

## Second Workshop of AIST and DBT of India

The 2<sup>nd</sup> workshop, based on the comprehensive memorandum of understanding signed with the Department of Biotechnology (DBT) of the Ministry of Science and Technology of the Government of India, was held on November 25 and 26, 2008, in Hyderabad, India. Over 50 people participated in the symposium held on November 25. Researches of both countries were presented in the three fields of glycoengineering, cell engineering, and bioinformatics and there was much interaction amongst researchers.

After the 1<sup>st</sup> workshop held in January, 2008, DBT has been publicly seeking institutes which would cooperate in bioinformatics based on the collaborative research themes presented by AIST, and the selection progress was reported at the bilateral meeting held on November 26. In the future, after the final selection based on detailed recommendations, individual collaborative research will begin.

Concerning collaborative research in glycoengineering

and cell engineering, there was much discussion, and it was agreed that collaborative project plans will be promptly presented by AIST to DBT, and collaborative research will be advanced. In the future, projects with specific research institutes of India will be recommended and collaborative research will be carried out.



Lecture by Dr. Kazuhiko Fukui, Leader of Molecular Function Team, Computational Biology Research Center, AIST

## CNRS-AIST Symposium in Celebration of 150 Years of Japan-France Relations

Presently, along with the development of industry, various problems such as deterioration of global environment including global warming, and depletion of natural resources have arisen. Generation of innovation is necessary to solve these problems in order for human beings to maintain sustainable development. To promptly accelerate innovation, an active open innovation promotion based on international collaboration of industry-academia is essential, instead of efforts in closed environments. With this awareness, AIST and National Center for Scientific Research (CNRS) of France co-hosted a symposium titled “For Science-Industry Cooperation toward Sustainable Development” on December 1, 2008 at Yasuda Auditorium, the University of Tokyo, as part of events celebrating the 150 years of Japan-France relations. This symposium was based on a proposal of Dr. Catherine Bréchnignac, President of CNRS, with which AIST has actively

fostered international collaboration from the past.

There were over 500 participants from businesses, public research institutes and universities. Speakers from the French side were: Mr. Carlos Ghosn, President of Renault Group and President and CEO of Nissan; Dr. Catherine Bréchnignac, President of CNRS; Dr. François Guinot, President of Academy of Technology of France; Prof. Jean-Charles Pomerol, President of Pierre and Marie Curie University (Paris 6); and Prof. Benoît Legait, Director of MINES ParisTech. From the Japanese side were: Mr. Toshinori Kobayashi, Director of Industrial Science and Technology Policy Division, Industrial Science and Technology Policy and Environment Bureau (METI); Prof. Masuo Aizawa, Executive Member of the Council for Science and Technology Policy, Cabinet Office; Prof. Hiroshi Komiyama, then President of the University of Tokyo; Mr. Shoei Utsuda, Vice Chairman of Nippon Keidanren (Japan Business Federation); and Dr. Hiroyuki Yoshikawa, then President of AIST.

Presented here are the lecture summaries according to the order they were given.

Director Toshinori Kobayashi of METI said that, we need to build a robust society in this age of financial crisis and rapid change of economy, and there is a greater necessity to promote innovation. Moreover, an important issue is the scientific technology to countermeasure worldwide problems of global warming. Although collaborations have been strengthened among science and technology communities of both France and Japan, he expressed expectations for such



Symposium hall

representative public research institutes as AIST and CNRS to cooperate in building an international research network. He expressed hopes that in doing so, the two organizations will cooperate over a wide range of fields, contribute to the development of scientific technology of the entire world, and take initiative toward solving the problems of global scale and helping the dampened growth of the world economy.

As the next speaker, then AIST President Yoshikawa gave a lecture on “Full Research at AIST”. He described, from the perspective of researchers on site, the concept and methods to bring basic research results into industry and to efficiently benefit society with the fruits of its research.

CNRS President Bréchnignac talked on the topic of “Networking Research: the Role of CNRS”. With the revisions of relevant laws concerning science and technology in France (establishment of the law related to Liberties and Responsibilities of Universities in 2007), CNRS needed to change its organization to do cooperative research on equal footing with universities in France. The previous CNRS system of 6 research departments plus 2 institutes was reorganized to a new system with institutes of 9 different fields. CNRS is now given a coordinating function as well as its original operating function. Concerning international networks especially with Asia, the networks with AIST and other universities including the University of Tokyo were presented.

The talk of Renault President Ghosn was given in a form of dialogue with CNRS President Bréchnignac with a title, “Modify the Paysage: Zero Emission Vehicles”. In the auto industry, fuel cell cars and electric cars will become mainstream as means of transportation in the future. In order

to further popularize these types of vehicles, it is important not only to strengthen cooperation between universities and industry but also to take comprehensive measures for taxes (consumer preferential taxation) and finance. There was a question-and-answer session after the talk and there was active direct dialogue between President Ghosn and the participants concerning the company’s approach to innovative vehicle development.

Then President Komiyama talked on the topic of “University as a Driving Engine for Innovation ~ toward Sustainable Society~” and said that energy with high efficiency such as from photovoltaic power generation should be sought as energy of the future. He mentioned, as an example, 80 % of energy use was successfully reduced at his home with photovoltaic generation, and that a project to reduce energy consumption was started at the University of Tokyo campuses. Positive activities of the University were presented, including the G8 University Summit before the G8 Hokkaido Toyako Summit last year and the proposal of “a network of networks (NNs)”.

President Pomerol gave a talk on “CNRS-University Relationships”. He gave an overview of the University of Paris 6 and explained autonomous university management based on the revision of laws in France.

Director Legait gave a talk on “The Relations of ParisTech, with CNRS and Japanese Universities” and gave an overview on MINES ParisTech. It is the central engineering institute of France and many of its graduates have become presidents of major companies, a fact which demonstrates that it educates human resources necessary for management of large enterprises. Concerning renewable



Toshinori Kobayashi  
Director, Industrial Science and Technology Policy Division, Industrial Science and Technology Policy and Environment Bureau, METI



Hiroyuki Yoshikawa  
Then President, AIST



Catherine Bréchnignac  
President, CNRS



President, Renault Group, and President and CEO, Nissan, Carlos Ghosn and CNRS President Bréchnignac



Comments from a participant

energy, MINES ParisTech was presented as having partnership with New Energy and Technology Development Organization (NEDO).

Vice Chairman Utsuda gave a talk on “Meeting the Challenge of Sustainable Growth for Industry”, especially on Japanese industry’s approaches toward solving global warming and tasks related to innovation creation. As expectations toward AIST, he mentioned that AIST, being a possible bridge between the university-centered creation of science and the business-oriented technology development, needs to integrate its management resources and networks. In reference to this, he expressed expectations in *Full Research* which was propounded by then AIST President Yoshikawa.

President Guinot gave a speech titled “150<sup>th</sup> Anniversary of Japan-France Relations: Universal Lessons of a Bilateral History?” With the historical view that technological development does not necessarily lead to human happiness, he said that, if man is to aim for a sustainable society, overall happiness cannot be achieved without the philosophy of “co-

existence” including relations with people of developing countries who do not bask in the achievements of technology development.

Council Member Aizawa talked on the theme of “S&T Policy for Realizing a Sustainable Society”. He described the activities of the Council for Science and Technology Policy. He expressed the need for research and development for solving issues in order to realize a sustainable society, and stated the need to reform our values concerning these issues. He also said that he advocates activities to enhance synergy effects of diplomacy and policies on science and technology, by promoting S&T diplomacy.

During this symposium “for Science-Industry Cooperation toward Sustainable Development”, many leaders of industry and academia of both Japan and France gave recommendations and proposals from many aspects based on deep analyses including expectations toward public research institutes. In all aspects, it was a very meaningful symposium.



Hiroshi Komiyama  
Then President, University of Tokyo



Jean-Charles Pomerol  
President, University of Paris 6



Benoît Legait  
Director, MINES ParisTech



Shoei Utsuda  
Vice Chairman, Nippon Keidanren



François Guinot  
President, Academy of Technology of France



Masuo Aizawa  
Executive Member, Council for Science and Technology Policy, Cabinet Office of Japan

## Fifth Biomass-Asia Workshop

The 5<sup>th</sup> Biomass-Asia Workshop was held from December 4 to 6 at Guangzhou, China.

This workshop was a joint effort of China and Japan. Chinese Academy of Sciences (CAS) contributed to the workshop as the Chinese organizer, and the local secretariat was located at Guangzhou Institute of Energy Conversion, CAS. Japanese organizers were Ministry of Education, Culture, Sports, Science and Technology, Ministry of

Agriculture, Forestry and Fisheries, Ministry of Economy, Trade and Industry, and Biomass-Asia Research Consortium, and AIST functioned as secretariat.

Biomass-Asia Workshop, since its first event in Japan in 2005, has been organized annually in Thailand, Japan, Malaysia, and this time, in China.

The workshop welcomed over 250 participants (49 from Japan including 25 from AIST), and speakers from Australia,

China, Indonesia, Japan, Malaysia, the Philippines, Thailand (expected but cancelled due to the closure of New Bangkok International Airport), and Vietnam.

After opening remarks by Dr. Akira Ono, Senior Vice-President of AIST, and Prof. Jinghai Li, Vice President of CAS (Mr. Huasheng Qiu, Deputy Director-General, Bureau of International Cooperation, CAS), keynote speeches and plenary lectures were delivered. During four technical sessions, based on the results of the past workshops, there were active discussions on regionally applicable models of sustainable biomass utilization technology in Asia. The topics included a hybrid agricultural waste utilization model possibly to be used in China and the "Palm Industry Complex Model" intensively discussed at the previous workshop, along with a possibility of evolving Biomass Town concept in East Asia. There were also vigorous discussions on standardization and sustainability assessment of biofuels, in the context of activities of Economic Research Institute for ASEAN and East Asia.

At the final session, it was agreed that efforts will be made to develop and disseminate the technologies for utilization models, and that the next workshop will be held in Japan. As a technical tour, the municipal solid waste comprehensive treatment demonstration plant in Huizhou City was visited. At the reception on the first evening, greeting speeches were delivered by Dr. Yong Chen, Director, Guangzhou Branch, CAS, and Mr. Masaharu Yoshida, Consul General of Japan in Guangzhou.



AIST Senior Vice-President Ono giving address at the opening

## Sixth Japan-Thailand Collaboration Workshop

The 6<sup>th</sup> Japan-Thailand Collaboration Workshop was held on February 12 and 13, 2009 at AIST Tsukuba. From the Thai side, nearly 70 people participated including President Sakarindr Bhumiratana of National Science and Technology Development Agency (NSTDA), Acting Governor Surapol Vatanawong of Thailand Institute of Scientific and Technological Research (TISTR), many representatives of the two research organizations and of Siam Cement Group, and Thai doctoral students studying in Japan. From AIST, then President Hiroyuki Yoshikawa, Senior Vice-President Akira Ono, Mr. Masakazu Yamazaki, Vice-President in charge of International Affairs, Prof. Naomasa Nakajima, then Vice-President / Director of Evaluation Division, and many people related to the collaborative research participated.

There were active discussions on a wide range of research fields where collaborations exist from the past such as bioethanol, biodiesel fuel, biomaterial, life cycle assessment (LCA), photocatalysts, ceramics, information technology, biomedical information, and biosensors; and also fields of possible collaboration in the future.

Siam Cement Group participated for the first time,

and possibilities for collaboration were sought. At the management session, opinions were exchanged regarding research management on topics as *Full Research*, the journal *Synthesiology*, Innovation School, and research evaluation.

It was agreed that the 7<sup>th</sup> Japan-Thailand Collaboration Workshop will be held in Bangkok, and that collaboration will be advanced further in each field in the future.



Heads of 3 institutes (center from left: NSTDA President Sakarindr, then AIST President Yoshikawa, TISTR Acting Governor Surapol) and workshop participants

### Cover Photos

Above: Message from President (p. 2)

Below: CNRS-AIST Symposium (p. 25-27)



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