



# **FEATURE: Toward a New Funding Concept**

7



TOPICS

No. 14

Winter

# FEATUREToward a New Research Funding Concept—Research Center for Science Systems

## Vision of Ideal Grant System

Researchers have embarked upon an all-out effort to bring Japan's grant allocation system into line with their needs. Regarding the stance of the Research Center for Science Systems on reforming the grant selection system, the Center's director Dr. Tasuku Honjo said the following: "The Center is working to improve the system so that it reflects researchers' perspectives while allocating grants in a way that respects the limitless potential of scientific endeavor. Since the Center's establishment two years ago, it has made important strides in enhancing the Grants-in-Aid for Scientific Research, Research Fellowships for Young Scientists, and other JSPS programs. These reforms have received high appraisal within the research community. Setting its sights on creating an ideal grant system, the Center will, starting from the most doable tasks, strive to effect progressive system improvements."

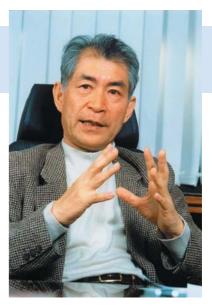
## Interview with Dr. Tasuku Honjo, Director, Research Center for Science Systems

It has been about two years since the Research Center for Science Systems was established. What sort of impact has the Center had on JSPS as an independent administrative institution?

Yes, JSPS became an independent administrative institution in October 2003, just three months before the Research Center for Science Systems was established. Over the past two years, the Center has through a process of sharing information and holding consultations with JSPS's administration been able to root itself deeply within JSPS's organization. Staffed now with 104 frontline researchers, the Center functions as JSPS's brain. This is, of course, not to say that JSPS was without good cerebral capacity before the Center was founded. Some 20 academic advisors had served as its brain. Nor was it that JSPS's program was unreflective of researchers' perspectives; the establishment of the Center was needed to provide the critical mass required to more systematically implement JSPS's rapidly expanding operation.

The Center, comprised as it is of researchers with extensive experience in the research community, has as is only natural a different set of insights and values from those of program administrators.

The question has long persisted, "Why is there a difference in what researchers consider to be an ideal grant allocation system and the one that is in actual practice?" With regard to such issues, researchers have over the years voiced their dissatisfaction to JSPS's administration. In the process of communication that evolved, a more synergistic relationship formed between the two sides, one in which they now work closer together in making program improvements. Various factors in JSPS's operation have stood in the way of establishing the kind of program implementation considered ideal by researchers. They include budget scale and format limitations, time constraints, and a lack of adequate staffing. By acquiring a better grasp of these internal factors, researchers have been able to more effec-

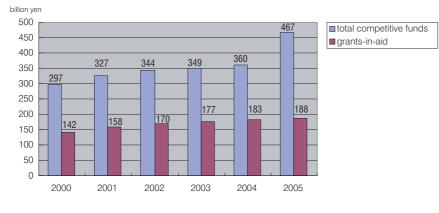


Dr. Tasuku Honjo

tively work together with JSPS's administration in making operational improvements. Through the establishment of the Research Center for Science Systems, it has been possible to foster within JSPS a clear concept of what is needed to dovetail researchers' needs with administrative realities.

## How does the Japanese grant application system differ from those of other countries?

Grants-in-Aid for Scientific Research account for 40% of Japan's competitive



#### Total competitive research funds from Japanese government versus grants-in-aid

research funding. (See graph above.) As such, these grants are the primary source for funding academic activities, especially bottom-up proposals from scientists across the spectrum of disciplines. Some 96,000 grant applications were received this year alone. JSPS recruits and reviews this large number of applications in just one 4-month period each year.

The Japanese review system is plagued with many complicated grant categories, particularly when compared to the simpler systems of the US and other advanced countries. What had once been a fairly uniform categorization of research grants has become a hodgepodge through a heaping up of budget requests for various new programs as government funding for scientific research increased. The resulting system is way out of sync with the on-theground situation of researchers. One wonders if any of Japan's funding agencies is really capable of providing comprehensive funding support in tune with researcher needs. When officials from such agencies come to my laboratory at Kyoto University, I have asked them about their holistic view of research funding. I have yet to receive an answer that satisfied me.

# That leads me ask what the Center is doing to improve the system?

It will be difficult to solve the problems I just mentioned all at once. Right now, we are concentrating on improving system efficiency.

The first issue we tackled was the system for selecting application reviewers. JSPS had in the past received nominations for reviewers from academic societies and former reviewers. This prompted requests from the research community to create a more transparent reviewer selection system, one undistorted by individual bias. In response, the Center created a database

of potential reviewers to use in assigning examiners to document reviews of submitted applications. The list for the Grants-in-Aid for Scientific Research program is updated every summer and the one for the Research Fellowships for Young Scientists program every winter, in line with their respective recruitment periods. This database was placed into full use last fiscal year; now work

is being done to enhance and refine the selection system.

Throughout the year, JSPS conducts application calls and screenings and performs project evaluations for its various programs. With regard to these operations, the Center periodically convenes senior program officer meetings, which are attended by me, our two deputy directors and the senior program officers in charge of each research group. At these meetings, program briefings are provided by JSPS's administrators and vigorous discussions held among the researchers with an eye to more effective implementation of those programs.

One example of the innovative ideas that have emerged from these discussions came as an answer to a question on how to assess the progress of young researchers who receive the special grant awarded to the best and brightest under JSPS's Research Fellowships for Young Scientists. Whereas in the past such progress reviews had been conducted by having fellows submit a written report, it was suggested that these "superlative postdoctoral" fellows be made to deliver an oral report in front of the Center's researchers. Placed into practice, this approach has proven to be very effective in that it not only provides a better way to evaluate the fellows' work but also allows us to assist and encourage them in the process.



Center's researchers receiving a presentation by superlative postdoc

So as to exceed what can be achieved in holding meetings, two working groups have been established within the Center: one for the Grants-in-Aid program and the other for the Young Scientists Fellowship program. Funding research and fostering researchers are two of JSPS's centerpiece programs. They are both given special weight within the government's science promotion policy. If these programs can be made more effective, they will exert an even greater impact on advancing scientific research in Japan.

# FEATURE



Senior program officer meeting

These groups are defining their respective issues and working toward making progress on solutions. The grants-in-aid working group has, for example, already made significant strides in improving the reviewer selection and application process and screening procedure. It is now considering how to overcome the many difficult hurdles associated with reforming Japan's dual-funding system. That is, government research funding comes in two forms: basic funding allocated to the universities and competitive funding, especially grants-in-aid. As basic funding is being cut, university laboratories are relying more upon grants-in-aid to sustain their operations. I believe that the government's grant-in-aid budget should be doubled over the next ten years. Doing this, however, will require putting into place a suitable system for allocating the larger quantity of grants along with a more accurate review mechanism. As I

mentioned, 96,000 applications were received this year, raising the question of what to do about the overburden placed on peer reviewers if grant-in-aid funding were to be doubled. Another idiosyncrasy of the Japanese system, as seen from an international perspective, is that it solicits grant applications in one big bunch just once a year. The

question is what in practice can be done to make the system more flexible? The same goes for how grants are spent: How can the system be changed to allow funds to be carried over into the next fiscal year so as to facilitate on-going research work? Though the answers to these questions would on the surface seem simple, various constraints imbedded in the Japanese bureaucratic system stand in the way of easily realizing reforms. It is such

perplexing issues that the working group is trying to tackle.

## What do you see as the future vista of the Research Center for Science Systems?

I am impressed with the spirit of Dr. Vannevar Bush, who founded the National Science Foundation in the US. It was his principle that as long as scientists are free to pursue the truth wherever it may lead, there will be a flow of new scientific knowledge to government, industry and others who wish to put it into practical use. The idea of government supporting research without attaching strings was I'm sure an epochal one in 1945 when research was focused on war-time applications. It has now become a universal precept in advancing scientific research, one that has significant ramifications in societal development as well.

To support research from a perspective that science pursued freely has unlimited potential will require transcending an ad hoc system of funding in favor of one that has the consistency of a long-term vision. In the period ahead, the Research Center for Science Systems will seek to shape that vision, one that is ideally suited to advancing research and upon which we can strengthen each of JSPS's programs.



Center's executive

## **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.

## Working Group on Research Fellowships for Young Scientists



Prof. Hideo Utsumi

Headed by Prof. Hideo Utsumi of Kyushu University, who is a senior program officer in the Center's Medical, Dental and Pharmaceutical Sciences Program Group, this working group has from its establishment in November 2004 dedicated itself to improving the review system for JSPS's Research Fellowships for Young Scientists program.

Through a series of studies and brainstorming sessions, the working group has to date made the following program improvements:

- To enable more precise reviews tailored to each research domain, the number of grant categories was increased from four (humanities and social sciences; mathematics and physics; chemistry; and life sciences) to eight (humanities; social sciences; mathematics and physics; chemistry; engineering; life sciences; agricultural sciences; and medical, dental and pharmaceutical sciences).
- 2) To enhance the transparency of the review process, different examiners are assigned to the first and second step (document and panel) reviews.

- 3) To create a better balance in the assignment of document reviewers, a database containing the names of potential examiners with superlative expertise and achievement in the subject fields has been established within the Center.
- To realize more objective, fairer evaluations, the number of document reviewers per application has been increased from three to six.
- 5) To enhance the efficiency of the review system and effect more appropriate selection decisions, the results of document reviews are ranked via t-score processing and effectively used in next-step panel reviews and interviews.

The review systems for JSPS's Postdoctoral Fellowships and other international programs are also being enhanced along the lines described above.

## Working Group on Grants-in-Aid for Scientific Research

Headed by Prof. Eiichi Nakamura of The University of Tokyo, who is a senior program officer in the Center's Chemistry Program Group, this working group has from its establishment in May 2005 been working intensively to improving the review system for Grants-in-Aid for Scientific Research program.

Through a series of studies and brainstorming sessions, the working group has to date made the following program enhancements:

1) Revamped the grant application format to make it user-friendly for both applicants and reviewers.

- 2) Redesigned the document review criteria to correlate them more closely with content of research proposals.
- Conducted a survey of conflict-ofinterest prevention systems used in other countries and introduced for the first time such a system into the Grant-in-Aid review process.
- Improved the format for preparing application documents so as to facilitate a clear articulation of the applicant's research plan and other requisites.



Prof. Eiichi Nakamura

# 2005 Recipient Chosen for International Prize for Biology

On 14 September, 2005, the Committee on the International Prize for Biology (chaired by Dr. Saburo Nagakura, president, The Japan Academy) of Japan Society for the Promotion of Science decided, based on the recommendation of the Prize's Selection Committee, to present the 2005 International Prize for Biology to Prof. Nam-Hai Chua, Laboratory of Plant Molecular Biology, The Rockefeller University, USA. The field of specialization for the 2005 Prize is "Structural Biology in Fine Structure, Morphology and Morphogenesis."

# Achievements Recognized by the Award

Prof. Nam-Hai Chua has achieved numerous breakthroughs in research on plant morphogenesis at the molecular level. In particular, he was the first in the world to investigate the proteins that act on photoinduced genes, together with the related gene structure-work that laid the foundations for subsequent research into the photomorphogenesis of plants. He also discovered "transit sequences" involved in protein transport into the chloroplasts, which play an important role in plant morphogenesis. Further, he has done unique and pioneering embryological studies of the basalapical axis of plants and the establishment of bilateral symmetry. These are just a few of the many notable contributions to the foundations of molecular and embryological research on plant morphogenesis that make him a worthy recipient of the International Prize for Biology. Prof. Chua has also mentored over twenty Japanese researchers, including Dr. Kazuo Shinozaki, director of the **RIKEN** Plant Science Center, and others thereby contributing to the development of scientific research in this area in Japan as well as in the world.

#### **Process of Selection**

The Selection Committee, composed of a chairman (Dr. Kiyoshi Aoki, professor emeritus, Sophia University) and 18 other members, including four overseas members, functioned as a sub-committee of the Committee on the International Prize for Biology. It sent out invitations for candidate nominations to academic institutions/associations and individual experts both at home and abroad in the subject field of specialization. Altogether these comprised 1,697 mailing addresses. Forty-eight nominations were received by the deadline. After adjustment for overlapping nominations, there were nominations for 32 individuals who reside in 16 countries spread throughout the world. Upon careful deliberation of the nominees at its first through fourth meetings, the Selection Committee decided to recommend Prof. Chua as the nominee for the 2005 Prize. Thereafter, the Committee on the International Prize for Biology formally endorsed the Selection Committee's recommendation.



Prof. Nam-Hai Chua

# Ceremony and Commemorative Symposium

The presentation ceremony for the 2005 International Prize was convened on Monday, 5 December, 2005 at The Japan Academy, Tokyo; and a commemorative international symposium was held on 30 November–1 December at the Noyori Conference Hall, Nagoya.

- Carried out by the General Affairs Division

POSITION: Andrew W. Mellon Professor and Head, Laboratory of Plant Molecular Biology The Rockefeller University

#### EDUCATION AND CAREER:

Education University of Singapore May 1962 - February 1965 B.Sc. in Botany and Biochemistry, June 1965 Harvard University September 1965 - June 1969 A.M. in Biology, June 1967 Ph.D. in Biology, June 1969 Prof. R.P. Levine, Thesis Advisor

#### **Previous employment history**

July 1988 - present	Andrew W. Mellon Professor and Head,
	Laboratory of Plant Molecular Biology
	The Rockefeller University
July 1981 - June 1988	Professor and Head,
	Laboratory of Plant Molecular Biology
	The Rockefeller University
July 1977 - June 1981	Associate Professor, Cell Biology Department
	The Rockefeller University
July 1973 - June 1977	Assistant Professor, Cell Biology Department
	The Rockefeller University
Oct 1971 - June 1973	Research Associate, Cell Biology Department
	The Rockefeller University
	Profs. P. Siekevitz, G.E. Palade, Advisors
Sept 1969 - Sept 1971	Lecturer, Biochemistry Department
	University of Singapore Medical School

## **Events & Recruitments**

#### San Francisco Office

JSPS/UTA Center for East Asian Studies Joint Colloquium "Interrogating Japan's 'Soft Power' in Japan" *The University of Texas at Austin, Texas, 25 February 2006*  For FY 2006

Application deadline from host institution to JSPS: 6-10 February 2006 JSPS Postdoctoral Fellowship for Foreign Researchers (Standard) JSPS Invitation Fellowship for Research in Japan (Short-term) Application deadline from host institution to JSPS: 8-12 May 2006

For details, ask a prospective host researcher or visit our website.

JSPS Postdoctoral Fellowship (Short-term) for North American and European Researchers

## International Workshop Held on Sumatra Earthquake Hazards

On 24-28 August, JSPS, Indonesian Institute of Sciences (LIPI), and California Institute of Technology cosponsored a workshop entitled "International Meeting on the Sumatran Earthquake Challenge," which was held in Padang on the Indonesian island of Sumatra. The workshop was born out of long years of cooperation between JSPS and its Indonesian counterpart LIPI. In response to a letter of condolence from JSPS president Prof. Motoyuki Ono following the recent devastating Sumatran earthquakes and tsunami, LIPI chairman Prof. Umar Anggara Jenie replied with a request for JSPS to help support a LIPI-organized workshop. JSPS was happy to fund approximately half of the cost of the workshop and to send a delegation, coordinated by Dr. Kenji Satake, National Institute of Advanced Industrial Science and Technology, to participate in it. The group comprised 23 researchers and three JSPS staffs headed by JSPS executive director Mr. Isao Kiso.

At the workshop's opening ceremony on the evening of the 24th, Mr. Kiso delivered a message on behalf of JSPS. The 5-day event was packed with activities including oral presentations, poster sessions, a scientific tour, and an exhibition. The international group of attending earthquake scientists and engineers compiled the results of their discussions into a set of recommendations called the "Padang Declaration" to be submitted to the national government, local administrations, and cognate research institutions. Attended also by the governor of West Sumatra, the workshop attracted considerable



Scientific tour

media attention.

The great earthquake near Sumatra on 26 December 2004 generated a massive tsunami, followed by a series of major earthquakes in March and April 2005. Research results on these giant earthquakes and earlier ones in 1797 and 1833 were discussed with an eye to predicting future earthquakes and tsunami and establishing countermeasures to be implemented. In this light, the Padang Declaration made recommendations on continuing and expanding earthquake and tsunami research in Indonesia, strengthening collaborative research efforts with overseas researchers and institutes, enacting initiatives to educate the citizens of high-risk communities, creating disaster preparedness and early response plans, and making infrastructure enhancements needed to withstand the impact of strong earthquakes and tsunami.

- Asian Program Division

# Japanese University Presidents Visit Sweden

Over the period of 17-22 October, a delegation of Japanese university presidents and directors made a visit to Sweden. Led by Dr. Masuo Aizawa, president, Tokyo Institute of Technology, the delegation represented 17 Japanese universities and was accompanied by JSPS president Prof. Motoyuki Ono. The visit was conducted as part of a continuing exchange built upon the fruits of a group of Swedish rectors' visit to Japan in October 2003.

The delegation convened a seminar with Swedish rectors and administra-

tors on the state of university research and education from a top management viewpoint. They also observed state-ofthe-art research and education programs at Swedish universities and held conversations with their faculties and staffs. Their discussions throughout the visit were most animated when it came to the subject of "innovation." In this vein, one presentation addressed the need for universities to integrate basic and applied research and to feed the results into society.

On the  $21^{st}$ , the delegation attended a



conference of the European University Association in Uppsala, where they exchanged views on university research strategy and other subjects with counterparts from around Europe.

- JSPS Stockholm Office

# International Law Symposium Held with German Partner Agencies

From 29 September through 1 October, JSPS in partnership with Alexander von Humboldt Foundation (AvH) and German Academic Exchange Service (DAAD) held a symposium titled "Globalization and Law: Japanese and German Contributions to an International Legal System in the 21<sup>st</sup> Century." Venued in Tokyo, it was held as an event of "Germany in Japan Year."

Attended by legal experts and young researchers from Japan, Germany and Asian countries, the symposium explored the influence that advancing globalization is exerting on the international legal system. It also looked at the respective contributions that Japan



From left: Dr. Bode, Prof. Ono, Dr. Schütte

and Germany can make to enhance the international legal system and what they could and should do in collaboration. Over the 3-day event structured in a working group format, keynote speeches were given by leading experts in the field of jurisprudence. The some 300 participants engaged in vigorous exchanges of views within the working groups.

The second day featured a panel discussion comprising young researchers, AvH secretary general Dr. Georg Schütte, DAAD secretary general Dr. Christian Bode, and JSPS president Prof. Motoyuki Ono. They discussed a framework visualized by the young legal researchers for international cooperation in research, education and training and the possibility of such a framework winning support from international science-funding agencies. This line of the discussion added a new vista to the collaborative relationship between JSPS and its German partners. — Research Cooperation Division II

 ${f S}$ ymposium on "Cognition and Action" Held in London

On 8-9 September, the JSPS London Office and University College London (UCL) cosponsored a large-scale symposium on the theme "Cognition and Action," which was held in UCL's Kennedy Lecture Theatre. This eleventh symposium in the series focused on neuroscience. Co-chaired by Prof. Atsushi Iriki, RIKEN and Tokyo Medical and Dental University, and Prof. Roger Lemon, Institute of Movement Neuroscience, UCL, the symposium featured presentations given by six leading researchers on the Japanese side and nine on the UK side.

Many advances have been sparked in the life sciences, particularly in the field of brain science, by mutual stimulation between Japanese and British researchers. This, nevertheless,



was the first time for the symposium to take up this subject as its theme. Hearing that lectures would be given by leading neuroscience experts, some 150 researchers came from not only London but Oxford, Cambridge and other places around the UK to participate in the event. Following the presentations, they actively engaged the lecturers in questions and discussions on neuro-research methods, results and future prospects.

UCL's Institute of Movement Neuroscience is one of the UK's top centers of excellence, having a brilliant record of achievements in the fields of brain and neurological investigation. On the other hand, frontline researchers in Japan boast milestone advances in the field of primate neurology (precursors of human intelligence). By enriching the already active exchange enjoyed between UCL researchers and their counterparts in leading Japanese universities, the symposium promises to have set the stage for an even more powerful collaborative research environment in this field.

- JSPS London Office

# Symposium Held in Canada on Christians in Japan

On 23-24 September, the JSPS San Francisco Office held a symposium entitled "Experiences With and Within: Christians in Japan from the 16<sup>th</sup> Century to the Present Day" in partnership with the University of British Columbia. Venued at UBC's Asian Centre, the program was co-organized with the University's Department of Asian Studies, the Institute for Asian Research's Program in Religion and



Public Policy, with support from the President's Advisory Committee on Lectures and the Faculty of Arts. This third symposium in the Office's "science colloquium" series was the first to be held in Canada. It featured presentations by eight leading researchers from Japan, Canada, the US and Portugal.

On the first day, JSPS president Prof. Motoyuki Ono delivered welcoming remarks, followed by two sessions: "The Experiences of Japan's Earliest Christians" in the morning and "20<sup>th</sup> Century Christians and the Japanese State" in the afternoon. At each session, researchers and students in the audience probed the subject matter with many questions, engaging the speakers in spirited discussions. The day's activities ended with a keynote speech by Prof. John Howes, professor emeritus of Asian Studies, UBC.

Held on the second day, the third session titled "Experience With and Within" featured two Japanese researchers and another round of questions and answers. The event wrapped up with a roundtable discussion.

The 2-day symposium attracted more than 120 people, with an unexpectedly high turnout of researchers from the US west coast. Transcending borders and disciplines, the symposium gave the participating researchers a unique opportunity to make and renew acquaintances, while rejuvenating their networks with the young scholars in attendance.

- JSPS San Francisco Office

# Go Asia 2005 Symposium Held in Sweden

On 8-9 September, a Go Asia Symposium was held on the theme "Diabetes." Venued on the campus of the Karolinska Institute (KI), the event assembled researchers from both Sweden and Asia, namely Japan, Malaysia, Vietnam and India.

With special focus on diabetes research at KI and in the participating Asian countries, the symposium allowed the attending KI researchers and students to enhance their knowledge of laboratory and clinical work being conducted in the Asian countries. At the same time, it served to promote interchange and the building of working networks among the participants. As a cosponsor, JSPS cooperated in the selection of the Japanese speaker and providing funding with an eye to contributing to the promotion of Japan-Sweden scientific exchange.

The symposium started with remarks by KI president Prof. Harriet Wallberg-Henriksson, who welcomed the participants, giving them an overview of KI's research program. In the first day's session, Dr. Mitsuhiko Noda, International Medical Center of Japan, reported on the Japan Public Health Center-based Pro-



spective Study on Cancer and Cardiovascular Diseases (JPHC Study), particularly the linkage it found between diabetes and lifestyle, including drinking and smoking, and the effects of lifestyle improvements. — JSPS Stockholm Office

# JSPS Alumni Club in Sweden Holds Executive Meeting

On 31 October, the JSPS Alumni Club in Sweden held an executive committee meeting in Stockholm. The meeting was attended by all eight members of the Club's board, whose discussions resulted in a decision to hold a general meeting of the members and a seminar on 27 January in Stockholm. They also talked over the details of the general meeting, including criteria for participation as an honorary member. They further considered the idea of holding subsequent years' meetings in Lund and Gothenburg, where many of the



Club's members reside, and the possibility of initiating exchanges with other JSPS alumni associations in Europe.

A seminar was held in the afternoon

following the committee meeting. It was attended by about 40 people including the executive members. Swedish and Japanese researchers spoke based on their long years of experience in the bilateral exchange about the state of exchange between the countries, differences in cultures, and ways to cope with them in working together. Furthermore, a vigorous discussion among all—speakers, Club members and other attendees—was advanced on how to expand Japan's exchange with Sweden. — JSPS Stockholm Office

## **Recent Visitors to JSPS (August-October 2005)**

#### **Eminent Scientists Visit JSPS**

Visits to JSPS were made on 25 October by Dr. Alexei Alexeyevich Abrikosov, distinguished scientist, Materials Science Division, Argonne National Laboratory, and on 27 October by Prof. Gilbert Stork, emeritus professor, Columbia University. Both met and held conversations with JSPS president Prof. Motoyuki Ono. Dr. Abrikosov had been invited to Japan by the University of Tsukuba under the JSPS Award for Eminent Scientists, and Prof. Stork by Tokyo Institute of Technology under the same program.

Dr. Abrikosov, who won a 2003 Nobel Prize in Physics, would give lectures and hold discussions at Kyoto University, Tohoku University, Tokyo University of Science, and Hitachi's Advanced Research Laboratory during his visit. At the University of Tsukuba, he was presented an honorary doctoral degree.

This time in Japan, Prof. Stork, a recipient of Israel's Wolf Foundation Prize in Chemistry, would give lectures to graduate stu-



Third from left: Dr. Abrikosov

dents at his host institution Tokyo Institute of Technology, visit The University of Tokyo, and participate in a symposium on Natural Organic Compounds held in Tokushima.

- Overseas Fellowship Division



Center: Prof. Stork

# Science Dialogue

From this fiscal year, JSPS has instituted the "Science Dialogue Program," which provides a framework for JSPS fellows to participate in the educational programs of high schools within the vicinity of their host institutions. Through this program, JSPS seeks to kindle a thirst for learning among the high school students, while giving the participating fellows an opportunity to deepen their ties with Japan through their contact with the students.

- Carried out by the Overseas Fellowship Division

August–October 2005





In a capacity under JSPS Science Dialogue Program, four Fellows took part in an International Science Camp. This intensive English science program was held on 8-9 October at Takasaki High School, and attended by 45 students. Each of the participating Fellows gave a presentation on his or her research, followed by a group discussion in English on the subject field revolving around the Fellow.

On the second day, the students gave presentations in English on the lectures and discussions of the preceding day. They were critiqued by the Fellows. The students displayed great interest in the research topics of the Fellows. As budding researchers themselves, the students were made more keenly aware through this experience of the need to acquire better English and presentation skills.

## **GUNMA**

Takasaki High School
Date: 8–9 October
Dr. Mei Tian (China)
Host institute: Gunma University
"PET Scans in Cancer Diagnosis – Their Clinical Utility"
Dr. Romain Lenglet (France)
Host institute: Tokyo Institute of Technology
"Software Engineering"
Dr. Madalin I. Enache (Romania)
Host institute: RIKEN
"Importance and Diversity of the Halophilic Archaea"

**Dr. Maura A. Raburn** (USA) Host institute: The University of Tokyo "Fun with Lasers"



Ritsumeikan Senior High School

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ΚΥΟΤΟ

NARA Nara High School

## **OKINAWA**

## Kaiho Senior High School

Date: 14 September Dr. Julien Le Breton (France) Host institute: University of the Ryukyus "Studies of Invasive Ant Species in the Pacific Islands"



## KAGOSHIMA

## Ikeda High School

Date: 29 August Dr. Raffi R. Kamalian (USA) Host institute: Kyushu University "Intro to MEMS and MEMS Sensors" Date: 22 October

Dr. Guang Yang (China)

Host institute: Kyushu University

"Design of Innovative Materials by Learning from Nature"



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## **HOKKAIDO**

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Lectures given before August 2005

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Given during August to October

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## **Obihirohakuyou High School**



## HOKKAIDO

## Hokkaido Erimo High School

Date: 14 September Dr. Dong-Su Choi (Korea) Host institute: Hokkaido University "Soil Acidification and CO2 Enrichment Affecting Growth of Pine Trees and Symbiotic Microorganisms in Korea"





## ΤΟΚΥΟ

## Tokyo Metropolitan Kokusai High School

Date: 28 September Dr. Bolormaa Oyuntsetseg (Mongolia) Host institute: Tokyo Institute of Technology "The Influence of Heavy Metals to the Environment" Dr. Sean E. Richey (USA)

Host institute: The University of Tokyo "Voter Turnout in Japan and the United States"





## **YAMANASHI**

## Yamanashi Prefectural Tsuru High School

Date: 25 October Dr. David Lemin (Belgium) Host institute: Chiba University "Introduction to Natural Products and Medicinal Chemistry"

## **SHIZUOKA**

### Iwata Minami High School

Date: 28 September Dr. Pavel Baroch (Czech) Host institute: University of Nagoya "Plasma Science in Our Lives" Dr. Raphael Plasson (France) Host institute: Keio University "Origins of Life on Earth"



### **Ichinomiya High School**

Date: 29 October Dr. Svetlana A. Fedorova (Russia) Host institute: University of Nagoya "Normal Kidney Development in Medaka Fish"

#### Call to Interested Fellows

An invitation to apply for participation in the JSPS Science Dialogue is extended to current fellows. Please note that selected fellows will be asked to volunteer their services. If you are interested in this opportunity, please contact our Overseas Fellowship Division by e-mail at

gaitoku@jsps.go.jp or by fax at

03-3263-1854.





Series

先輩からのメッセージ

## Message from Former JSPS Fellow (2)

## JSPS fellowship begins a long-lasting encounter with Japan

In November 1986, I finished my legal education in Germany with the second state exam in law and immediately flew to Japan to start my studies of Japanese law at the Legal Faculty of Chuo University in Tokyo with a postdoctoral fellowship provided by JSPS. As a former assistant at the Institute for International Commercial Law at the University of Muenster, I always wanted to study a foreign legal system after finishing my German education. At the institute, I met and befriended a Japanese law professor who was himself studying German law. He asked me to come to Japan and accepted me as a guest at his alma mater. That is how it all started. My collaboration with my host, Prof. Dr. Koresuke Yamauchi, is still very close. In fact, I write this article sitting in my study at Chuo University, whereto he invited me during my current sabbatical as a quest professor.



With former host Prof. Dr. Yamauchi

But let's return to the beginnings. After the end of the JSPS fellowship I did not return to Germany as I still had the impression that my Japanese language abilities were not sufficient for doing deeper research on Japanese law and my Japanese legal knowledge was still not enough to call myself what I wanted to become, a specialist on Japanese law. Therefore, in 1989 I took a position as scientific researcher in the German Institute for Japanese Studies in Tokyo, which the German government had just established in 1988. After five years spent there, I began looking for a teaching position in Germany. But there was no professorial chair to be found in Japanese law, as German research activities on Japanese law had only started in the late 1970s when the overwhelming Japanese economic success was felt there.

As I wanted to use my Japanese language and law knowledge, I settled for the post of director of the Permanent Office of the European Association for Japanese Studies, which at that time had its seat in Leiden, the Netherlands. The office was located there because the University of Leiden is said to house the oldest chair for Japanese studies in Europe, being established in 1855. Some time later, I took the position of director of the Law and Tax Department of the German Chamber of Commerce and Industry in Tokyo so that I could continue improving my Japanese language and legal knowledge. When in 1999 the first professorship on Japanese law in the Germanspeaking area was offered at the University of Marburg, I applied and was happy to be accepted. Since 2001, I have been teaching Japanese law there in Germany.

As the first step to this career was taken with substantial help from JSPS, I have always felt grateful. Together with some other JSPS fellows from Germany, I therefore in 1995 set up an association of former German JSPS fellows in Bonn, which due to its quite long official German name is simply called "JSPS-Club." This club, being the first alumni organization of JSPS fellows worldwide, has enjoyed the strong support of the JSPS Bonn office and JSPS headquarters since its foundation. It features a number of activities, among which the annual jointly organized scientific symposium in Germany is the most important. In September this year, the club again in close cooperation with JSPS held its first symposium in Tokyo to commemorate not only the 10th anniversary of its foundation but also to show active German-Japanese scientific cooperation in the Year of Germany in Japan, which started in April 2005.

Dontsche Gewillschaft Sitz der 1978 Stependiaten e.V.	Booklet commemorating 10 <sup>th</sup> anniversary of JSPS Club
10 <sup>th</sup> Anniversary atte Deutsche Gesellschaft der JEFS-Stipperdiaten «M.	
- German-Japanese Scientific Exchange -	
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#### Prof. Dr. Heinrich Menkhaus

JSPS Postdoctoral Fellow, 1987-1989 Professor of Japanese Law, Faculty of Law, Philipps-University Marburg, Germany Executive Director, Japan Center, Philipps-University Marburg, Germany Chair of "Deutsche Gesellschaft der JSPS-Stipendiaten e.V." (JSPS-Club)

Having been a member of the board of the club since its foundation, in 2002 I took over the chairmanship from my dear colleague Prof. Dr. Uwe Czarnetzki, a physicist, who had run the organization successfully from its beginning. My involvement in Japanese-German bilateral scientific relations has also given me the opportunity to head the German-Japanese Society for Labor Law and the German Association for Japanese Studies. All this might, however, not be enough as Germany is due to financial restraints cutting back funding for university institutions doing Japanese studies. As these institutions are the natural corridor for bilateral communications, every opportunity-also in Japan-should be taken to point out and resolve this dilemma. Thus, I strongly support every help that JSPS is willing to provide in sustaining a prosperous German-Japanese scientific exchange.



Board members of JSPS Club with Prof. Dr. Menkhaus sitting between JSPS executive director and president

# Introducing JSPS Overseas Offices: Bonn



Founded in October 1991, the JSPS Bonn Office was the first JSPS overseas liaison office to be established in Europe. In 1996, it moved to its present location inside Wissenschaftszentrum Bonn (Bonn Scientific Center). The office is located on the second floor of the Center's 2-story building, nestled in a quiet grove of trees. Just a few minutes walk from the office is Rheinaue Park, situated along the Rhine.

Established in 1976, the Bonn Scientific Center serves as the core of a powerful network to promote scientific advancement in Germany. Many German science-promotion organizations gather at the Center, including JSPS's partner agencies German Academic Exchange Service (DAAD) and German Research Foundation (DFG) as well as other organizations such as the Helmholtz Association of National Research Centres and the German Rectors' Conference. Needless to say, the center is an ideal location for JSPS's Office.

Since its establishment, the Bonn Office has worked to develop good collaborative relationships with JSPS's partner agencies—namely DAAD, DFG, the Alexander von Humboldt Foundation (AvH), and the Max Planck Society (MPG)—while laboring to promote Japan-German cooperation. Over the 10 years of its operation to date, the Office program has been carried out by its director (currently, Prof. Yasuo Tanaka), deputy director, Japanese interns, and local staffs.

In 1995, the first JSPS fellows' alumni association

was established in Germany. Called the JSPS Club for short, it was modeled upon the Humboldt alumni clubs. Since the Club's establishment, the Bonn Office has, with an eye to sustaining and developing the Club's activities, played a backstage role as its secretariat in carrying out the Club's administrative functions. Every two or three months, the Office publishes a German-language newsletter named Rundschreiben, through which it provides information on scientific developments and trends in Japan. Its last page carries a corner dedicated to former JSPS fellows, which offers information on their activities while giving them a vehicle to voice their views. Besides the Office's own homepage (http://www.jsps-bonn.de/) and that of the Club's (http://www.jsps-club.de/), the two organizations collaborate in providing an Office-managed gateway site (http://www. forschen-in-japan.de/iexplorer/start.html) for disseminating information on Japan-German cooperation.

Once a year, the JSPS Office and Club hold a Japan-Germany Science Symposium, whose theme, venue and other details are discussed and planned together by the two organizations. Having a rotating venue around Germany, the symposium is attended each year by over 200 people, mainly JSPS alumni. This year, the Club celebrated its tenth anniversary with a special Japan-Germany Science Symposium in April and another symposium in September in Tokyo, which was co-sponsored by the Club and JSPS's headquarters and held as part of "Germany in Japan Year."

In addition, the Bonn Office has from two years ago been holding small-scale science colloquiums for young Japanese and German researchers. Every summer, the Office also holds what is called "summer fest," an annual reporting meeting ("JSPS Abend") combined with a congenial get-together to foster friendship and promote stronger cooperative ties with JSPS's partner agencies in Germany.

Recent years have seen an increase in opportunities for the Office to collaborate with JSPS's German partners through newly launched programs with them. For the first time this year, the Office worked in cooperation with DAAD in providing a pre-departure orientation for German participants in the JSPS Summer Program. Among other expansions of its activities, the Office is also asked by DFG and other agencies and universities to provide briefs on JSPS's programs.

Moreover, this year the JSPS Club has taken the lead in holding for the first time a pan-European JSPS alumni council. This initiative has allowed the Bonn Office to also strengthen its ties with the other JSPS offices in Europe.

It is through this kind of strong trilateral partnership with the club and partner agencies that the JSPS Bonn Office would like to promote Japan-German collaboration and develop its programs with a view to creating linkage throughout Europe.

- JSPS Bonn Office

## Japan-Germany Science Symposium Held in Tokyo

On 12 September, JSPS and the JSPS Club (former JSPS fellows' association in Germany) co-sponsored a symposium on the theme "Urban Planning—Sustainable Cities." Held at the National Olympics Memorial Youth Center in Tokyo, it had two purposes: to participate in as an event in "Germany in Japan Year" and to celebrate the Club's tenth anniversary. Germany is well known internationally for its frontier research on the subject, while it shares with Japan a high interest in the environment as a global issue.

In prelude to the presentations, JSPS executive director Prof. Kenichi Iga and JSPS Club chair Prof. Dr. Heinrich Menkhaus (professor, Philipps-University Marburg) greeted the attendees, giving them an overview of the Club's 10-year history. Then, Mr. Stefan Gallon, Minister of the German Embassy in Tokyo, congratulated the JSPS Club on its successful first decade of operation and offered a look back over the unique history of the German-Japan partnership, which started in the 17<sup>th</sup> century between scientists of the two countries. Speaking for all, he expressed high expectations in the German JSPS Club, which has inherited this deep-rooted tradition. The keynote speech was delivered by JSPS Club board member Dr. Arnulf Jäger-Waldau (Renewable Energies Unit, Institute for Environment and Sustainability, EC Joint Research Centre).

Three sessions were held, each featuring presentations by one German and one Japanese researcher. The morning session was on "Concepts of Sustainable City"; the afternoon session, "Technical Solutions"; and evening session, "Social Impact of Urban Planning." Delving into the form that cities might take to reduce resource and energy consumption, some speakers drew upon the experience of their respective countries in offering models of urban sustainability, while others introduced urban management schemes that incorporate reusable energy, such as solar and wind power, and other city design innovations. Still others considered vistas for future urban planning, as illustrated in one presentation titled "Paradigm Shift for Sustainable Society."



Attending the symposium were about 30 members of the German JSPS Club, who had traveled to Tokyo for the occasion, and their former Japanese host researchers, along with representatives of German science-promotion agencies and experts in the fields of environment and urban planning. The some 80 attendees listened attentively to the lectures and asked spirited volleys of questions. Afterwards, many of them praised the symposium for its meaningful role in advancing dialogue on solutions to issues of urban sustainability.

More details on the symposium can be found at the following URL: http://www.jsps-bonn. de/pages/DinJ2005.htm

- JSPS Bonn Office

Series

Hailing from Sri Lanka, Dr. Chandrajith Ashuboda ("Ashu") Marasinghe started his JSPS postdoctoral fellowship in the Software Engineering Laboratory of the University of Aizu in November 2004. His host, Prof. Minetada Osano, was one of the referees for Dr. Marasinghe's PhD dissertation at the University of Aizu, where he received both his master's and doctorate degrees. He was introduced to Prof. Osano by his doctoral supervisor Prof. Michael Cohen. Prof. Osano said of Ashu, "He's a person who puts others before himself. He has the sort of heart that Japanese once possessed but have forgotten."

#### You are researching "kansei engineering" under your JSPS fellowship. This is a new field to us. "Kansei" is Japanese, is it not?

Yes, *kansei* is a Japanese word in which the first syllable *kan* means sensitivity and the second *sei* means sensibility. It does not have a direct translation in Western languages. *Kansei* engineering is a new branch of information processing science, one born in Japan. As *kansei* engineering can answer many research questions with regard to emotional reactions, it's a concept of considerable interest to many research fields, including computer science, robotics, design science, perception, and marketing.

As this concept is still new in other countries, Japan is the best place for me to pursue my research. Being one of very few foreign researchers doing work in *kansei* engineering in Japan, I am privileged to learn from and share ideas with pioneers of this field. Wanting to promote this research in my home country, I am currently working on a proposal to establish a *kansei* engineering society in Sri Lanka starting from next year.

# What is the focus of your research in the kansei engineering field?

In our project, we are focusing on conducting kansei evaluations of cross-

cultural sound perceptions by measuring emotional reactions. *Kansei* processing can influence sound perception in different ways according to cultural characteristics. Our project considers alternatives for assessing *kansei* reactions, and we hope it will better elucidate how *kansei* reactions by listeners of each language are used to describe various natural and synthetic sounds. We evaluate *kansei* properties of sound perception using *kansei* adjectives to describe sounds in different native language groups.

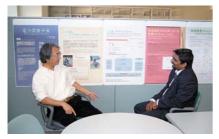
# What is your impression of your host institution?

This is my seventh year at the University of Aizu. It is a great university for foreigners who want to do research, study, or work in Japan. It has a highly refined international flavor. Currently, around half of the faculty are from other countries. Lectures are given either in English or in Japanese at the undergraduate level. The language of instruction at graduate level is English in principle, and students are required to write their dissertations in English. Simultaneous interpretation is provided between Japanese and English in faculty meetings.

This year, the university was chosen as one of the 20 pilot institutions under the Ministry of Education and Science's new Strategic Fund for Establishing International Headquarters in Universities. It has a particularly strong program in the field of computer engineering, supported by a worldclass computer environment. Being a regional university, it enjoys a close relationship with the local community. When students or researchers go to town, we are greeted warmly.

# What do you do outside your research? Do you take part in any community activities?

I consider Aizu-Wakamatsu to be my home away from home. I have learned many things living in the Aizu culture and among the Aizu people. I participate in several social activities so as to learn more about Japanese



Dr. Marasinghe with his host Prof. Osano



Dr. Marasinghe and other HC 2005 conference participants



## Dr. Chandrajith Ashuboda Marasinghe

B.Sc. (Physics and Mathematics),
University of Colombo, Sri Lanka, 1997
M.Sc. (Computer Science and Engineering),
University of Aizu, 2001
Ph.D. (Computer Science and Engineering),
University of Aizu, 2004

culture, especially Aizu culture. Voluntary activities are I think the best way to immerse oneself in society and culture. Most of my free time is spent participating in the Aizu-Wakamatsu Rotary Club; International Youth Exchange Organization, Fukushima; Environmental Conservation Association; Aizu-Sakura Lanka Club; and other volunteer organizations to which I belong. Lately, I have also been visiting temples in the area with Prof. Osano and studying the history of Aizu-Wakamatsu. I believe this helps deepen my research of *kansei*.

# Finally, what advice would you offer someone about to begin a JSPS fellowship?

Becoming a JSPS fellow has lifetime rewards. I have three pieces of advice. Most important is to maintain a close relationship with your host researcher. Next, try to communicate with your colleagues at the host institution so as to build strong networks with Japanese experts in your field. Then, make contact with the local community through volunteer activities. Of course, you must give priority to your research; however, using your spare time to participate in such activities will help you learn the customs and improve your language skills. Always keep your promises, and you will build strong relationships with the Japanese people.

Interview by JSPS Fellows Plaza

# Introducing Japan: Aizu-Wakamatsu

# By Dr. Chandrajith Ashuboda Marasinghe, JSPS Fellow

I think Aizu-Wakamatsu is one of the most beautiful cities for sightseeing in Japan's Tohoku region. Located in Fukushima Prefecture, it has lots of beautiful mountains, lakes, parks, historical places, and hot springs. I have found the people of Aizu to be both kind and helpful. They welcome tourists warmly with their unique traditions and generosity.

To the east of Aizu-Wakamatsu is Lake Inawashiro, Japan's fourth largest lake. It is also called Lake Tenkyo (heaven's mirror) because it reflects the silhouette of Mt. Bandai on its surface. The centuries old castle town of Aizu-Wakamatsu now has a population of 120,000. At its center is Tsuruga Castle, around which the city's streets are patterned.



Eating soba

Kozuvi

Tsuruga Castle

A unique symbol of Aizu is *akabeko*, or "red cow," in the Aizu dialect. As a carved souvenir, it is one of Fukushima's few folk crafts to be well-known throughout Japan. *Akabeko*, with their free-swinging heads that bob, make people smile.

Visitors to Aizu-Wakamatsu are almost certain to treat themselves the local *soba* cuisine during their travels. These brownish buckwheat noodles are an eternal favorite with Japanese, who have traditionally eaten them on New Year's Eve to ensure long life.

Aizu-Wakamatsu is also one of Japan's principal *sake*-brewing regions; made with melted snow, the local rice wine is famous for its excellent flavor.

Kozuyu has been a classic Aizu dish, one which was cooked and eaten mainly by the samurai class. It is a soup made of taro, carrots, *konnyaku*, dried mushrooms, scal-

lop ligaments, and other curious ingredients and seasoned with salt and soy sauce. Historically, *kozuyu* was served on ceremonial occasions, and continues to be prepared for New Years and other celebrations. It is served in a small, flat lacquerware bowl to ensure that it's eaten while hot.

I hope you will have a chance some day to come here to Aizu-Wakamatsu and to taste both its unique cuisine and flavorful culture.



## JSPS Fellows Plaza Website Newly Updated

JSPS Fellows Plaza has expanded its website, which provides information for present, past and prospective JSPS fellows. Please visit our new site at the following address: http://www.jsps.go.jp/english/e-plaza/

The site has pages on "How to Apply" "Experiences and Messages from JSPS Fellows," and "Program Guidelines." It has now added two new pages: "e-Orientation" and "Find Nearby Fellows."

On the "e-Orientation" page, a video is provided of JSPS executive director Prof. Kenichi Iga welcoming newly arriving JSPS fellows and giving them a brief overview of JSPS's orientation program. The "Find Nearby Fellows" page may be used to locate colleagues who are stationed nearby your host institution or who have similar research fields.

Our newsletter "JSPS Quarterly" and the booklet *Life in Japan for Foreign Researchers* can also be viewed through the site.

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





#### **Cover photo:**

Mountain-nestled Shirakawa Village and its traditional houses with steep thatched roofs supported by handsjoined-in-prayer (*gassho*) rafters.

## **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.



# 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.

# 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. For further information on JSPS's organization and programs, please visit our website [www.jsps.go.jp/english/], or mail or fax inquiries to JSPS Fellows Plaza using the address or fax number given below. JSPS Quarterly and our brochure may also be downloaded.

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