FEATURE: Preventing Misconduct in Research Activities

- Preventing Misconduct in Research Activities ................................................................. 2
- Presentation Ceremony Held for 2006 International Prize for Biology .......................... 5
- FoS Symposia Held with Germany, America and France .............................................. 5
- A-HORCs Meeting and Northeastern Asian Symposium ............................................ 6
- Earthquake Workshop Held with LIPI in Indonesia .................................................... 7
- Japan-Australia Symposium on Earth Systems and Nanomaterials ............................ 7
- NIH-JSPS Symposium Held on Biomedical Science ................................................... 7
- Japan-Germany Colloquium on Robotics ................................................................. 8
- Fifth JSPS Forum Held in France .............................................................................. 8
- JUNBA: First Academia Summit and Symposium ..................................................... 9
- Pre-Departure Seminar and Alumni Evening in UK ............................................... 9
- Science Dialogue ........................................................................................................ 10
- Message from Former JSPS Fellow ......................................................................... 12
- Introducing JSPS Overseas Offices: Bangkok ......................................................... 13
- Recent Visitors to JSPS ............................................................................................... 13
- Research and Life in Japan by a JSPS Fellow ......................................................... 14
- Introducing Japan: Iwate ......................................................................................... 15
- JSPS Fellows Plaza Website ...................................................................................... 15
Preventing Misconduct in Research Activities

The government is taking various measures to raise the productivity of scientific research in Japan. Its third S&T Basic Plan, launched in 2006, calls for an investment of ¥25 trillion in research and development over the plan’s 5-year implementation period. This, despite the stringent fiscal climate currently overshadowing the nation’s economy. This effort to enhance scientific research notwithstanding, incidents of improper behavior in conducting research activities continue to be reported. This article introduces steps being taken by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Science Council of Japan (SCJ) to prevent improper conduct in the execution and reporting of research activities.

Measures taken by MEXT

Recently, incidents of unethical behavior by researchers have been revealed in various countries around the world. In Japan as well, such improper conduct as researchers falsifying data has been exposed. It is MEXT’s position that unethical conduct violates the very essence of science, which is to seek the truth and create new knowledge. At the same time, such behavior impedes research progress by shaking people’s confidence in science. It is, therefore, MEXT’s fundamental stance that unethical conduct should not be tolerated.

Amidst the gloomy fiscal climate, the government is working to create a bright future for Japan by increasing the allocation for research funding from the national treasury. In the context of using these precious assets effectively, there is an ever-stronger demand for proper comportment in the conduct of research activities. To meet these expectations, MEXT’s Council for Science and Technology has established a dedicated committee within its organization. The committee has delved into the background surrounding research misconduct and studied ways to eliminate it in research activities supported by grants-in-aid and other competitive research funding from the national treasury. In August 2006, the committee published the set of guidelines summarized below to define and prevent acts of research misconduct.

Synopsis of Guidelines for Responses to Research Misconduct

**Imperative for proper conduct**

Research functions to expand the body of existing knowledge and to generate new knowledge. As this work draws upon the achievements of others, it requires fair and factual disclosure of research results so that they can be shared and critiqued.

Generally, research misconduct is defined as fabrication, falsification or plagiarism of data or research results. Such acts violate the functional and ethical principles of research and obstruct normal flow of scientific communication within the research community. In turn, they also undermine public trust in science and obstruct scientific advancement. That research be conducted fairly and ethically is particularly important as the government is increasing its investment in science and technology amidst stringent fiscal conditions. It is incumbent, therefore, upon both individual researchers and the research community at large to adopt a rigorous stance against research misconduct.

**Conditions contributing to misconduct**

There are several conditions within the research environment that contribute to misconduct. They include a race to be the first to publish research results, the need to obtain continuous competitive research funding, and intense competition for research posts. Exasperating these problems is the fact that students and young researchers are not properly educated in research ethics and protocols, while self-correcting functions are not fully operational within research organizations.

**Purview of Guidelines**

The Guidelines set forth principles to underscore frameworks to be developed by MEXT, funding agencies, universities and other research institutions for responding to misconduct in research activities supported by competitive funding. There are 13 competitive funding systems under the jurisdiction of MEXT, including the Grants-in-Aid for Scientific Research Program (administered by JSPS), 21st Century COE Program (administered by JSPS), and Private Universities Program for Advancement of Science and Technology.

The contents of the Guidelines are to be reflected in the grant application materials and consignment contracts issued by funding agencies and research institutions. These organizations are to each establish an office for receiving allegations and other information concerning research misconduct.
Making and handling allegations

When made, allegations must clearly specify the alleged offender(s) and the content of the alleged offense, while providing rational, scientific reasons for why the act is considered to constitute research misconduct. In handling allegations, the names of informants and contents of the allegations are to be maintained in strict confidentiality until the release of the investigation results. To prevent the filing of allegations with malicious intent, it shall be published that the names of persons found guilty of doing so may be publicly disclosed and disciplinary action taken against them.

Conducting investigations

Investigations of allegations are as a rule to be conducted by the research institution that employs the alleged offender. A preliminary assessment of the rationale of the allegation should be conducted right away to determine whether a formal investigation is warranted. When conducting an official investigation, an investigation committee shall be formed of members who include researchers in the subject field from other institutions.

Investigations may include the examination of scientific papers, experiment notes and other recodes, reproduction of experiments, and interviews with related persons. The accused shall also be given an opportunity to rebut the charges. All evidence and materials garnered in the investigation are to be preserved.

During investigations and preceding assessments, research institutions may suspend funding, both ongoing and pending, to the accused party until the investigation results have been determined.

If culpability is found, the committee is to determine the details of the misconduct, including the persons involved and their respective degrees of involvement, and report their findings to the research institution. Persons charged with misconduct, or with making a malicious allegation, are eligible to file an appeal.

If it is determined that misconduct was not committed, research funding suspended during the investigation shall be reinstated and measures taken to restore the reputation of the persons cleared of the allegations.

Disciplinary actions

When misconduct is found to have been committed, the funding institution shall appoint a committee to deliberate and recommend what disciplinary action should be taken. Based on the committee's report, the funding institution shall decide on the appropriate action to be taken against the culpable persons. Such actions may include the termination of competitive funding, exclusion from future applications for competitive funding, and requirement to return all or portions of competitive funds already granted. As a rule, paper authors and others who are found to have committed acts of misconduct will be made ineligible to apply for competitive funding for a period of two to ten years. Persons who are not found culpable of misconduct but who were responsible in part for the published contents of the illicit research will be rendered ineligible for a period of one to three years.

Disclosure

Funding institutions are to make public the following information when a decision is made to take disciplinary action: names and affiliations of subject persons, details of the actions, amount of research funds involved, description of related research and misconduct, and the report of investigation results.

Initiative by Science Council of Japan

The Science Council of Japan comprises 210 members from leading academies in the fields of the humanities and social sciences, life sciences, and science and engineering, and is supported by some 2,000 associate members. One of the Council's functions is to make policy recommendations, which it has done on various subjects to date.

In October 2006, the Council issued the “Statement: Code of Conduct for Scientists.” The members had felt a sense of crisis over the repeated incidents of misconduct committed in recent years by researchers both at home and abroad, so the Council, representing Japan’s scientific community, compiled this statement as an instrument for implementing a recommendation to prevent misconduct. The statement has two components: a “Code of Conduct for Scientists” and the document “Toward Autonomous Implementation of the Code of Conduct for Scientists.” The Code sets forth the minimal necessary behavioral standards common to all fields of science, which individual scientists should observe autonomously. Concomitantly, the document on implementing the Code issues a call for all education and research institutions, academic societies and research funding agencies to introduce their own systems for encouraging scientists to faithfully and on their own volition practice proper conduct in their research activities. In preparing the statement, the Council surveyed universities, research institutions and academic societies around Japan, and reflected their views in finalizing the Code of Conduct. A summary of the “Statement: Code of Conduct for Scientists” is provided on the next page.
Summary Statement: Code of Conduct for Scientists

a. Introduction
The Science Council of Japan (SCJ) established the Committee on the Code of Conduct for Scientists in October 2005. After careful examination of the current situation, the Committee drafted a preliminary version of the Code of Conduct. The Committee also carried out a survey to consult with the science community at large on various issues concerning implementation of codes of conduct and ethics programs. As a result of these activities, the Committee finished the Statement, which includes the Code of Conduct for Scientists and the document entitled “Toward Autonomous Implementation of the Code of Conduct for Scientists.” These two documents are complementary to each other.

The SCJ requests all scientific organizations to draw up their own ethical codes of conduct with reference to the SCJ’s Code of Conduct for Scientists and to encourage every scientist to abide by it. Also, the SCJ requests all organizations to design and implement an ethics program for research as discussed in “Toward Autonomous Implementation of the Code of Conduct for Scientists.”

b. Code of Conduct for Scientists
The Code of Conduct for Scientists represents the minimum ethical standards which shall be shared by all researchers regardless of their academic disciplines. The ethical standards summarized in this Code are for the scientists who conduct independent and autonomous research under trust and commitment from society and for promoting sound progress of science. The standards should be autonomously endorsed by individual scientists. The Code consists of eleven articles under the following headings: Responsibilities of Scientists, Conduct of Scientists, Effort to Improve Ability, Explanation and Disclosure, Research Activities, Establishing Research Environments, Observance of Laws and Regulations, Consideration to Research Subjects, Relations with Others, Elimination of Discrimination, and Conflict of Interest.

c. Toward Autonomous Implementation of the Code of Conduct for Scientists
The document entitled “Toward Autonomous Implementation of the Code of Conduct for Scientists” describes specific elements for effective implementation of the Code, which should be included in the ethics programs for research adopted by individual institutions. All scientific organizations are requested to introduce their own research ethics programs to meet their purposes and needs, and to promote honest and autonomous activities of scientists.

This summary, published on 3 October 2006, was reprinted from the website of the Science Council of Japan. The full text of the statement can be found at http://www.scj.go.jp/ja/info/kohyo/pdf/kohyo-20-s3e-1.pdf
Presentation Ceremony Held for 2006 International Prize for Biology

On 20 November, the 22nd annual ceremony for awarding the International Prize for Biology was held in the presence of Their Majesties the Emperor and Empress of Japan at The Japan Academy, located in Ueno Park, Tokyo. The ceremony was organized by the Committee on the International Prize for Biology, chaired by Dr. Saburo Nagakura, president of The Japan Academy.

At the ceremony, an opening message was delivered by Dr. Nagakura and a report on the selection process was provided by Dr. Motonori Hoshi, chair of this year’s Selection Committee, after which the prize and an Imperial gift were presented to this year’s awardee, Dr. Serge Daan, Niko Tinbergen Chair in Behavioral Biology, University of Groningen, The Netherlands. A message was then delivered by His Majesty, followed by congratulatory remarks from the Prime Minister (read by Mr. Hakubun Shimomura, Deputy Chief Cabinet Secretary) and from Mr. Bunmei Ibuki, Minister of Education, Culture, Sports, Science and Technology (MEXT). The ceremony concluded with an acceptance address from Dr. Daan.

At the reception following the ceremony, a congenial atmosphere prevailed with Their Majesties and Dr. Daan engaging in amicable conversation with each other and with the guests who included MEXT minister Mr. Ibuki, embassy representatives and the Prize Committee members.

On 28 November, for the first time a lecture open to the general public was held at Sophia University to commemorate the award to Dr. Daan. Also, the International Prize for Biology Commemorative Symposium on Chronobiology took place on 1-2 December at the Tokyo International Forum.

—General Affairs Division

FoS Symposia Held with Germany, America and France

Frontiers of Science (FoS) Symposia are held by JSPS in cooperation with its partner agencies in participating countries. These symposia lodge 60-80 (30-40 from each side) talented young researchers from Japan and the counterpart country under one roof for a period of three days. Specializing in a wide range of research fields, the participants use this time together to engage in cross-disciplinary discussions on the leading edge of scientific pursuits. Differing from the general symposium format, FoS symposia do not attempt to reach conclusions or compile results; their aim is to further enrich the young researchers’ ability to think freely and creatively so as to be better equipped to challenge and expand the frontiers of science. Concurrently, these symposia are meant to develop leaders who possess broad perspectives—transcending minutely defined boundaries among research fields—and who are capable of jelling colleagues across wide spectrums of science into collaborative undertakings.

The third annual Japanese-German Frontiers of Science (JGFoS) Symposium was held in Heidelberg on 3-5 November; and the ninth Japanese-American Frontiers of Science (JA FoS) Symposium was held in Irvine, California on 8-10 December. Entering the new year, the first Japanese-French
A-HORCs Meeting Held Along with Northeastern Asian Symposium

On 6-9 November in Kyushu, Japan, the fourth meeting of the Heads of Research Councils of Asian Countries (A-HORCs) was held among Prof. Yiyu Chen, president, National Natural Science Foundation of China (NSFC); Dr. Oh-Kab Kwon, chairman & CEO, Korea Science and Engineering Foundation (KOSEF); and Prof. Motoyuki Ono, president, JSPS. A-HORCs was established in 2003 to strengthen scientific cooperation between Japan, China and Korea by giving opportunities to the heads of their leading science-promotion agencies to meet in person and exchange views on issues related to science and technology policies in their countries.

Hosted by Japan, this meeting started with welcoming remarks by JSPS president Prof. Ono, followed by briefings from each representative on S&T policy in their respective countries and on new program initiatives being undertaken by each of their agencies. This information exchange with an eye to trilateral understanding and cooperation engendered a highly meaningful discussion.

Concurrently, Northeastern Asian Symposium 2006 was held in Kitakyushu City. The decision to hold this symposium series under JSPS-NSFC-KOSEF joint sponsorship was made at
Earthquake Workshop Held with LIPI in Indonesia

On 5-6 December, a LIPI-JSPS workshop, entitled “Indonesia-Japan Initiatives on Indonesian Earthquake Research for Hazard Mitigation and Community Preparedness” was held in Jakarta. The decision to organize the workshop had been made between JSPS and the Indonesian Institute of Sciences (LIPI) in August. Participating in it were a group of seven Japanese researchers led by Dr. Kenji Satake, National Institute of Advanced Industrial Science and Technology (AIST), and of 15 Indonesian researchers led by Dr. Hery Harjono, LIPI.

The meeting opened with remarks by LIPI vice chairman Prof. Dr. Lukman Hakim, who was followed by JSPS international program director Mr. Hiromichi Matsuo. He described the process leading up to convening the workshop and introduced new Asia-oriented programs to be initiated by JSPS in FY 2007, including Asian Summit of Funding Institutions and HOPE Meetings, the latter designed to bring young researchers from the region together with Nobel laureate-level scientists.

Giving presentations and exchanging views, the participants decided to carry out collaborative research on crustal deformation and four other topics. These 2-year joint research projects are scheduled to be launched in FY 2007.

— Asian Program Division

Japan-Australia Symposium Held on Earth Systems Science and Nanomaterials

On 21 November, a symposium was held on the themes “Earth Systems Science and Nanomaterials” in Australia’s capital Canberra. The symposium was organized by JSPS and the Australian Academy of Science (AAS), under the auspices of MEXT and DEST (Australia’s Department of Education, Science and Training). It was held as one of the scientific events across a spectrum of fields of mutual interest and interaction organized to celebrate the 2006 “Australia-Japan Year of Exchange.”

A reception held the previous evening gave the session chairs and speakers a chance to make each other’s acquaintance. Featuring remarks by JSPS’s international program director Mr. Hiromichi Matsuo, it also served as the symposium’s opening ceremony. On the next day, the participants split into two workshops, with the one on earth systems science chaired by Prof. Akimasa Sumi, The University of Tokyo, and Dr. Roger Gifford, CSIRO Plant Industry, and the other on nanomaterials chaired by Prof. Junjiro Kanamori, International Institute for Advanced Studies, and Prof. Neville Fletcher, The Australian National University. The latest advances in these fields generated animated discussions led by the co-chairs. In each workshop, various aspects of these advances were introduced by four speakers from each the Australian and Japanese sides. The meeting gave the participants a good opportunity to tighten their grasp on the state of bilateral collaboration in the subject fields, while exploring possibilities for new dimensions of cooperative research.

The discussion results were reported at the inter-governmental “12th Australia-Japan Joint Science and Technology Committee Meeting,” which was held on the day following the symposium.

— Research Cooperation Division

NIH-JSPS Symposium Held on Biomedical Science

On 6-7 November, the JSPS Washington Office co-sponsored a symposium with the National Institutes of Health (NIH) entitled “Frontiers in 21st Century Biomedical Science: Highlights from Japan and the United States.”

It was addressed by five researchers from Japan and eleven from the US. The speakers invited from Japan were Prof. Toshio Hirano, Osaka University; Prof. Nobutaka Hirokawa, The University of...
Japan-Germany Colloquium on Robotics Held

On 18-21 November, the JSPS Bonn Office held its annual Japan-Germany Colloquium, this time in Ismaning on the outskirts of Munich. Focused on “Robotics,” this fourth colloquium in the series was attended by young Japanese and German researchers in their mid-20s to early 40s. They meshed their robotics expertise and enthusiasm into spirited discussions.

The colloquium was organized by JSPS inspector general Dr. Hirochika Inoue (professor emeritus, The University of Tokyo) and Prof. Dr. Gerd Hirzinger, German Aerospace Center (DLR), and coordinated by Prof. Makoto Kaneko, Osaka University, and Prof. Dr. Martin Buss, Technical University of Munich, who prepared the program and selected the participants. Twenty-three young Japanese and German researchers in various aspects of robotics were chosen to give presentations on the latest advances in the field at the colloquium’s four sessions on (1) high-tech robotics, (2) human-robot joint action, (3) brain science and robotics, and (4) ubiquitous robotics.

Many of the participants said they had derived inspiration from their exchange of views at the colloquium and would like to embark upon joint research with colleagues who share common interests. In fact, several groups of Japanese and German researchers were seen during the breaks and after sessions discussing such possibilities. The JSPS Bonn Office would be very pleased if the colloquium served as a catalyst for sparking collaborations between researchers from Japan and Germany, two front-running nations in the exciting field of robotics.

— JSPS Bonn Office

Fifth JSPS Forum Held in France

On 24 November, the JSPS Strasbourg Office held its fifth JSPS Forum, this time on the theme “Chemistry Contributing to Society: Green Sustainable Chemistry.” Venued at the Institut de Science et d’Ingénierie Supramoléculaires (ISIS), University Louis Pasteur, in Strasbourg, the forum was co-sponsored by the French Ministry of National Education, Higher Education and Research, Centre National de la Recherche Scientifique (CNRS), and University Louis Pasteur.

At the forum, eight chemists representing Japan and France gave presentations and engaged an audience of over 300 people in an active exchange of views and information on the role that chemistry can play in achieving the goal of creating an environmentally harmo-
nious society in the 21st century—one which will ensure the well-being of humankind by reducing environmental loading while sustaining the current level of economic prosperity.

Held in parallel with the forum was a poster session by 25 young Japanese and French researchers who reported on their innovative research activities. Concurrently, the participating Japanese universities set up displays of research materials. The forum together with these interactive exhibits provided an ideal opportunity for promoting scientific exchange between Japanese and French researchers.

The forum’s proceedings were carried over the multimedia Canal-U, providing real-time coverage worldwide. The presentations can be viewed at http://www.canal2.tv/.

— JSPS Strasbourg Office

JUNBA: First Academia Summit and Symposium

The “First Academia Summit and Symposium” of the Japanese University Network in the Bay Area (JUNBA) was held on 11-12 January.

JUNBA comprises a network of Japanese universities with overseas offices in the San Francisco Bay Area. The consortium, which includes Japanese agencies, was organized to facilitate liaison among the member universities, while accelerating their internationalization initiatives. It also works to advance collaborative research and education between Japan and the US.

The Summit on the 11th began with remarks from JUNBA president Dr. Yoshikatsu Murooka and Mr. Makoto Yamanaka, Consul General of Japan in San Francisco, followed by a keynote speech from JSPS executive director Mr. Isao Kiso. The first session, titled “International Strategy by Each Participating University,” featured presentations by representatives of eight universities, followed by spirited discussions. The second session engaged the participants in an exchange of views on the universities’ internationalization approaches and in drafting a Summit Declaration on advancing and supporting collaborative education and research and university-industry cooperation in the Bay Area and across the wider United States. The Summit Declaration was announced at a reception held that evening at the official residence of the Consul General of Japan in San Francisco.

The Symposium venued at Stanford University on the 12th was themed “Nano-Material Science.” Nine researchers from the US and Japan reported on state-of-the-art developments in their respective countries, with the ensuing Q&A session spawning an energetic sharing of further information on research in the subject field. The concluding reception was held in a very relaxed atmosphere, conducive to a congenial exchange of views and the forming of new collegial networks among the participants.

JUNBA plays a uniquely significant role in promoting from its base in America the internationalization of Japanese higher education and research. In this endeavor, the JSPS San Francisco Office would like to continue to offer its encouragement and support.

— JSPS San Francisco Office

Pre-Departure Seminar and Alumni Evening in UK

On 7 December, a pre-departure seminar was held for UK researchers going to Japan on JSPS postdoctoral fellowships. These seminars brief the participants on various aspects of doing research and living in Japan and introduce them to programs they can apply for to continue their cooperation with Japanese colleagues after returning to the UK. This seminar, held at The Daiwa Anglo-Japanese Foundation, provided briefings on the JSPS London Office’s activities and the Foundation’s programs. Dr. Che Connon, secretary of the UK JSPS Alumni Association, spoke on his experiences as a JSPS fellow in Japan, while Prof. So Iwata, Imperial College London, described differences in work environments between Japanese and British research institutions.

Following the seminar, an Alumni Evening, organized by the association, was held in the gallery where The Daiwa Anglo-Japanese Foundation was displaying a photo exhibit entitled “The Beatles in Japan.” It was attended by more than 40 people from the alumni association, UK government, funding agencies and universities along with Japanese researchers residing in the UK. For the new fellows about to depart for Japan, the event gave them a good opportunity to acquire firsthand information about research and life in Japan by meeting and talking to past JSPS fellows and others involved in Japanese research programs.

— JSPS London Office
The following fellows participated in JSPS’s Science Dialogue Program during the period from November 2006 through January 2007. For details about the program, please see its webpage at: http://www.jsps.go.jp/english/e-plaza/e-sdialogue/

--- Overseas Fellowship Division

**Fujishima Senior High School**

*Date: 23 January*

**Dr. Devang K. Thakor** (USA)

Host institution: Kyoto University

Title: “Science Education in the United States”

---

**Kaiho Senior High School**

*Date: 25 November*

**Dr. Fabien Ravary** (France)

Host institution: University of the Ryukyus

Title: “The Social Organization of Some Very Special Ants”

---

**Gunma Prefectural Takasaki High School & Waseda University Honjo Senior High School**

*Date: 11-12 November*

**Dr. Guo Yu Qiu** (China)

Host institution: National Institute for Environmental Studies

Title: “Energy Balance of Our Environment and Its Relationship with Global Warming”

---

**Dr. Manujendra N. Saha** (Bangladesh)

Host institution: Gunma University

Title: “Analysis of Hepatitis B Virus (HBV) Infection Mechanisms and the Development of Antiviral Agents”

---

**Dr. Davide Mariotti** (Italy)

Host institution: National Institute of Advanced Industrial Science and Technology

Title: “Microplasmas and Nanostructures”

---

**Dr. Yufeng Zhou** (China)

Host institution: High Energy Accelerator Research Organization

Title: “What is the World Made of?”

---

**Ikeda High School**

*Date: 18 December*

**Dr. Kim R. Larsen** (Denmark)

Host institution: Kitakyushu Museum of Natural History & Human History

Title: “Biological Science: The Work and the Wonders”

---

**Nagasaki Nishi High School**

*Date: 21 December*

**Dr. Tamara Zhunusssova** (Kazakhstan)

Host institution: Nagasaki University

Title: “Case-Control Study of Breast Cancer in Women Living around Semipalatinsk Nuclear Test Site”

---

**Ikeda High School**

*Date: 13 November*

**Dr. Tony J. De Falco** (USA)

Host institution: Research Organization of Information and Systems

Title: “The Amazing Neuron”

---

**Ritsumeikan Senior High School**

*Date: 19 December*

**Dr. Chinawat Yapwattanaphun** (Thailand)

Host institution: Kyoto University

Title: “Queen of Tropical Fruit”

---

**Iwata Minami High School**

*Date: 28 November*

**Dr. Tesfaye B. Kidane** (Ethiopia)

Host institution: Kobe University

Title: “High-Resolution Age Determination Using Integrated Paleomagnetic and Radiometric Techniques”

---

**Kakogawa Higashi High School**

*Date: 21 December*

**Dr. Chinawat Yapwattanaphun** (Thailand)

Host institution: Kyoto University

Title: “Queen of Tropical Fruit”

---

**Shimizu Higashi Senior High School**

*Date: 12 January*

**Dr. Yessy Arvelyna** (Indonesia)

Host institution: Tokyo University of Marine Science and Technology

Title: “Application of Remote Sensing Images to Ocean Phenomena and Disaster Monitoring”
On 25 November, JSPS took part in conducting Science Agora 2006 in Tokyo. At it, Dr. Pablo Perez Goodwyn (JSPS fellow, Kyoto University), Associate Prof. Hideyuki Takagi (Kyushu University), Mr. Kazuaki Kubota (teacher, Ritsumeikan Senior High School), and Ms. Kaori Shimura (teacher, Tsuru High School) gave presentations about their respective experiences in participating in the Science Dialogue Program.

As a component of the event, a symposium was held on “making more effective use of competitive research funding,” at which JSPS executive director Prof. Kenichi Iga spoke on subject from the perspective of JSPS’s role as a funding agency. His remarks stimulated a spirited discussion among the university and other participants.
Message from Former JSPS Fellow (7)

Microbial biotechnology research in Japan paved my way to a professorship

My first experience in Japan was in 1973 as a participant in a UNESCO Post-Graduate Training Course in Microbiology and Biotechnology at Osaka and Kyoto Universities. I left my seven-month old son, worked hard, and published two papers. Later, when JSPS expanded its program into Thailand, I applied for a fellowship under the JSPS RONPAKU (Dissertation PhD) Program in 1978. Again, I left my two kids, and was able to get a PhD from Kyoto University under my advisor Prof. Saburo Fukui in March 1983. Three years later, I received a grant from the British Council for a post-doctorate visit to Birmingham and Cambridge Universities. Returning to Thailand from England in 1987, I became an associate professor at Kasetsart University. Subsequently, I worked as a member of the academic committee to the Graduate School between 1994-1998 and as a department head between 1994-1996. I was appointed to the post of professor in 1999.

My research interest in Japan was from the beginning to work on vitamin B12 with either Prof. Koichi Ogata or Prof. Fukui, both experts in the field at Kyoto University. My experience with vitamin B12 fermentation started with work on a methanol-utilizing bacteria in Prof. Fukui’s laboratory, where I was able to publish two papers within a year. As soon as I returned home, I joined an ASEAN project on soybean liquid waste recovery for vitamin B12 production using Propionibacteria and Streptomyces bacteria instead of an expensive imported methanol as substrates. Under my RONPAKU fellowship, which I received in 1979, I had started my research on vitamin B12 fermentation using immobilized Propionibacterium cells, about which I produced another two publications under the supervision of Prof. Fukui and Prof. Atsuo Tanaka. A total of five publications on vitamin B12 fermentation experiments in Japan and Thailand during the period 1973-1982 helped me to earn the doctorate degree from Kyoto University.

When taking the aforementioned UNESCO course at Osaka University, I really wanted to study the Japanese language so as to be able to communicate better with the Japanese people, but Prof. Hisaharu Taguchi insisted that I concentrate on my research work instead because my stay in Japan was limited. I followed his advice for the research facilities I could take advantage of there were better than those available in my home country.

Prof. Taguchi recommended that I continue my studies under the JSPS RONPAKU Program, and asked my husband to bear with me a little longer. He agreed so that I could advance my academic career. In Japan, I did my RONPAKU research inside the big, old building of the Department of Industrial Chemistry, Faculty of Engineering, Kyoto University. There were only a few other female scientists working in the building. However, I always felt safe and happy working in the warm and hospitable environment created by my Japanese advisors and active, young friends.

At the time I obtained my PhD degree, Thailand was experiencing a low-price crisis in its cassava export market. So as to provide value-added products, I began right away on work to utilize cassava starch for producing Monascus red pigments in submerged cultivation. During my PhD research activities in Japan, Prof. Taguchi had always emphasized that Thailand is an agricultural country, so scientists must focus on value-added agricultural products using fermentation technology. His attitude in this respect stimulated me to redouble my efforts, particularly in using the local substrate to yield value-added vitamin B12 and Monascus products in both solid-state and submerged fermentation, the results of which accrued to the benefit of my country. Developing microbial strains and products through such research paved the way to my professorship.

After 1983, I joined the JSPS-NRCT exchange program in the area of biotechnology, working mostly on cassava use in producing Monascus pigments. At the same time, I made it a practice to participate in RONPAKU alumni activities, and was appointed as the chair of the Association of RONPAKU Alumni, Thailand (ARAT) in February 2005. During these two years, three of the biggest activities conducted by the group have been: a Tsunami Seminar (20 December 2005) supported by the JSPS Bangkok Office; a Solar Energy Workshop (24-25 August 2006) supported by the Office ARAT Research Exhibition at Thailand Research Expo 2006, September 2006

Now, my RONPAKU advisor has passed away and my intimate friends have moved to other departments within Kyoto University or to other universities. As JSPS’s funding for the biotechnology exchange has become limited, I withdrew myself from the program in order to give an opportunity to young scientists. But, I still do my own research on vitamin B12 and Monascus fermentation.

I will be eligible for retirement this year, but will continue to work for an extended five years, during which time I want to finish my research on rice solid culture of Monascus products. I intend to also visit my intimate teachers, including Prof. Tanaka and Prof. Kazuo Komagata, in Japan as I always recall with fond memory the best time of my life that I spent with them.

Finally, I must say that Japan has opened up many doors for me while imbuing me with a wider perspective of science and technology, one that has motivated me to make contributions for the benefit of my country. Looking back, I am deeply impressed with Prof. Taguchi’s kind, sincere and caring attitude toward my country, Thailand. It has long been my privilege to follow his thoughtful suggestions.
Introducing JSPS Overseas Offices: Bangkok

A JSPS overseas office was established in Bangkok in October 1989 to take advantage of Thailand’s strategic location in Southeast Asia to promote scientific exchange between Japan and the countries of the region. To date, the Bangkok Office has had 12 directors, who have specialized in a range of fields from the humanities and social sciences to the natural science. Each in his own way has been energetic in advancing the office’s activities.

In September 1997, the office moved to its present location in Bangkok’s new business district. Situated within a 5-minute walk from both the Asoke Station on the Sukhumvit Line of the BTS Skytrain, and the Sukhumvit Station on the MRT subway line, the office is very conveniently located in terms of transportation. It also has good access to Thai universities and other academic institutions.

Among the office’s various activities, one deserving particularly special mention is the recent establishment of the Association of RONPAKU Alumni, Thailand (ARAT), the operation of which is well supported by ARAT. Founded in February 2005 by volunteers who had been fellows under JSPS’s RONPAKU (Dissertation in February) Program, ARAT is the operation of which the office actively supports. ARAT was founded in February 2005 by volunteers who had been fellows under JSPS’s RONPAKU (Dissertation in February) Program. As of December 2006, the association’s membership had climbed to 168. Every year, the Bangkok Office and ARAT co-sponsor a seminar with the National Research Council of Thailand (NRCT) and hold a ceremony to present JSPS medals of merit to the RONPAKU fellows who earned their PhDs that year. The office and ARAT also conduct human resource development activities, one example of such being a training course it held on making solar batteries.

Furthermore, the office carries out various kinds of activities to contribute to the building of an active S&T community in Southeast Asia. Last November, the office held a symposium on the directions that the region’s universities and academies should take in advancing their future internationalization activities. This February, it held a workshop to hammer out ways to strengthen such internationalization activities.

While working with Japanese government agencies and universities that conduct cooperation activities in Thailand, the office is also establishing itself as a base to share with researchers and administrators dispatched to extend the international activities of Japanese universities to the region.

Last September, a new international airport was opened, paving the way for Bangkok to thrive as one of leading international cities of commerce, culture, and academia within Southeast Asia. As S&T development continues to advance rapidly in the region, Bangkok will now be even better positioned to serve as a strategic hub for implementing Japan’s science promotion initiatives, giving the office an all the more important role to play in the future.

— JSPS Bangkok Office

Recent Visitors to JSPS (November 2006-January 2007)

Eminent Scientists Visit JSPS

JSPS carries out a program called “JSPS Award for Eminent Scientists,” under which it invites Nobel laureates and other scientists with superlative records of research achievements to Japan. The guidance and mentoring that they provide during their visits is expected to contribute to the overall advancement of scientific research in Japan.

Over the past period, the following eminent researchers came to Japan and met with JSPS president Prof. Motoyuki Ono during their visits:

15 November: Dr. Yoichiro Nambu
   professor emeritus, University of Chicago, received Wolf Prize (1994/5)

16 November: Dr. Barry Marshall
   professor, University of Western Australia, awarded Nobel Prize in Physiology or Medicine (2005)

24 November: Dr. Takashi Asano
   professor emeritus, University of California, received Stockholm Water Prize (2001)

27 November: Dr. Gerardus ’t Hooft
   professor, Utrecht University, awarded Nobel Prize in Physics (1999)

5 December: Dr. Dudley Robert Herschbach
   professor, Harvard University, awarded Nobel Prize in Chemistry (1986)

Their conversations with Prof. Ono covered a wide span of topics, including grants-in-aid and other aspects of Japan’s research funding system, the research activities of Japanese universities as viewed from overseas perspectives, the fostering of young researchers, and outreach initiatives to kindle high school students’ interest in science.

— Overseas Fellowship Division
Hailing from Spain, Dr. Jose Alexis Palmero Rodriguez has been doing research under a JSPS postdoctoral fellowship at the Mizusawa VERA Observatory, National Astronomical Observatory of Japan, National Institutes of Natural Sciences since April 2006. He first came to Japan in 1999 to matriculate a master's course in the Graduate School of Science at The University of Tokyo. While a graduate student there, he was selected to receive a scholarship from the Japanese government. Then in 2004, he was awarded a JSPS “Research Fellowship for Young Scientists,” testifying to the excellent potential he demonstrated as a doctoral researcher. His current host Prof. Sho Sasaki had been Dr. Palmero Rodriguez’s faculty advisor at The University of Tokyo, and continues to work closely with him on research related to the geology and topography of Mars.

On what are you conducting your research under the JSPS fellowship?

Mars is the only planet in the solar system that shows evidence for having had hydrologic activity analogous to that of the Earth. It is because of this and the planet’s potential to harbor life and even to sustain human settlement, that Mars has drawn great interest from the scientific community in recent years.

I am currently working on several projects related to the geologic history of groundwater systems on Mars and their release at the surface. Some of the results include the finding of extensive caverns eroded by groundwater flow along the tectonic structures that surround buried impact craters, and the finding of sedimentary deposits over the north pole of Mars that appear to be eroding the surface into giant canyons.

That sounds extremely interesting. How did you become involved in your research field?

I did extensive traveling to remote places on Earth during my early twenties. It was then when I became interested in the study of planetary landscapes.

Why did you choose Japan to pursue your research? What initially led you here?

I like to put myself in an environment where I can discover new things and experience cultural diversity. During my college days, I spent a year as an exchange student at Nanjing University in China. I felt no anxiety at all when I began living in Japan.

Japan has been making some important headway in missions that involve planetary geology. It is my purpose to become increasingly involved in these initiatives and to serve as a bridge for other scientists working in the EU and the USA.

I originally became interested in working in Japan through Sasaki-sensei back when he was working at The University of Tokyo.

What are the merits to conducting your research in Japan?

Through my research in Japan, I have had the chance to work with numerous scientists, both Japanese and from other countries like America and Russia, and to learn a new language and a very unique culture. In Japan, the state of research in planetary science is advancing at a rapid pace.

Do you have any plans for what you will do after your fellowship?

I have an offer from the Planetary Science Institute, Tucson, Arizona. So after

Dr. Jose Alexis Palmero Rodriguez

Ph.D. (Earth and Planetary Science), The University of Tokyo, Japan, 2004
M.Sc. (Earth and Planetary Science), The University of Tokyo, Japan, 2001
B.Sc. (Geology), University of London, UK, 1996

my fellowship ends I will take it up. After that, I’m not sure: I may go back to Europe or even come back to Japan.

What is your impression of Iwate or the Mizusawa area around your research institute?

Compared to Tokyo, Iwate is a very cold place, but the people are warm, the food is delicious, and water is pure. I live near a forest. I like to go on hikes and go into the forest to observe nature. I thrive on local cuisine—especially reimen, chilled and spicy Morioka noodles. As my residence is close to the Observatory, commuting is no problem. All in all, I really enjoy life here in Mizusawa, Iwate Prefecture.

What advice would you give someone about to begin a JSPS fellowship in Japan?

Make an effort to integrate and to make Japanese friends. Learn about Japanese culture, hang out with the Japanese. In addition, go to Kyoto as soon as you have a chance. Personally, I like the Fushimi district of Kyoto with its wooded hills and myriads of fox shrines, so I’ve traveled to Kyoto often. You may find that you will also want to visit that city regularly.

Interview by JSPS Fellows Plaza

To Past and Present JSPS Fellows:

We are in the process of updating our mailing list. If you have changed your address or would like to add your name to the JSPS Quarterly mailing list, please mail your full name and address (including country) to JSPS Fellows Plaza, 6 Ichibancho, Chiyoda-ku, Tokyo 102-8471 or fax it to us at +81-3-3263-1854. Please indicate whether you are a current or former JSPS fellow.
Introducing Japan: Iwate

This article takes a look at Iwate, the prefecture where Dr. Palermo Rodriguez is conducting his research at the VERA Observatory in Mizusawa.

Located in the north, Iwate is Japan’s second largest prefecture. With the Pacific Ocean to its east, Iwate has some of Japan’s most spectacular coastal scenery, punctuated by such sites as the Rikuchu Coast National Park, known for its narrow strips of sea between high cliffs, sea-eroded terraces, and pillars of tall rocks. Iwate is surrounded by mountains, with a basin lying at their center. Towada-Hachimantai National Park, comprises the Hachimantai Plateau, nesting among its mountains Lake Towada. One of the park’s most majestic mountains is the conical Iwate-san, known as the Mt. Fuji of Iwate. At its foot lies the Koiwai Farm, popular for sightseeing and well known around Japan for its locally developed brands of milk and butter.

Iwate’s long cultural history is centered around the town of Hiraizumi, established by the Oshu Fujiwara family who had ruled northern Japan during the Heian Period (794-1191). The clan’s leader Kiyohira used the wealth derived the region’s abundant resources of gold and other metals to build the Chusonji Temple, making Hiraizumi what is called the Kyoto of northern Japan. Remaining today are the Golden Hall, with its gilded walls and Amida Buddhas, and beautiful temple gardens. So splendid are the historical remnants and scenery of Hiraizumi that the prefecture is applying to have it registered as a UNESCO world cultural heritage site.

Blessed with an abundance of pure water flowing out of its mountains, Iwate is well known for its locally produced sake, rice wine. It boasts one of Japan’s three best sake brewers Nanbu Toji, whose Nanbu Bijin brand is so superb that it is served to first-class passengers on Japan Airlines.

The city of Morioka is famous throughout Japan for its unique cuisine of noodle dishes, among them wanko soba, Morioka reimen and jajamen. Wanko noodles are particularly popular because they are so fun to eat at the local shops: One mouthful of noodles after another is tossed into the small bowls of the customers, who are urged on to eat more and more by servers chanting "jan jan." Contests are held to see who can eat the most bowls in five minutes, with the record set by a housewife who is said to have downed 225 bowlfuls in the allotted time.

---

JSPS Fellows Plaza Website

JSPS Fellows Plaza is continually in the process of updating its website, which provides information for present, past and prospective JSPS fellows. Please give us a visit at:
http://www.jsps.go.jp/english/e-plaza/

You’ll find pages on “How to Apply,” “Experiences and Messages from JSPS Fellows,” “Program Guidelines,” “e-Orientation,” “Find Nearby Fellows,” “Science Dialogue,” and “Alumni Associations.” The site also carries current and back copies of our newsletter “JSPS Quarterly” and the booklet Life in Japan for Foreign Researchers.

If you have any opinions or impressions you wish to share regarding our website, please contact us at the JSPS Fellows Plaza.

— JSPS Fellows Plaza
Crowing Rooster, Emblem of the Japan Society for the Promotion of Science

From days of old in Japan, it has been the belief that the vigorous cry of the rooster in the gray of the morning augurs the coming of a new and bright day. As the crowing rooster can therefore be thought of as a harbinger of the kind of new knowledge that promises a brilliant future for humankind, it was chosen as the emblem of the Japan Society for the Promotion of Science. This emblem was designed in 1938 by Professor Sanzo Wada of Tokyo Fine Arts School to depict the rooster that symbolizes the breaking dawn in a verse composed by Emperor Showa.

About JSPS

The Japan Society for the Promotion of Science (JSPS) was established as an independent administrative institution to perform the following main functions: fund scientific research, foster researchers, and promote international scientific exchange.

Request for Reader Comments

We are taking a survey with an eye to reflecting reader interests in the JSPS Quarterly. If you have an opinion of our newsletters, we would like to hear from you. We would also like to know your impressions of the JSPS Fellows Plaza webpage. Please e-mail your comments to the JSPS Fellows Plaza at fellowsplaza@jsps.go.jp or fax them to us at +81-3-3263-1854.