RIKEN-Picower (MIT) Neuroscience Symposium hears about exciting "New Frontiers in Brain Science"

Gathering researchers on the cutting edge of brain science, the RIKEN-Picower (MIT) Neuroscience Symposium was held Nov. 8-9 at the Massachusetts Institute of Technology in Cambridge, Massachusetts. The symposium, the sixth such event jointly held by the RIKEN Brain Science Institute (BSI) and the Picower Institute of Learning and Memory at MIT, saw attendance around 350 people attending lectures on the theme "New Frontiers in Brain Science."

The symposium included four sessions, on "Systems Neuroscience," "Development and Cognition," "Learning and Memory," and "Molecular and Cellular Neuroscience," in which leading research results in each respective field were introduced. In particular, a new transgenic technology that Susumu Tonegawa and his team at the Picower Institute of Learning and Memory at MIT developed in order to research the mechanism of memory attracted the interest of the audience; their success in isolating synaptic pathways in vivo suggest that this technology, dubbed the DICE-K method, could find widespread application in neurological research. Mineko Kengaku of the Laboratory for Neural Cell Polarity discussed her team's work on cellular and molecular dynamics of nuclear movement in neuronal migration, and Yoshihiro Yoshihara from the Laboratory for the Neurobiology of Synapse talked about the molecular machinery of dendritic filopodia. BSI special adviser Masao Ito lectured on the 10-year history of BSI and its future outlook.

In addition, there was a poster session in which young researchers, including some from BSI, presented their research results.

The symposium was an excellent introduction to the research activities of BSI, as well as providing a clear indication of the size and extent of the research fields covered by the institute.

International symposium on advanced use of African resources in plant science

The RIKEN Plant Science Center in Yokohama hosted an international symposium on November 20 that focused on the use of African plant resources. The symposium was held under the auspices of the Japan Society for the Promotion of Science and the Japan Science and Technology Agency.

The theme of the symposium was scientific research on plants directed toward the effective utilization of African resources. The three sessions of the symposium focused on using medicinal plants in South Africa to combat infectious diseases such as malaria; effective utilization of wild-plant genetic resources from the Kalahari desert in Botswana; and in Sudan, management of water resources of the Nile river and control of parasitic striga weeds, so as to realize sustainable food production in that country.

Toshiya Muranaka of the RIKEN Plant Science Center and Marion Meyer of the University of Pretoria gave a presentation on ways of bringing technological resources to bear in strategic international technology cooperation to add value to indigenous plants in South Africa and aid combat against infectious diseases.

Akiho Yokota from the Nara Institute of Advanced Science and Technology (NAIST) and Seja Maphanyane of Botswana's Ministry of Agriculture spoke on the establishment of a high-level infrastructure to enhance the use of wild plants of the Kalahari desert, making use of post-genomic research techniques.

Kobe University's Yukihiro Sugimoto and Abdelbagi Mukhtar Ali Ghanim of Sudan's Agricultural Research Corporation presented a lecture on ways to increase food production in Sudan, and water resource management and pest control of the parasitic weed Striga, a topic of research that is currently being expanded.

The participants also discussed preparations for the Fourth Tokyo International Conference on African Development (TICAD IV) in May 2008 in Yokohama.

Honors to physicists at RIKEN

This October, Akira Tonomura and Franco Nori were elected Fellows of the American Association for the Advancement of Science (AAAS). Tonomura is presently a group director at the RIKEN Frontier Research System (FRS), and Franco Nori is a laboratory head at FRS and also a professor at the University of Michigan. Currently, they are the only AAAS Fellows based in Japan, within the Physics section.

Tonomura was selected as a member of the Japan Academy this month. He was chosen in recognition of his role in the development of electron microscopes using coherent field-emission electron beams. The Academy has three other RIKEN researchers amongst its members, including RIKEN's President, Ryoji Noyori.