organisms, from corals and sea urchins to amphibians and bony fishes, in the fields of developmental biology, evolutionary biology, genomics, neurophysiology, and immunology.

A total of 100 people from Japan, Taiwan, China, Indonesia, India, Singapore, Germany, Poland, Switzerland, the Netherlands, Ukraine, the United States, Canada, and Argentina registered to this webinar. An advantage of the online format was that the number of registered participants had expanded worldwide. The webinar itself saw roughly 50–60 people consistently staying online to participate in all sessions.

In the post-event questionnaire, 97% of respondents answered that the webinar content was interesting, and many gave high marks to the lecture content and management. During this webinar, we attempted to foster realtime dialogue via Slack in the form of a typed chat format enabling week-long question-and-answer sessions to encourage our participants to discuss the issues. 86% of participants felt that Slack was easy to use, while others preferred direct discussions with all lecturers and participants. In addition, there were useful comments regarding the timing of breaks, which will be helpful in organizing future webinars. We would like to organize scientific events in this format, not only because travel bans remain in effect, but also because this format attracts participants from more diverse countries.

#### Webinar information:

#### Organizers

Kiyoshi Naruse (NIBB / NBRP-medaka / IBBP) Ai Shinomiya (ExCELLS / NIBB) Yasuhiro Kamei (NIBB) Chen-Hui Chen (ICOB, Academia Sinica, Taiwan) Sheng-Ping Hwang (ICOB, Academia Sinica, Taiwan) Date: March 5, 2021

### Collaborative Activities with Joint Usage/Research Center

# NIBB–Institute of Low Temperature Science (ILTS), Hokkaido University

NIBB and ILTS are conducting collaborative research based on the agreement of cooperation signed in 2019.

### Accomplishment of the NIBB Priority Collaborative Research Project

Project Title:

Molecular and physiological mechanisms for understanding mammalian hibernation and their comparative analysis among species

Co-Principal Investigators: Prof. Yoshifumi Yamaguchi (ILTS) Prof. Toshihiko Fujimori (NIBB) Prof. Shuji Shigenobu (NIBB)

#### NIBB–Institute of Molecular Embryology and Genetics (IMEG), Kumamoto University

## Agreement of Cooperation with IMEG, Kumamoto University

NIBB and IMEG at Kumamoto University have signed an agreement of cooperation, which is deemed effective from May 26, 2020. To prevent the further spread of COVID-19 infection, the signing ceremony was held in a remote capacity via an online connection between Kumamoto and Okazaki.



Dr. Kiyokazu Agata, the Director General of NIBB, and Dr. Hitoshi Niwa, the Director of IMEG, signing the agreement.

This agreement will promote research and education efforts at these two top research institutes, leading the way in advanced research of the highest international standards through mutual collaboration in the fields of developmental medicine and basic biology. The results of the collaborative activities will be used for research on both sides. In addition, the agreement aims to strengthen the support infrastructure for joint usage and joint research nationwide and to revitalize international academic exchange.

Young researchers and graduate students in NIBB and IMEG have organized regular joint mini-meetings focused on developmental biology.

## NIBB–Institute of Advanced Medical Sciences (IAMS), Tokushima University

## Agreement of Cooperation with IAMS, Tokushima University

NIBB and IAMS at Tokushima University have signed an agreement of cooperation, which is deemed effective from November 26, 2020. To prevent the further spread of COVID-19 infection, the signing ceremony was held remotely via an online connection between Tokushima and Okazaki.



Dr. Kiyokazu Agata, the Director General of NIBB, and Dr. Toyomasa Katagiri, the Director of IAMS, signing the agreement.

The aims of this agreement are promotion of mutual collaborative activities in the fields of research related to medical science and basic biology and leading the way in advanced research of the highest international standards. This will promote research and education efforts at these two top research institutes to strengthen the support infrastructure for joint usage and joint research nationwide and to revitalize international academic exchange.

NIBB researchers and IAMS researchers collaborate on several projects using bioimaging and genome editing methods.

### The 14<sup>th</sup> NIBB Bioimaging Forum "A New Aspect of Bioimaging by Non-optical Modality"

Organizing Committee: Shinya Komoto, Kagayaki Kato, Joe Sakamoto Supervisors: Yasuhiro Kamei, Kiyoshi Tatematsu

#### November 6 (Fri), 2020

The 14<sup>th</sup> NIBB Bioimaging Forum supported by Advanced Bioimaging Support (ABiS) and entitled "A New Aspect of Bioimaging by Non-optical Modality" was held on November 6, 2020.

NIBB Bioimaging Forums have previously focused on optical observation techniques such as super-resolution microscopy using adaptive optics, and the imaging of biophysical properties. Therefore, during the 14<sup>th</sup> version of this event, we focused on Computed Tomography (CT) especially through the utilization of X-ray, synchrotron radiation and magnetic resonance, as a non-optical observation method instead. CT is a powerful tool for the visualization of the three-dimensional structure of samples without destroying them. Nevertheless, it is difficult for newcomers to engage in research due to the embryonic nature of the existing CT user community, and the difficulty of accessing devices. Therefore, we held this forum to provide opportunities for communication with both existing and potential CT users, as well as to share information.

When people hear the term CT, many imagine machines in hospitals that medically diagnose humans. However, CT is not used only in the medical field, but also in various non-medical fields, such as industry, biology and so on. Therefore, we invited lecturers from both academia and company. Lecture topics were diverse and included areas such as sample preparation, observation methods, recent trends in CT device, and applications to academic research.

Although the forum was held on-site in 2019, it was postponed because COVID-19 outbreak. The organizing committee subsequently decided to merge the 2019 and 2020 versions of the event and hold the forum online using the Zoom online meeting platform. To organize and manage the form both quickly and effectively, the three organizers gathered at NIBB to live stream the forum. Communication difficulties were experienced by some participants, among several other things that needed to be improved. In contrast, lecturers who could not attend on the day of the forum took advantage of the format and gave their presentation by prerecording it and streaming it on the day of the event.

In closing, I would like to express my appreciate to all participants and organizers, and hope that the forum was helpful for the former's research,

(Joe Sakamoto)