikawa

(Department of Neurology and Neurological Science,
Department of Personalized Genomic Medicine for Health,
Tokyo Medical and Dental University)

15:00-15:20

H8 Cerebellar Disorders and Their Evaluation 8

"Tandem Internal Models Fulfill Precise Motor Control"

Speaker: Takeru Honda

(Motor Disorders Project, Tokyo Metropolitan Institute of Medical Science
Laboratory for Behavioral Genetics, RIKEN Center for Brain Science
Department of Advanced Neuroimaging, IBIC, National Center of Neurology and Psychiatry)

15:20-15:45

H9 Cerebellar Disorders and Their Evaluation 9

"Evaluation of predictive control in cerebellar patients"

Speaker: Shinji Kakei

(Tokyo Metropolitan Institute of Medical Science, Tokyo Japan.)

15:40-16:10

General Discussion & Closing Remarks