

Form 3-3
Japan-U.S. Brain Research Cooperation Program
Information Exchange Seminar Program FY2022: Report

Research Field: neuro-glio-vascular unit

1. Seminar title:

US-Japan joint workshop on the Neurovascular Unit

2. Dates, from/to (mm/dd/yyyy)

From 01/06/2023 to 01/09/2023

3. Location:

Keio University Mita Campus, North Building (Conference Hall #10), 2-15-45 Mita,
Minato-ku, Tokyo, Japan

4. Coordinators

Japanese Coordinator

- Jin Nakahara, Professor of Neurology at Keio University School of Medicine
- Kazuto Masamoto, Director and Professor of Center for Neuroscience and Biomedical Engineering, Faculty of Informatics and Engineering at the University of Electro-Communications
- Yoshikane Izawa, Associate Professor of Neurology at Keio University School of Medicine

U.S. Coordinator

- Ken Arai, Associate Professor of Radiology at Massachusetts General Hospital, Harvard Medical School
- Elga Esposito, Instructor of Radiology at Massachusetts General Hospital, Harvard Medical School

5. Participants:

Japan: Invited participants 17 people Others 36 people

(Please give names, titles and affiliations of invited participants)

- Dr. Masafumi Ihara
Director, Department of Neurology, National Cerebral and Cardiovascular Center (NCVC)

- Dr. Michisuke Yuzaki
Professor, Department of Physiology, Keio University School of Medicine
- Dr. Satoshi Saito
Physician, Department of Neurology, National Cerebral and Cardiovascular Center
- Dr. Yu Hayashi
Professor, Department of Biological Sciences, Graduate School of Science, the University of Tokyo
- Dr. Toshiaki Taoka
Professor, Department of Innovative Biomedical Visualization (iBMV), Graduate School of Medicine, Nagoya University
- Dr. Kazuhiro Sohya
Associate Professor, Division of Physiology, Faculty of Medicine, Saga University
- Dr. Hiroaki Wake
Professor, Department of Anatomy and Molecular Cell Biology, Nagoya University Graduate School of Medicine
- Dr. Schuichi Koizumi
Professor, Department of Neuropharmacology, Interdisciplinary Graduate School of Medicine, University of Yamanashi
- Dr. Shinichi Takahashi
Professor, Saitama Medical University International Medical Center, Neurology and Stroke, Keio University School of Medicine, Physiology
- Dr. Yorito Hattori
Chief Physician, Department of Neurology, National Cerebral and Cardiovascular Center
- Dr. Kenji Tanaka
Professor, Advanced Medical Research Institute, Keio University School of Medicine
- Dr. Laarni Grace Corales
Doctoral Course in Medical Sciences, Tohoku University
- Dr. Shinobu Kitazume
Professor, Department of Clinical Laboratory Sciences, School of Health Sciences, Fukushima Medical University
- Dr. Takakuni Maki
Lecturer, Department of Neurology, Kyoto University Graduate School of Medicine
- Dr. Kazunobu Sawamoto
Professor, Institute of Brain Science, Department of Developmental and Regenerative Neurobiology, Graduate School of Medical Science, Nagoya City University
- Dr. Akihiko Taguchi

Professor, Department of regenerative medicine research, Institute of Biomedical Research and Innovation at Kobe

- Dr. Osamu Onodera
Professor, Department of Neurology, Brain Research Institute (BRI), Niigata University

U.S.: Invited participants 6 people Others 2 people

(Please give names, titles and affiliations of invited participants)

- Eng H. Lo
Director of Neuroprotection Research Laboratories at Massachusetts General Hospital and Professor of Radiology and Neuroscience at Harvard Medical School, Boston.
- Cesar V. Borlongan
Professor, Vice-Chairman for Research, and Director of USF Morsani College of Medicine's Center of Excellence for Aging and Brain Repair, University of South Florida
- Elga Esposito
Instructor, Departments of Neurology and Radiology, Massachusetts General Hospital, Harvard Medical School
- Jeffrey J. Iliff
Associate Director for Research, VISN 20 Mental Illness Research, Education and Clinical Center (MIRECC), VA Puget Sound Health Care System, Professor of Psychiatry and Behavioral Science, Professor of Neurology, University of Washington School of Medicine
- Jialing Liu
Professor of Neurological Surgery, Principal Investigator, Brain and Spinal Injury Center (BASIC) and the Cerebrovascular Research Program, UCSF Neurosurgery (112C)
- Ken Arai
Associate Professor, Departments of Neurology and Radiology, Massachusetts General Hospital, Harvard Medical School

6. Seminar Outline and Significance:

We organized a collaborative workshop focusing on the research theme of the Neurovascular Unit. This workshop was held on January 6, ~ January 9, 2023, and there were three keynote lectures, six sessions, one-panel discussion, and more than ten poster presentations by young investigators. Each session had U.S. and Japanese chairs/presenters and included at least one female researcher. The organizing committee members also included both U.S. and Japanese scientists.

Our joint workshop was consistent with the objectives of the U.S.-Japan Science and Technology Cooperation Program in three ways; (i) this workshop was intended to promote new exchanges between U.S. and Japanese researchers in neurovascular unit research. (ii) we expect that new collaborative research will be initiated from this exchange, and (iii) our workshop promoted the growth of young researchers responsible for future Neurovascular Unit research.

Finally, and importantly, because the cell-cell interactions within the Neurovascular Unit play multiple roles in brain function, accelerating research on the Neurovascular Unit will further the mission of NIPS and NINDS, which is to seek fundamental knowledge about the brain and nervous system and use that knowledge to reduce the burden of neurological disease for all people.

7. Seminar Results and Future Implications:

Based on the presentations and discussions at the workshop, the organizing committee members are preparing a workshop report for publication in a research journal. In addition, the Japanese organizing committee members (Drs. Nakahara, Masamoto, and Izawa) serve as "Japanese Neurovascular Unit Study Group" committee members. We have held annual meetings to discuss research on the neurovascular unit since the early 2000s. Ken Arai, the U.S. Coordinator, joined the committee members in 2019 and will continue to serve as the "Japanese Neurovascular Unit Study Group" committee member. In addition, the U.S. presenters at this workshop shared their contact information with the Japanese participants so that the Japanese participants could contact the U.S. presenters to propose a new collaboration.

8. Other (implementation issues, feedback, etc.)

We thank you for all your support in organizing this workshop.