

The 63rd NIBB Conference “Environment to Bioresponse”

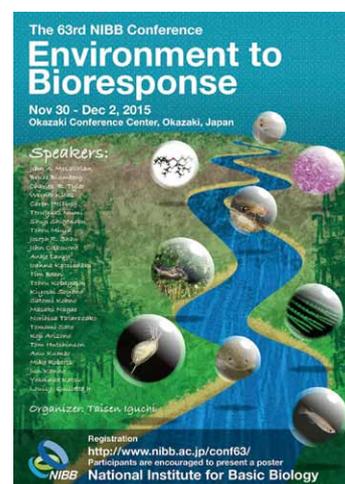
Organizer: Taisen Iguchi (NIBB, Japan)

November 30 (Mon) - December 2 (Wed), 2015

This symposium, with researchers that have been active in the international forefront, was intended to facilitate deep discussions on the connection between the “environment” and the “organism”. In addition to basic biological research on environmental response strategies of organisms, from which comes the molecular basis of evolution leading to the establishment of a variety of species, we discussed various issues regarding the effects of environmental chemicals to humans and wildlife, and the mechanisms of the effects using model species. In addition to mice and humans, a variety of animal species such as beetles, ants, aphids, *Daphnia*, medaka, zebrafish, roach, *Xenopus*, and alligators have been used. We discussed the latest findings concerning the molecular mechanisms of bioresponses such as phenotypic plasticity, metamorphosis, defects of sexual differentiation, and reduction of reproduction, which are caused by environmental factors, hormones, and chemical substances. 15 years ago, I organized The 45th NIBB Conference in order to discuss how to analyze the effects caused by hormone-like substances being released into the environment, on fish, amphibians, reptiles, and mammals, including humans. The progress made during the 15-years of research was an eye-opener, and our basic understanding for the elucidation of molecular evolution and the function of hormone receptors, the elucidation of sex differentiation mechanisms in various animal species including alligators, *Daphnia*, and aphids, and the decoding of the genome sequence of various

animal species has been monumentally advanced. Moreover, the progress of this research has revealed the necessity for promoting research focusing on the epigenetic changes induced by the chemicals and the environment, the mechanism of action of “Obesogen” induced obesity, and the trans-generational and composite effects of these chemicals. This symposium was an opportunity to broadly discuss the impact and bioresponses to environmental factors from a wide range of research fields including perspectives from basic biology and bioinformatics.

(Taisen Iguchi)



Speakers

Bean, Tim P. (Cefas), Blumberg, Bruce (Univ. of California), Colbourne, John (Univ. of Birmingham), Guillette, Louis Jr. (Medical Univ. of South Carolina), Helbing, Caren C. (Univ. of Victoria), Katsiadaki, Ioanna (Cefas), Kloas, Werner (IGB), Kohno, Satomi (Medical Univ. of South Carolina), Lange, Anke (Univ. of Exeter), McLachlan, John A. (Tulane Univ.), Roberts, Mike (Defra), Shaw, Joseph R. (Indiana Univ.), Tyler, Charles R. (Univ. of Exeter), Arizono, Koji (Pref. Univ. of Kumamoto), Horiguchi, Toshihiro (NIES), Iguchi, Taisen (NIBB), Kanno, Jun (NIHS), Katsu, Yoshinao (Hokkaido Univ.), Kobayashi, Tohru (Univ. of Shizuoka), Miura, Toru (Hokkaido Univ.), Nagae, Masaki (Nagasaki Univ.), Niimi, Teruyuki (NIBB), Sato, Tomomi (Yokohama City Univ.), Shigenobu, Shuji (NIBB), Soyano, Kiyoshi (Nagasaki Univ.), Tatarazako, Norihisa (NIES)