Japan Science & Technology Newsletter **July, 2012**

The Embassy of Japan presents the *Japan Science & Technology Newsletter*, a quarterly report on Japanese science and innovation highlights and news.

1. Japan-Canada S&T Cooperation

1.1 Japan-Canada Second Stem Cell Workshop

The Second Japan-Canada Stem Cell Workshop was hosted in Yokohama, Japan on June 16th at the PACIFICO Yokohama, during the 10th Annual Meeting of the International Society for Stem Cell Research (ISSCR). Coordinated by Dr. Toshio Suda, Professor of Medicine at Keio University, more than 40 participants representing both countries attended the Workshop which featured presentations by three researchers each from Japan and Canada. The 19 Canadian and 22 Japanese leading researchers who attended participated in active, in-depth discussion on possible stem cell research collaborations during the event. The Workshop provided researchers with many opportunities to seek research partners and review collaborative research between Canadian and Japanese scientists, as well as exchange and build research plans directly with their counterparts. (June 16)

1.2 Nano-life workshop hosted by MANA and the University of Montreal

The International Center for Materials Nanoarchitectonics (MANA) and the University of Montreal held a workshop on Nano-life on July 19 at the University's campus in Montreal. The workshop was agreed upon in a Memoranum of Understanding signed by MANA, part of the National Institute for Material Science (NIMS) of Japan, and the University of Montreal in 2011, with the aims of promoting cooperative research and the exchange of researchers for nano-life research. (July 19)

1.3 Embassy of Japan's Science and Technology Webpage now available

The Science and Technology Webpage on the website of the Embassy of Japan in Canada has launched and is now available to the public. The Webpage which aims to promote Japanese and Canadian science, technology and innovation cooperation, will provide information on collaborative S&T efforts between the two countries. As Japan and Canada's bilateral cooperative partnership encompasses a variety of fields including life sciences, nanotechnology, aerospace technology, and environment and energy, and involves a wide range of organizations such as universities, national research institutes and private companies, the Embassy of Japan in Canada will continue to promote bilateral cooperation in science, technology and innovation as an important pillar of the friendly relations between the two countries.
The S&T Homepage can be viewed here: http://www.ca.emb-japan.go.jp/canada_e/Bilateral_Relations/Japan-Canada_science_technology_innovation_cooperation.html

2. Japanese S&T

2.1 Successful launch of the satellites *SHIZUKU* and Korea's *Arirang-3*aboard the Japanese rocket H-2A

The H-2A rocket No. 21 (H-2A F21) was launched by the Japan Aerospace Exploration Agency (JAXA) and Mitsubishi Heavy Industries, Ltd.(MHI), carrying the Global Change Observation Mission 1st-Water *"SHIZUKU"* (GCOM-W1) and the Korea Multipurpose Satellite-3 *"Arirang-3"* (KOMPSAT-3) and two small satellite passengers from the Tanegashima Space Center, on May 18. The *SHIZUKU* was developed by JAXA for continuous global-scale observations of geophysical parameters to clarify global climate change and water circulation changes and has the world's largest revolving space antenna; the Advanced Microwave Scanning Radiometer 2 (AMSR2), capable of observing radiometers. The *Arirang-3* was developed by the Korea Aerospace Research Institute to meet Korean satellite demand for high-resolution images needed for Geographical Information Systems and other environmental, agricultural and oceanographic monitoring applications. H-2A successful launch so far showcases the ability to successfully launch foreign satellites into space, and displays the versatility of Japanese rocket technology. (May 18)

2.2 Japanese Astronaut Akihiko Hoshide reaches the ISS aboard the Soyuz Spacecraft

Flight Engineer Akihiko Hoshide was launched into space aboard the Russian Federal Space Agency's Soyuz spacecraft 31S/TMA-05M, from the Baikonur Cosmodrome, Kazakhstan on July 15, and docked with the International Space Station on July 17. Astronaut Hoshide will spend about four months conducting scientific experiments, system maintenance, and extravehicular activity, including the connecting of the HTV3 transfer vehicle to the ISS. He previously supported the development of the Japanese Experiment Module *"Kibo"*, and participated in the STS-124 Discovery flight to the ISS in 2008. (July 15)

2.3 HTV3 successfully launches and docks with the ISS to deliver supplies and hardware

The cargo transfer vehicle HTV3, named *KOUNOTORI3*, was successfully launched on the H-2B rocket No. 3 by the Japan Aerospace Exploration Agency (JAXA) on July 21st, from the Tanegashima Space Center. The unmanned HTV3 carried almost 4 tons of supplies, food and experimental hardware. The *KOUNOTORI3* smoothly berthed with the International Space Station on July 28 with the assistance of Expedition 32 Flight Engineers including Akihiko Hoshide of JAXA, using the Canadarm2. (July 28)

2.4 K computer completes operational testing

The operational testing of the K computer was completed on June 29th, meeting the testing deadline set by Fujitsu and RIKEN, who jointly developed the K computer working under the Ministry of Education, Culture, Sports, Science and Technology's (MEXT) high-performance computing infrastructure (HPCI) initiative. The K computer is designed for high computing performance to support a broad range of applications, such as the early development of next-generation semiconductor materials, pharmaceutical applications, and the simulation of the seismic wave propagation, strong motion, and tsunamis to predict their effects, as well as high-resolution atmospheric circulation models for detailed predictions of weather phenomena. The general-purpose supercomputer will now be available for limited operations as it undergoes operational environment settings, adjustments, and user registration. Full scale operations for shared use are expected to commence at the end of September. (July 2)
http://www.riken.jp/engn/r-world/info/info/2012/120702/index.html

Related Links
Japan Science and Technology Agency http://www.jst.go.jp/EN/
Science Links Japan http://sciencelinks.jp/
Japan Aerospace Exploration Agency http://www.jaxa.jp/index_e.html