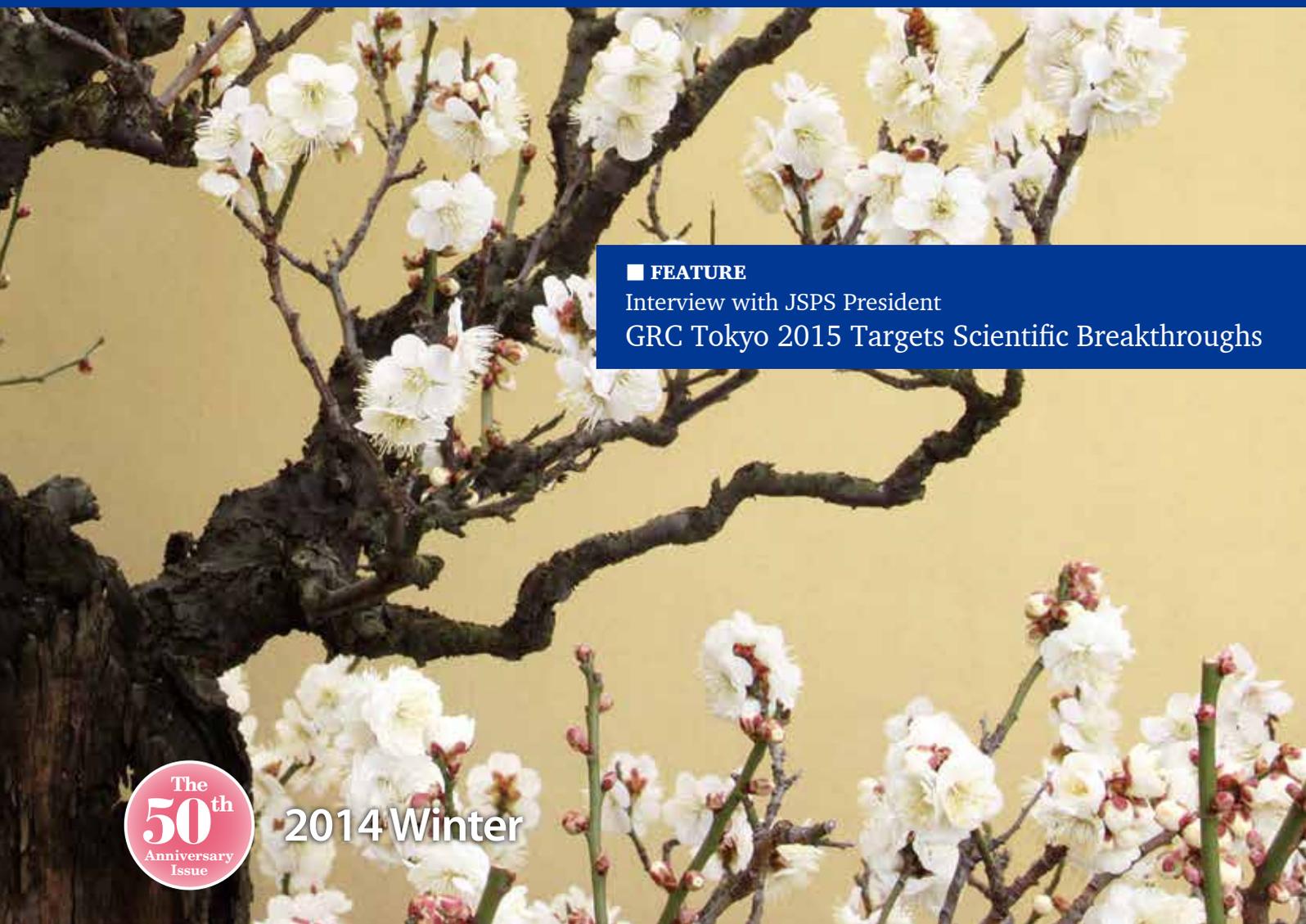




# JSPS QUARTERLY

JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE



■ FEATURE

Interview with JSPS President  
GRC Tokyo 2015 Targets Scientific Breakthroughs



2014 Winter

# Nobel Prize Dialogue to Be Held in Tokyo

A decision has been made to hold the first ever Nobel Prize Dialogue in Tokyo. It will be cosponsored by the Japan Society for the Promotion of Science and the Nobel Media.

From 2012, this event has been held as an open-to-the-public symposium, titled Nobel Week Dialogue, in Sweden around the time of the Nobel Prize Ceremony. This will be the first time for it to be held outside Sweden.

Meant to elevate public interest in and understanding of science and technology and to contribute to their advancement, “Nobel Prize Dialogue Tokyo 2015” will place on stage world-renowned researchers and scholars, including Nobel laureates, from Japan and around the world. Students, researchers and members of the interested public are invited to attend. A special website will be set up to provide information on the registration procedure, program agenda, and other related details.

In the meantime, the following basic information is offered on the upcoming Nobel Prize Dialogue event:

**Date:** 1 March 2015

**Place:** Tokyo International Forum (3-5-1 Maru-no-Uchi, Chiyoda-Ku, Tokyo)

**Cosponsors:**

Japan Society for the Promotion of Science  
Nobel Media

**Theme:** Genetic Revolution and Its Future Impact

**Language:** English (Japanese simultaneous interpretation provided)

**Attendance capacity:** 1,000 people

The registration procedure is being prepared and will soon be posted on the event’s dedicated webpage.

## JSPS President’s Message of Congratulations to Professors Isamu Akasaki, Hiroshi Amano, and Shuji Nakamura on Their Receipt of the Nobel Prize in Physics

On behalf of the Japan Society for the Promotion of Science, I extend our hearty congratulations to Dr. Isamu Akasaki, professor, Meijo University, and distinguished professor, Nagoya University, Dr. Hiroshi Amano, professor, Nagoya University, and Dr. Shuji Nakamura, professor, UC Santa Barbara, USA, for their winning this year’s Nobel Prize in Physics.

As global frontrunners, these three Nobel Prize recipients succeeded in developing the high-luminance blue light-emitting diode. This not only made possible the advent of the low-energy blue light but the white light as well. Their breakthrough has contributed greatly to economizing energy resources while giving the world new light sources. This accomplishment is seen as a powerful outcome of Japan’s basic research, one which I am very grateful has been appraised anew.

A commonality that runs through the activities of these three Prize recipients is the way in which their own creative ideas drive basic research that sprouts seeds of innovation.

If the support that Professors Akasaki and Amano have received from our Grants-in-Aid for Scientific Research has been of assistance in advancing their research to this lofty height, we at JSPS would be extremely pleased.

I look forward to this award of the Nobel Prize being a source of courage and pride to all those engaged in scientific research, particularly young researchers who while toiling away at an early stage of their careers are zestfully endeavoring to expand science’s frontiers.

In the future as well, JSPS will vigorously support various genres of creative research advanced by researchers’ own free ideas while we work to create an environment conducive for young researchers to generate new, world-leading research results. In such ways, JSPS will strive to sustain Japan as a country among nations with the capability of creating “knowledge.”

Dr. Yuichiro Anzai  
President

Japan Society for the Promotion of Science, JSPS

# Interview with JSPS President GRC Tokyo 2015 Targets Scientific Breakthroughs

Dr. Yuichiro Anzai, President of JSPS

**Q** In your travels around the world as the president of JSPS, I know you have exchanged views with the heads of funding agencies in a great many countries. Dr. Anzai, what are the current trends in scientific research around the world, as you have found them?

**A** Having discussed the global state of scientific research with leading researchers and top executives of the research agencies, my sense is that scientific research as intellectual activities driven by researchers' curiosity and the inventions and discoveries they generate are essential for building sustainable and prosperous societies for the world's people. Such research not only propels the creation of intellectual assets that become the common property of the world's people, but also contributes to the societal development of each nation. Having reached scientific research, globalization has given advent to an era in which researchers collaborate in a competitive manner via international network, with excellent research outcomes being produced within a global environment. To keep up with this trend, cross-border cooperation and competition is also needed among the funding agencies and research institutes that support the world's researchers.

**Q** Looking at scientific research trends in Japan, one after another Japanese researchers have recently been receiving Nobel Prizes. Does this indicate that the achievements of Japan's scientific research are recognized worldwide?

**A** The fact that many Nobel Prizes have been awarded to Japanese researchers is a tremendous source of pride. Dr. Isamu Akasaki and Dr. Hiroshi Amano, the Japanese recipients of this year's Nobel Prize in Physics, tenaciously stuck to their research in attempting to develop the world's first blue light-emitting diode (LED) even as other research groups had given up because of difficulties encountered in processing gallium nitride. From the early stage of basic research, their work was supported by JSPS's Grants-in-Aid for Scientific Research (called *Kakenhi*).

What's needed now is greater support for less visible research that has the potential to yield future milestone advances. To continue producing world-level research outcomes over coming decades, it will be imperative for Japan to be steadfast in its support for basic research advanced based on researchers' own free ideas.

**Q** One of the themes of next year's GRC annual meeting in Tokyo will be "Research Funding for Scientific Breakthroughs." Will that discussion be centered on the kind of basic research support that we've been talking about?

**A** We should bear in mind that the concept of "Basic Science" and "Applied Science," or even Science itself, is in transition, and we will discuss "scientific breakthroughs" in this context at the annual meeting. Having said that, I firmly believe that a research system that can support individual researchers to immerse themselves in research driven by curiosity, while helping them pursue new innovations and discoveries, is the fundamental source of breakthroughs. Japan's *Kakenhi* program is one example of a system that takes this initiative. I believe that other countries whose research systems generate excellent outcomes are taking similar initiatives. Building a robust infrastructure for basic research support is the key to achieving breakthroughs, and, accordingly, governments and agencies are expected to exert their power in providing strong support systems. The achievement of breakthroughs is a common challenge to be tackled by countries worldwide. We will thoroughly explore and discuss ways to do this at the GRC annual meeting in Tokyo.

**Q** The other theme of the upcoming annual meeting is "Building Research and Education Capacity." I understand the discussion will address, among other things, the fostering of young researchers and strengthening of research hubs.

**A** I am blessed with many opportunities to contact young researchers. I find that there is a tendency that the most talented young researchers are willing to challenge yet-unsolved and even uncharted areas of research and to derive stimulus for doing so from the intense competition that reverberates in the world's best research hubs. In addition to cultivating individual researchers, "capacity building" entails the strengthening of international research hubs and the global research environment. Moving forward in this direction is an imperative that all the world's countries hold in common. Through the GRC discussions, we will explore ways to advance international collaboration that can accrue to achieving this mutual objective.

Currently, the staffs of JSPS and the event's co-hosting NRF South Africa are working together as one body to prepare for the GRC annual meeting in May. In conjunction with it, a public symposium is also being organized. I am confident that this concerted effort will bring about what promises to be a truly superlative event.

# JSPS Takes Initiative in Ensuring Research Integrity

In April, JSPS established a Research Integrity Office within its Research Program Department for the purpose of centralizing its program to prevent misconduct and misuse of funds in research activities and to more effectively handle such issues related to the competitive funding administered by the department. About a half year has elapsed since the start of this program. At this juncture, the Research Integrity Office and its activities are proceeding in the following ways.

First, the Office has devoted both time and energy into creating research ethics educational materials. Based on the report from a MEXT taskforce and a proposal by the Science Council of Japan, the Research Integrity Office set up a committee for developing an ethics training program and began deliberating the creation of ancillary educational materials and activities.

As these deliberations progressed, on 29 July an academic forum, which included the participation of the Science Council and other related organizations, was held on establishing a research ethics

educational program. Then, a workshop cosponsored by the University of Tokyo and National Science Foundation (NSF) was held on research ethics education in the university's Koshiba Hall.

The workshop began with remarks by JSPS executive director Dr. Makoto Asashima and NSF Tokyo Office head Dr. Kellina Craig-Henderson, followed by a presentation on "Educating for Responsible Research Conduct" by San Diego State University professor Dr. Dena Plemmons. Before the break, she passed out a questionnaire to the participants and asked them to fill it out. After it, she provided feedback on their responses, evoking a volley of questions and comments that advanced the discourse on research ethics education yet another step. This was the first time to hold such a workshop outside the US, where it has provided the underpinnings for actually carrying out training on research ethics education.

Then, Dr. Asashima spoke about the importance of research ethics education and introduced the educational materials produced by JSPS. As the chair of the aforementioned committee for developing the training program, he has been personally engaged in the creation of these training materials. From the collaborating University of Tokyo, executive vice president Dr. Yoichiro Matsumoto spoke about measures the university is taking to cope with issues of research misconduct.

To wrap up the event, NSF program director Dr. Linda L. Layne told about the Foundation's work to cultivate ethics in STEM (science, technology, engineering and mathematics) research



Dr. Asashima

activities.

Attended by both researchers and research institutions staffs, 164 participants filled the hall beyond capacity, bespeaking the strong interest in an initiative to advance research ethics education in Japan.

JSPS has now completed its preparation of the research ethics educational materials, which will soon be given public access on its homepage. To promote their active utilization throughout Japan, the materials will also be compiled in a booklet printed in both Japanese and English versions and issued in an e-learning format. In such ways, JSPS will thoroughly disseminate the educational contents of its research ethics promotion initiative.

While continuing to perfect and promulgate these educational materials, the Research Integrity Office will provide easily accessible consultation to research organizations across Japan on matters regarding proper research conduct and the valid use of research funding.



## JSPS Honorary Fellow

The “JSPS Honorary Fellow” is a lifelong title given out of a strong feeling of appreciation to persons who have over long years contributed to the advancement of JSPS’s programs while serving in positions on JSPS’s Academic Advisory Board, in the JSPS Research Center for Science Systems, or at JSPS’s overseas offices. Also eligible are persons acknowledged to have made outstanding contributions to JSPS programs. This autumn, two ceremonies were held to confer this title upon two former directors of JSPS overseas offices.

One was Dr. Yasuo Tanaka, professor emeritus of the University of Tokyo and JAXA and a scientific member of Max Planck Institute for Extraterrestrial Physics. Serving as the director of JSPS Bonn



Dr. Nakatani (center)

Office from 1995 through 2008, he played an instrumental role in strengthening the framework of scientific exchange between Germany and Japan. In JSPS’s first attempt to support the establishment and operation of an alumni association, he worked to help create a systematic network of former JSPS fellows, paving the way for JSPS to add a new and dynamic dimension to its international activities. His conferral ceremony was held on September 18<sup>th</sup> during the JSPS *Abend*, a yearly gathering held by the JSPS Bonn Office.

The other recipient was Dr. Yoichi Nakatani, professeur conventionné and chair of the Japan Committee of the University of Strasbourg. He was the first director of JSPS Strasbourg Office. During his 12-year tenure starting in 2002, he implemented a program of periodic science seminars to introduce cutting-edge research being advanced in Japan and France, while participating in various governmental, interuniversity and interagency meetings. Through these activities, he succeeded in positioning the office as a center for scientific exchange between France and Japan. He also worked to establish the JSPS French Alumni Association, creating a medium for former JSPS fellows to



Dr. Tanaka (left)

carry out exchange among themselves and with Japanese colleagues. His conferral ceremony was held at the Consulate General of Japan in Strasbourg on October 17<sup>th</sup> during a reception for a scientific symposium held by the JSPS Strasbourg Office.

JSPS was honored to present these two people with the title “JSPS Honorary Fellow” in ceremonies held among many guests who support JSPS’s activities and overseas offices. We trust that Professors Tanaka and Nakatani will continue to give JSPS their greatly appreciated support in its efforts to promote ever-closer scientific collaboration with Germany and France.

General Affairs Division

## Meeting of Heads of Research Councils in Asia Held in Korea

On 24-25 September, the 12<sup>th</sup> meeting of the Heads of Research Councils in Asia (A-HORCs) was held in Busan, Korea, hosted by the National Research Foundation of Korea (NRF). These meetings are convened annually for the purpose of allowing the heads of top science-promotion organizations in Japan, China and Korea to meet and exchange views on their countries’ S&T policies and other matters of mutual interest. This year’s meeting was attended by JSPS president Dr. Yuichiro Anzai, NSFC vice president Dr. Congqiang Liu, and NRF president Dr. Min Keun Chung.

Each gave a country presentation on “Quality Assurance in Evaluation.” Coupled with a Q&A exchange on policies and efforts for enhancing the review systems of each country, the members also discussed the implementation of exchange programs among their organizations.

They agreed to hold next year’s 13<sup>th</sup> A-HORCs meeting on the theme “Research Funding for Scientific Breakthrough” in



tandem with the 17<sup>th</sup> Northeastern Asian Symposium on the theme “Chemical Biology,” both to be hosted by JSPS.

International Policy Planning Division

## Get-together with Young Researchers Participating in STS forum



Prof. Daigo giving speech

On 5-7 October, the 11th annual meeting of the Science and Technology in Society (STS) *forum* was held in Kyoto, Japan.

One of JSPS’s centerpiece missions is to foster the next generation of excellent scientists. In that pursuit, JSPS supports the participation in each year’s STS *forum* of ten young researchers from countries around the world.

In the afternoon before this

year’s forum, JSPS president Dr. Yuichiro Anzai hosted a luncheon for the group of young researchers, offering them strong words of encouragement as they go forward in blazing the paths of their future careers.

In the plenary session held in the presence of the Crown Prince on the forum’s final day, Prof. Ichiro Daigo of the University of Tokyo delivered a speech on behalf of the group in which he said we must think far into the future and of leaders and generations to come when working toward solving science and technology issues that are critical to society.

International Policy Planning Division

## “Science in Japan” Forum Held in Washington, DC

Every year, the JSPS Washington Office holds a “Science in Japan” Forum for the purpose of promoting scientific exchange between Japan and the US through presentations on a selected topic of the latest research results in the two countries.

Themed “Frontiers of Research on Low-Dimensional Systems,” this nineteenth forum in this series was held on 3 October in



Forum speakers

Washington, DC. It featured state-of-art presentations by distinguished researchers from the US and Japan. Rice University professor Dr. Junichiro Kono, the forum coordinator, opened the speaker sessions with an overview of the topic research and the forum’s agenda. Throughout the day, the speakers’ excellent presentations evoked lively Q&A discussions. The event closed with an insightful wrap-up by MIT professor Dr. Mildred Dresselhaus.

More than 120 participants including researchers from universities, research institutes and government agencies attended the forum, cosponsored by the American Association for the Advancement of Science, American Chemical Society, American Physical Society, U.S. Department of Energy, Japan Science and Technology Agency, National Science Foundation, the International Society for Optics and Photonics, and the Optical Society. This strong showing of support from so many organizations is indicative of the good US-Japan relations that the JSPS Washington Office is cultivating.

JSPS Washington Office

## NIH-Japan-JSPS Symposium on Biomedical Research Held

Frontline Japanese researchers in the fields of biomedical and behavioral sciences have been conducting cutting-edge research at National Institutes of Health (NIH) in the US over past decades.

To further strengthen scientific collaborations between them and their colleagues in the US and Japan, the JSPS Washington Office and NIH held a symposium entitled “Highlights from the Frontiers of Biomedical Science from NIH and Japan” on 23-24 October at NIH in Maryland.

In the five sessions held on the first day, presentations were delivered on the latest biomedical advances by distinguished researchers from Japanese universities and NIH. In the plenary session of the second day, a lively discussion was advanced on the effects of the Great East Japan Earthquake. It was followed by the three concurrent workshops on stem cells and neuroscience, imaging and protein-protein interaction, and cancer therapy. Then, NIH deputy director Dr. Michael Gottesman awarded certificates to the most outstanding poster presenters selected from among the young researchers introducing their work.

The active engagement of more than 100 participants made this 2-day symposium a very successful step in promoting US-Japanese cooperation in this field of critical consequence for the health of people in both countries and around the world.

JSPS Washington Office



Opening remarks by Washington Office director Dr. Shimomura

## Joint Symposium Held at UC Berkeley

The JSPS San Francisco Office and University of California, Berkeley joined forces in holding a symposium over the three days from 26-28 September. It brought together under one roof US and Japanese specialists in such fields as archeology, ethnology and agronomy to discuss the theme “Long-term Sustainability through Place-based, Small-scale Economies.”

Presenting research on past and present farming practices, they considered the importance of small-scale, diversified food production



rooted in regional communities and what is need to make it more functional. They extended the discussion into a reevaluation of the advantages offered by small-scale communities within societies and of their attendant small-scale economies in promoting food security, and drafted proposals for building societies capable of sustained growth in the future.

The first two days featured an open symposium in which researchers invited from the US and Japan held sessions and led discussions on four connected themes. On the third day, a wrap-up session, attended by the lecturers and organizers, was held to draw the curtain on very successful 3-day event.

With presentations and discussions that overarched the researchers’ various fields, the discourse advanced was both multilayered and multifaceted, giving the symposium an extra depth of meaning. The frank and upbeat exchange of views among the some 100 attendees is expected to advance joint research in related fields yet another notch.

JSPS San Francisco Office

## UK-JSPS Physics Symposium Held at University of Leeds

On 11-12 August, the UK-JSPS Symposium on Nanoscale Physics of Quantum Materials was held at the University of Leeds. It was attended by 54 participants, about three-fourth of whom were European researchers and the rest Japanese researchers. This topic being one of high interest among young researchers in the UK, the presentations delivered at the symposium included many by the university's graduate students.

Focusing on the new physics of spintronics, the symposium sought a vibrant exchange of views and information via presentations on the latest research developments in this rapidly advancing field—an exchange that would explore possibilities for future joint research initiatives. Differing from electric current, spin current does not carry an electric charge, opening up the possibility of information transmission with only small energy loss.

Throughout, the symposium gave the UK and Japanese researchers

a platform for engaging in this discourse on an equal footing. Highly energized, their discussions were advanced during lunch and dinner and long after the official



proceedings had ended. Some of the groups formed in this process are considering applying for project grants under JSPS's Core-to-Core Program. All in all, the symposium is seen as having taken international scientific exchange in this blossoming field yet another step forward.

JSPS London Office

## UK-JSPS Symposium Held at University of Sheffield

On 15-16 September, a JSPS-supported symposium was held at the University of Sheffield on the theme "Interscale Transfers and Flow Topology in Equilibrium and Non-Equilibrium Turbulence."

This symposium addressed one of the yet unsolved puzzles in classical physics—turbulence.

Focus was placed on energy transport and flow topology within turbulence, and ways were sought to effectively advance information exchange and joint research to better elucidate them.



Discovered by Imperial College London, non-equilibrium turbulence has been the subject of research over the last ten years. As non-equilibrium turbulence has wide engineering applications, an accurate understanding of this phenomenon is sought along with its modeling and pioneering of control theories.

In this symposium, world-leading researchers from the UK, Japan and Europe were invited to report on advances in their various fields in an intensively packed lecture format. Unconstrained by time limits, the participating researchers advanced their discussion amidst a free atmosphere in a way that yielded a very high quality exchange of views and information on the nature and mechanisms of non-equilibrium turbulence.

JSPS London Office

## JSPS Abend and JR-Net Coordination Meeting Held in Bonn

On 18 September, the JSPS Bonn Office held its annual "JSPS Abend," in which the staff reported on the office's activities over the course of the fiscal year. Attended by German partner institutions and other affiliated organizations, the meeting started with greetings from JSPS executive director Mr. Jumpei Watanabe, followed by congratulatory messages from two representative guests. Then, a lecture was delivered by University of Tokyo associate professor Dr. Aeka Ishihara on a theme about Goethe's culture and nature. In the dinner reception, the participants enjoyed a special chance to converse and strengthen their friendship ties to the background accompaniment of a piano recital.



Speech by Mr. Watanabe

Japanese researchers residing in Germany consider it very important to have a platform for conducting information exchange and network building in Japanese. On 18 September, the JSPS Bonn Office held its first meeting on JR-Net, JSPS's Japanese Researchers' Network, which assembled representatives of already operational independent networks, Japanese professors working in German universities, and JSPS personnel. They exchanged views on the kind of networks in current demand and problems incurred in running and using them. In the near future, these networks will be introduced on the website of the Bonn Office, which plans to lend its support in building a researcher network in cooperation with JR-Net users.

JSPS Bonn Office



## Forum on Inorganic Chemistry Held in Strasbourg

On 17-18 October, the JSPS Strasbourg Office collaborated with the French National Center for Scientific Research (CNRS) to hold a South Europe-Japan Joint Forum on “Inorganic Chemistry and Its Interfaces.” It was co-organized with and venue at the University of Strasbourg.



Q&amp;A session

The scientific coordinators on the two sides were Prof. Pierre Braunstein, University of Strasbourg, and Prof. Munetaka Akita, Tokyo Institute of Technology. In the splendid environment they lead in preparing for the forum, 12 top-notch researchers from Japan and South Europe (France, Italy, Spain, Portugal and Switzerland) gave presentations on the state-of-the-art work they are advancing in the flourishing field of inorganic chemistry. The subjects they addressed included catalysis by metal complexes, biomimetic hydrogen production, electrochemistry and photochemical processing for solar batteries, and inorganic materials with unique magnetic and electric properties.

The 76 people filling the hall engaged the lecturers and each other in an animated Q&A discussion and exchange of views that is expected to elevate this cross-regional discourse and cooperation in inorganic chemistry to yet higher levels of discovery and application.

JSPS Strasbourg Office

## Trilateral Dialogue Held on High North Research

On 22 September, a dialogue between Finland, Japan and Russia was held on advancing research cooperation in the High North at the University of Helsinki. It was sponsored by Hokkaido University in cosponsorship with the Embassy of Japan in Finland and the JSPS Stockholm Office. The meeting started with remarks by Mr. Kenji Shinoda, Japanese Ambassador to Finland, followed by University of Turku Professor Lauri Ojala, Saint Petersburg State University Associate Professor Konstantin Krotov, and Hokkaido University Professor Shinichiro Tabata, who introduced their respective research institutions and reported on their High North research activities. Representatives of the University of Helsinki attended as guest participants.

Their ensuing discussion confirmed the necessity of advancing yet further joint research in this area. It was agreed to carry out joint projects while continuing to move forward cooperation under the Finnish-Japan bilateral program “Russia’s final energy frontier—Sustainability challenges of the Russia Far North,” led by Prof. Tabata.

Among the participating researchers were graduate students advancing creative studies in this area.



JSPS Stockholm Office

## JSPS and CASS Hold Joint Symposium in Beijing

On 20 August, JSPS and the Chinese Academy of Social Sciences (CASS) teamed up to hold a symposium on “Economic Growth and Labor Market in China and Japan.” Venued in CASS’s Conference Hall, it was the third in this symposium series, launched in 2012.

In the opening ceremony, welcoming remarks were offered by Ms. Zhou Yunfan, deputy director, China’s Bureau of International Cooperation, and Prof. Osamu Wada, director, JSPS Beijing Office,



followed by four sessions. CASS’s Dr. Cai Fang set the tone with his lecture on “Understanding China’s Labor Market” to kick off the first session. In it and ensuing sessions, Japanese and Chinese researchers in related fields of labor and economics delivered presentations from the various perspectives and knowledge bases of their many specializations.

On the Japanese side, Dr. Masayuki Morikawa, vice chairman and vice president, Research Institute of Economy, Trade & Industry, gave an address on “Human Capital and Economic Growth: Japan’s Experience and Implications for China.” Joining him were presentations given by Mr. Yoichi Maie, deputy director, Japan External Trade Organization Beijing Office, Prof. Kojiro Sakurai, Senshu University, Prof. Koshi Endo, Meiji University, Prof. Yasuyuki Osumi, University of Hyogo, Prof. Tomohiko Noda, Osaka Prefecture University, and Prof. Tetsuji Okazaki, University of Tokyo.

The symposium was a resounding success, having attracted some 120 participants comprising both Chinese researchers in associated fields and also people from Japanese universities and other interested organizations.

JSPS Beijing Office

## JSPS Bangkok Office and Alumni Association Hold Two Seminars

During Thailand Research Expo 2014 organized by the National Research Council of Thailand (NRCT), JSPS's Bangkok Office convened two seminars. One was on the theme "Learning: The Treasure Within—Learning to Know, to Do, to Be and to Live Together." Three Japanese researchers from differing academic backgrounds gave presentations and spearheaded a discussion moderated by a Thai researcher on "what learning means to us." The seminar's interesting topic and bidirectional format, featuring pair work and interviews, attracted more than 100 attendees. A spirited discussion between them and the lecturers explored ways for Thailand to incorporate Japanese good practices in education and learning within its academic programs.



A lecturer Dr. Homma soliciting comments

The other seminar was held by the JSPS Alumni Association of Thailand (JAAT) in conjunction with the Bangkok Office on the theme "Long Life without Cancer." Chaired by JAAT president Prof. Dr. Sunee Mallikamarn, the seminar featured lecturers by JAAT secretary Dr. Danai Tiwawech; Dr. Toshikazu Ushijima, Japan's National Cancer Center Research Institute; and Dr. Wichet Leelamanit, assistant professor of Mahidol University. A heightened concern about health among the Thai people drew over 100 attendees, who found such topics as mechanisms for preventing and early detection of cancer and the use of herbs and foods in cancer treatment to be intensely interesting.

JSPS Bangkok Office



Dr. Danai Tiwawech

## JSPS Holds Program Briefing at Bangladesh Agricultural University

On 5 September, the Bangladesh JSPS Alumni Association (BJSPSAA) working in conjunction with the JSPS Bangkok Office held a program briefing at Bangladesh Agricultural University (BAU). BAU is an agricultural university with an illustrious 54-year history. A good many of BJSPSAA's members are employed in it.

BJSPSAA vice president Prof. Dr. A K M Nowsad Alam kicked



From the right: BAU vice-chancellor, BJSPSAA president, JSPS Bangkok director

off the meeting with opening remarks, saying that he looked forward to Japanese Prime Minister Shinzo Abe's visit to Bangladesh on the following day strengthening yet further linkage between the two countries in the industrial domain.

Following a description of JSPS's program menu, BAU honorable vice-chancellor Prof. Dr. Md. Rafiqul Hoque delivered remarks in which he offered gratitude to Japan for the sustained support it has given Bangladesh since the country secured its independence. Lastly, BJSPSAA president Prof. Dr. M. Afzal Hossain spoke about his aspiration to energize the alumni association's activities in the months ahead.

This being the first time for a JSPS program briefing to be held at BAU, it drew an audience of 120 researchers, among whom many had earned their doctorates in Japan under the Japanese Government (MEXT) Scholarship Program and other support schemes. The gathering of this large and attentive audience bespoke the strong interest that Bangladeshi researchers have in advancing their research activities overseas.

JSPS Bangkok Office

## Environmental Seminar Held by Sweden Alumni Club

On 28 August, a seminar was convened by the Sweden Alumni Club (SAC) at Örebro University. At it, Ehime University Associate Professor Shin Takahashi and Shimazu Techno-Research General Manager Takumi Takasuga on the Japanese side, and Dr. Johan Lindberg of the Swedish Toxicology Sciences Research Center and seven other researchers on the Swedish side lectured and entertained questions on the theme "New Technologies for the Analysis of Persistent Pollutants and Pharmaceuticals in the Environment." Prof. Takahashi delivered a lecture titled "Human Exposure Assessment Monitoring of POPs Released from E-waste Recycling Activities."

JSPS Stockholm Office



## Korea-Japan Research Network Holds Its 10<sup>th</sup> Academic Meeting

On 20<sup>th</sup> September, the Korea-Japan Researcher Network (KJRN), also called the JSPS Korea Fellows Alumni Association, held an academic meeting and general assembly at Catholic University of Pusan. Celebrating the university's 50<sup>th</sup> anniversary, these meetings enjoyed a festival mood. Held on the theme "Role of scientists in stimulating economic collaboration between Japan and Korea," the meeting attracted nearly 90 researchers and students. At it, Dr. Hiroshi



Fukagawa, professor of economics from Kyushu University, and Mr. Hong Sung-Hee, president of the Korea-Japan Economic Exchange Association, delivered keynote speeches. Then, Dr. Yun Yong-Sik gave a presentation in which he shared his experience of revisiting Japan under JSPS's BRIDGE Fellowship Program. Briefings from National Research Foundation of Korea and JSPS attracted audience attention with their latest menus of activities and offerings. To climax the meeting, short presentations were given by each of the attending alumni members, who hailed from a variety of fields ranging from veterinary science, cosmology and astrophysics, to fashion and apparel. This being KJRN's 10<sup>th</sup> academic meeting, an original members' pocketbook was printed and content-rich abstracts published. The association's activities, such as this annual meeting, are greatly expected to strengthen both Japan-Korea research collaboration and also unity among its membership.

The following general assembly saw the election of a new chairman, Dr. Kyung-soo Chang of Catholic University of Pusan, who promised to invigorate even more the alumni activities over the coming three years.

Overseas Fellowship Division

## Indian JSPS Alumni Association Holds Symposium and General Assembly

On 7-8 August, the 5<sup>th</sup> International Conference on "Advancements in Materials, Health and Safety towards Sustainable Energy and Environment (MHS-2014)" was held by the Indian JSPS Alumni Association (IJAA). Venued in Chennai, this 2-day event attracted more than 160 participants from both India and Japan. It featured nearly 30 lectures on cutting-edge research by scientists from the two countries, including two keynote speeches by Dr. R. Chidambaram, Principal Scientific Advisor to the Government of India, and Professor Emeritus Yoichi Fujii-e, Representative Director of NPO Nuclear Salon. At a poster session, some 70 brilliant young scientists introduced their work.

One of IJAA's unique activities is its introduction of Japanese universities. The staff of three Japanese universities and colleges gave briefings on their institutions from the stage, while visitors picked up the brochures of about 20 Japanese universities at their respective booths. Young Indian students listened with baited attention and starry eyes to floor explanations given by the University of Tokyo staff. They told us that their dream is to do research in Japan following in the footsteps of their professors.

At the general assembly, IJAA chair Prof. D. Sakthi Kumar declared the start of the "Friend of Japan" association implemented along with IJAA, which is open to everyone interested in Indo-Japanese friendship. Two days before the conference, JSPS executive director Mr. Jumpei Watanabe joined a signing ceremony for a "Letter of Intent" with officials of the Indian Council of Social Science Research (ICSSR)

and the Indian Council of Historical Research (ICHR). The purpose of the letter is to expand bilateral collaboration in fields of the social sciences. The ceremony was held in the presence of Mr. Hakubun Shimomura, Japanese Minister of Education, Culture, Sports, Science and Technology, and Ms. Smriti Zubin Irani, Indian Minister of Human Resource Development.

These vigorous activities and interactions carried out during the dog days of India's hot summer surely accrued to a yet-tighter unity between scientists and students of the two countries.

Overseas Fellowship Division



## New Developments at JSPS Nairobi Research Station and Eastern Africa Alumni Association

On 20 June, the Eastern Africa JSPS Alumni Association held its 23<sup>rd</sup> meeting in Kigali, Rwanda. Cosponsored by the College of Science and Technology, University of Rwanda, the association's scientific workshop and program briefing attracted more than 50 participants.

The results of the meeting can be summarized in the following four points:



- Recruit members for the Rwanda branch of the alumni association
- Hold advance meetings with the region's funding agencies scheduled to participate in next year's Global Research Council's annual meeting in Japan
- Request scientific information from French-speaking countries in Eastern Africa
- Promote applications for JSPS fellowships

This meeting of the alumni association marked the first time in the Nairobi Research Station's 50 years for it to entertain a scientific exchange with the region's French-speaking countries. What makes this especially meaningful is that 26 of the 54 African countries are French speaking. On another plane, the Nairobi Station has augmented its leadership capacity. Up till now there has only been one resident director; now, a vice-director has been added. The new resident director as of this June is Mr. Daisuke Mizoguchi and the vice-director is Ms. Chiharu Kamimura. They will double the effort to move the Station's activities by a big leap forward.

JSPS Nairobi Research Station

## Revisiting the History of *JSPS Quarterly*

The  
50<sup>th</sup>  
Anniversary  
Issue

At this juncture marking the 50<sup>th</sup> edition of the *JSPS Quarterly*, we pause to take a brief look back over its history.

JSPS issued its first periodically published bulletin oriented to an international readership in 1995. It was titled the *JSPS Newsletter*. In that same year, the JSPS Fellows Plaza was established to provide programmatic support for overseas researchers who were invited to Japan under JSPS programs. That program complemented the on-site support given the invited researchers by their host researchers and institutions. 1995 also saw a dramatic expansion of the JSPS Postdoctoral Fellowship Program, giving rise to a need to provide the greatly increased number of overseas fellows with a wider array of information.

As more researchers finished their stays in Japan and returned to their countries, the *JSPS Newsletter* was launched to sustain and strengthen their collegial connections with Japan while providing them updated information on scientific trends in Japan and on JSPS's evolving activities. In 2002, the name of the newsletter was changed to *JSPS Quarterly* along with a significant increase in its distribution. No longer mailed out to mainly

current and former JSPS fellows, the newsletter also served the purpose of disseminating information to JSPS overseas counterpart organizations around the world, universities and other research institutions both in Japan and abroad, and Japan's overseas consulates and embassies. Given this expanded readership, the newsletter carries from time to time articles to introduce Japan's science policies.

Since 2002, news along these lines has been featured in lead articles. For example, Japan's 3<sup>rd</sup> Science and Technology Basic Plan was described in the newsletter's 17<sup>th</sup> issue (2006) and its 4<sup>th</sup> Basic Plan in the 38<sup>th</sup> issue (2011). An article on new measures for "Preventing Misconduct in Research Activities" was carried in the 19<sup>th</sup> issue (2007), and another on innovations to provide enhanced "Support for Female Researchers in Japan" in its 18<sup>th</sup> issue (2006).

Besides disseminating information on JSPS's programs and Japan's science policies, the *JSPS Quarterly* serves as a medium to keep connected former JSPS fellows laboring on the frontlines of science in countries around the world with JSPS and Japan.

Overseas Fellowship Division



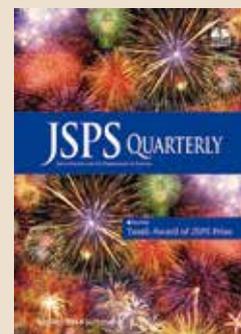
Nobel laureate Dr. Fukui's essay



First *JSPS Quarterly*



One of the popular cover photos



Latest cover design

## Universities Selected under Top Global University Project

The Top Global University Project is an initiative by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) to strengthen the international competitiveness and compatibility of Japan's institutions of higher education. Priority support is given to universities that act decisively to carry out thorough reforms and globalization of their institutions. These include universities that boast top world-caliber education and research programs and universities that can drive university internationalization and reform in Japan by undertaking challenging initiatives.

Under this project, two types of supporting programs are offered: Type A (Top Type) is for world-class universities that have the potential to be ranked among the top 100 in world university rankings. Type B (Global Traction Type) is for innovative universities that lead the internationalization of Japanese society, based on continuous improvement of their efforts.

In coordination with MEXT, JSPS has established a selection

committee for this project, which carries out application screening. Among the applications submitted in April and May, there were 109 from 104 universities. The screening process winnowed them down to 37 universities, which on 26 September were selected by MEXT.

These universities are expected to press forward in elevating their education and research programs to a high world level by such means as increasing the percentage of their international students and faculty members, expanding the courses they carried out in English, and reforming their personnel and educational affairs systems.

For the list of selected universities, see the following website:  
[http://www.mext.go.jp/b\\_menu/houdou/26/09/\\_\\_\\_icsFiles/afieldfile/2014/10/07/1352218\\_02.pdf](http://www.mext.go.jp/b_menu/houdou/26/09/___icsFiles/afieldfile/2014/10/07/1352218_02.pdf)

University Cooperation Program Division



## Grand Highway for a Carbon-Neutral Energy Fueled World



I<sup>2</sup>CNER & ACT-C Joint Symposium held on 30 January 2014

I<sup>2</sup>CNER's mission is to contribute to the creation of a sustainable and environmentally-friendly society by conducting fundamental research to advance the development of low-carbon emission and cost-effective energy systems, while improving energy efficiency. The array of technologies that I<sup>2</sup>CNER's research aims to enable includes Solid Oxide Fuel Cells for power generation, Polymer Membrane-based fuel cells for hydrogen fueled vehicles, biomimetic and other novel catalyst concepts, and the production, storage, and utilization of hydrogen as a fuel.

Fuel cells, in particular polymer electrolyte membrane fuel cells (PEFCs) with such support components as carbon black, platinum (Pt) nanoparticles and Nafion, are receiving increasing attention for transportation applications, portable electronic devices and power supply due to their high-energy density, high efficiency and green emissions. Cost reduction and improved durability are the two major targets for accelerating the commercialization of PEFCs. To achieve these goals, industry has embarked on a quest for novel methods to fabricate Pt-based electrocatalysts with high mass activity and deposited on durable conductive support materials. Prof.

Nakashima's group at I<sup>2</sup>CNER devised a unique approach to growing homogeneously dispersed Pt nanoparticles with a narrow diameter distribution in a highly controllable fashion on polymer-wrapped carbon nanotubes (CNTs)\*. A PEFC cell employing a composite with the smallest Pt nanoparticle size (2.3 nm diameter) exhibited approximately 8 times higher mass activity than a cell based on Pt nanoparticles with a 3.7 nm diameter (Figure 1). This unprecedented performance is the first case worldwide of a new approach to future generation PEFCs that are based on diameter controlled Pt on polymer-wrapped CNTs that exhibit very high durability due to the remarkable intrinsic nature of CNTs.

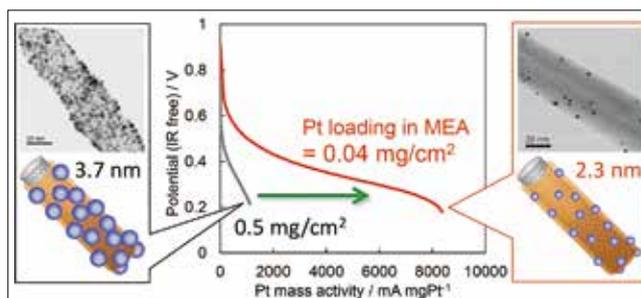


Figure 1

Our research also explores the underlying science of CO<sub>2</sub> capture and storage technologies and the conversion of CO<sub>2</sub> to useful products. Additionally, it is I<sup>2</sup>CNER's mission to establish an international academic environment that fosters innovation through collaboration and interdisciplinary fusion research.

\* (Scientific Reports, 2014, 4, art no. 6295, title: *Enhancement of Platinum Mass Activity on the Surface of Polymer-wrapped Carbon Nanotube-Based Fuel Cell Electrocatalysts*).

### Prof. Nicola H. Perry

WPI Assistant Professor at I<sup>2</sup>CNER, Kyushu University



#### Profile

August 2014-present: WPI Assistant Professor, I<sup>2</sup>CNER, Kyushu University, Japan

September 2014-present: Research Affiliate, Department of Materials Science and Engineering, MIT, USA

September 2012-August 2014: Postdoctoral Research Associate, I<sup>2</sup>CNER, Kyushu University, Japan

November 2012-August 2014: Visiting Scholar, Department of Materials Science and Engineering, MIT, USA

November 2009-August 2012: Postdoctoral Fellow, Energy Frontier Research Center for Inverse Design, Northwestern University, USA

December 2009: PhD, Materials Science & Engineering, Northwestern University, USA

May 2005: BS, Materials Science & Engineering; BA, French Studies, magna cum laude, Rice University, USA

After her PhD research focusing on ceramics for fuel cells (ionic conductors) and postdoctoral work aimed at developing new transparent ceramics for solar cells (electronic conductors), Dr. Perry joined I<sup>2</sup>CNER in 2012 to combine these two areas and work on mixed ionic and electronic conductors for clean energy conversion and storage. While based at Kyushu University, her position is unique in that it allows her to spend up to half her time at MIT in the US. Traveling between the two institutions not only allows her to interact with and strengthen ties among world-leading researchers and cutting-edge experimental facilities in both locations, but also to directly compare living and working in the two countries.

"I was initially drawn to I<sup>2</sup>CNER because of the several opportunities it offered: collaboration with experts in my field, funding to work on an interesting and challenging areas of research, an emerging international research environment, and the chance to learn from living in Japan. Certainly the efforts that I<sup>2</sup>CNER, in particular its administrative staff, has made to welcome international researchers have made all of this possible. They have made English the working language, accommodated researchers under one roof in the new I<sup>2</sup>CNER building, and provided assistance and guidance on many practical aspects of daily life in Japan. Since joining, I have also become increasingly grateful to I<sup>2</sup>CNER for its interdisciplinary approach to developing sustainable energy. This is an area in which I have worked for a while, now I<sup>2</sup>CNER provides me with a much broader perspective of different approaches and technologies. The center's program encourages us to forge interdisciplinary collaborations with scientists from many different countries and fields of expertise to find energy solutions.

"We normally work from Monday through Saturday. A typical day for me might involve running and analyzing experiments, building experimental setups, writing papers or proposals, meeting with students and collaborators, and occasionally teaching. In my free time, I enjoy cycling among Itoshima's picturesque beaches and mountains, exploring Japanese cuisine and culture with friends, and (slowly) learning Japanese. On Sundays, I spend time with my Japanese and international friends in church. I would encourage anyone, especially students, interested in sustainable energy to learn more about I<sup>2</sup>CNER's work and to consider joining us!"

For more detailed information about I<sup>2</sup>CNER, please visit its website: <http://i2cner.kyushu-u.ac.jp/>



## The Science Dialogue Experience of Two JSPS Fellows

Dr. Josefine Nestler and Dr. Tommi Tynell



It was a clear autumn day after a typhoon on October 14<sup>th</sup> when Drs. Josefine Nestler and Tommi Tynell gave Science Dialogue lectures to students in the fifth grade at Ichikawa Gakuen Ichikawa Junior & Senior High School. Their lectures, titled “From Plant Biology to Molecular Genetics” and “Thermoelectric Energy Harvesting and Its Role in Solving the Energy Crisis,” were held simultaneously, so the students split up into two classrooms to receive them.

Dr. Nestler started off her lecture with an introduction to her home country, Germany. She, then, talked about the importance of English especially within today’s science community, a topic which the host high school asked her to comment on. Moving on the core of her presentation, Dr. Nestler described her work as a postdoctoral researcher investigating rice genes affecting root growth at the Japan International Research Center for Agricultural Sciences. She used many diagrams and pictures in her

presentation to help the students get a basic idea of molecular genetics and she conducted an experiment to show them what DNA looks like. The experiment used a portion of a mango and kiwifruit to demonstrate DNA in a way that not only made it easy for them to understand but also greatly inspired their interest.

Dr. Tynell also introduced his home country along with popular items made and seen in Finland, including the *Moomintroll*. International exchange is widely encouraged in Finland. So motivated, Dr. Tynell lived in Japan while taking his master’s course. He is now conducting research on thermoelectric effect at the National Institute for Materials Science. He explained to the students how the climate crisis can be mitigated by utilizing wasted heat produced during energy generation. He introduced products developed based on this effect: A thermic watch that converts body heat into electricity needed to run itself; a pan that generates electricity from cooking heat, and a pair of boots that collects body heat and turns it into electricity. Demonstrating these gadgets turned a somewhat somber classroom atmosphere into a highly animated one.

Both lecturers took away the impression that the students were shy when it came to speak up, but as Dr. Nestler said “It’s expected and understandable considering their age.” Dr. Tynell added, “Students in Finland are also shy and don’t ask many questions.” While touring the school facilities, they marveled at its new and well-equipped buildings. This being their first time to visit a Japanese high school, they enjoyed the opportunity it afforded them to learn through firsthand personal contact with the students and their teachers about secondary education Japan-style.

The following fellows participated in JSPS’s Science Dialogue Program during the period from July through September 2014. For details about the program, please see its website: <http://www.jsp.go.jp/english/e-plaza/e-sdialogue/>.

Overseas Fellowship Division

Lecturer	Venue	Nationality
Sapporo Nihon University Senior High School (Hokkaido)	Alexander D. Fraser	Australia
Iwate Prefectural Kamaishi High School	Md Rabiul H. Biswas	India
Fukushima Prefectural Fukushima High School	Saliu A. Amolegbe	Nigeria
	Anton Ayzenberg	Russia
	Robert Bedington	UK
	Niklas L. S. Bergstrom	Sweden
	Ingwild Bode	Germany
	Ali Boyali	Turkey
	Ronald C. Estoque	Philippines
	Mickael Lozac’h	France
	Sujata Manandhar	Nepal
	James Q. Quach	Australia
	Muhammad Saqib	Australia
	Thomas Spallek	Germany
Julien Triplette	France	
Jens S. A. Wittsten	Sweden	
Csongor I. Gedeon	Hungary	
Tochigi Prefectural Utsunomiya Girls’ Senior High School	Thiago Junqueira de Castro Bezerra	Brazil
	Chris Fook Sheng Ng	Malaysia
	Dhermendra K. Tiwari	India
	Pulak R. Giri	India
Saitama Prefectural Kasukabe High School	Pulak R. Giri	India
Saitama Prefectural Kawagoe Girls’ High School	Iona Mcintosh	UK
Saitama Prefectural Kumagaya Girls’ High School	Tzu-Kai K. Chao	Taiwan
Chiba Municipal Chiba High School	Tristan Barbier	France
Chiba Prefectural Funabashi Senior High School	Michael T. Corbett	USA
Junior High and Senior High School at Komaba, Univ. of Tsukuba (Tokyo)	Tunde Kovacs	Hungary
	Ferenc Szollosi	Hungary
Tokyo Metropolitan Tama High School of Science and Technology	Bishnu P. Bastakoti	Nepal
	Roman Krcmar	Slovakia
	Mark S. P. Ravinet	UK
	Dun Wang	China
Prefectural Kanagawa Sogo Sangyo High School	Mohammad A. Siddique	Bangladesh
Niigata Prefectural Shibata Senior High School	Ying Y. Wang	China

Lecturer	Venue	Nationality
Ishikawa Prefectural Nanao High School	Zhen J. Hao	China
	Tonni A. Kurniawan	Indonesia
	Kamilla D. Pawlikowska	Poland
Fukui Prefectural Fujishima Senior High School	Laurence T. Williams	UK
	Adrien Barton	France
	Manasikan Thamawong	Thailand
Fukui Prefectural Koshi Senior High School	Laszlo Stuhl	Hungary
Fukui Prefectural Takefu High School	Gamal Elmasry	Egypt
Yamanashi Prefectural Hikawa High School	Pontus Lars Erik Saito Stenertorp	Sweden
	Lin Wang	China
	Laura Zambelli	France
Yamanashi Prefectural Kofu Higashi Senior High School	Mohammed Kamruzzaman	Bangladesh
Yamanashi Prefectural Kofu Minami Senior High School	Chamidu J. Atupelage	Sri Lanka
Yamanashi Prefectural Tsuru High School	Azhar Rasul	Pakistan
Yamanashi Prefectural Yoshida High School	Md. S. Hossain	Bangladesh
Nagano Prefecture Suwa Seiryu Senior High School	Cristina Andres Barrao	Spain
	Jan Barta	Czech
Shizuoka Prefectural Hamamatsu Minami High School	Rico L. Gamuyao	Philippines
Shizuoka Prefectural Iwata Minami High School	Zulma A. Jimenez	Colombia
Aichi Prefectural Jishukan Senior High School	Ivan V. Borzenets	USA
	Steven Bowden	UK
	Craig James	UK
Aichi Prefectural Kariya High School	Beata A. Bober	Poland
	Eike F. Schwier	Germany
Shiga Prefectural Hikone Higashi High School	Taryn L. March	Australia
Kyoto Prefectural Jonan Ryoso High School	Neeraj Kumar	India
Osaka Prefectural Hirakata Senior High School	Islam S. S. Mohammed	Egypt
Akashi National College of Technology (Hyogo)	Victoria Lebed	France
Tokushima Prefectural Wakimachi Senior High School	Tue M. Nguyen	Vietnam
Kagawa Prefectural Kan-onji Daiichi High School	Mark Hammonds	UK
Ikedo High School (Kagoshima)	Shailendra K. Singh	India
Okinawa Prefectural Kyuyo Senior High School	Sanna H. Nystrom	Sweden

Hailing from Morocco, Dr. Ezzikouri Sayeh has been conducting research with his host researcher, Prof. Kyoko Kohara in the Joint Faculty of Veterinary Medicine at Kagoshima University under a JSPS postdoctoral fellowship since 2013. After obtaining his PhD in Morocco and working as a researcher at Pasteur Institute of Morocco, Dr. Ezzikouri found Prof. Kohara via the Internet and asked her to host him under the JSPS fellowship program.

**- Would you give us a word about your background?**

In 2004, I earned my master's in genetics and biostatistiques from Chouaib Doukkali University in Morocco. In 2005, I received a diploma in bioinformatics from Pasteur Institute of Paris in France. Then in 2008, I obtained my PhD in molecular biology and genetics from my home university in Morocco. That year, I also received a diploma in basic virology from Pasteur Institute of Paris.

**- Please briefly describe your research.**

Before coming to Japan, I was working as a researcher in the Virology Unit at Pasteur Institute of Morocco. My focus was on hepatitis viruses and related diseases (cirrhosis and liver cancer). My contributions to that field include epidemiology, virology and genetic studies mainly in four areas: (1) Epidemiology of hepatitis viruses in Morocco; (2) Identification of genes related to responses to treatment and spontaneous resolution of hepatitis B and C viruses; (3) Identification of genes related to pathogenesis and the development of liver cancer; and (4) Identification of biomarkers for early diagnosis of liver cancer.

**- What are you currently researching under the JSPS fellowship?**

At the Laboratory of Animal Hygiene, Joint Faculty of Veterinary Medicine, Kagoshima University, in partnership with other Japanese groups I am focusing on developing the *tupaia belangeri* treeshrew as a model for the hepatitis B and C virus infection systems based on its whole genome. Until now, there has been no immunocompetent animal model to study hepatitis B (HBV) and C (HCV) viruses except for the chimpanzee, whose application to research has recently become almost impossible due to ethical and economic reasons. We are working to first establish a persistent infection with these viruses and then to study immune responses to the infection. Also, we will try to develop a candidate HBV therapeutic vaccine.

At the same time, I'm evaluating the effect of some candidate compounds against HCV replication in *in vitro* and *in vivo* models. Moreover, I'm also involved in the screening

of new biomarkers for liver cancer diagnosis.

**- How did you become interested in your research field?**

This is a long story that started in 2003 when I was looking for a host laboratory to do my master's study. I received one proposition from a laboratory in a Faculty of Medicine on genetic susceptibility and HCV infection. That started me reading about hepatitis viruses, which was a new topic for me. Not having a computer at that time, I remember handwriting a 100-page bibliography on hepatitis viruses. Due unfortunately to a misunderstanding with my host researcher (this is another story), the project was stopped. After that, I had to find another host researcher to do my MSc thesis. As I learned more about hepatitis viruses, I became increasingly interested in the field and wanted to continue researching in it. I moved to Pasteur Institute of Morocco with the hope of finding other researchers working on hepatitis viruses. *God is great*: I found a wonderful supervisor (Dr. Soumaya Benjelloun), restarting my research adventure in the field of hepatitis viruses. In that laboratory, I did my master's and PhD theses, later becoming a researcher in it. In telling this story, I should not forget to mention Dr. Pascal Pineau of Pasteur Institute of Paris, who played an important role in my education on hepatitis viruses from mainly a molecular liver cancer aspect. Building on that experience, I am now working with Prof. Kyoko Kohara on other challenging aspects of hepatitis viruses. *Many thanks to all.*

**- How did you get to know your Japanese host researcher?**

If my memory serves me correctly, this is the seventh time I have been asked that question. Given that Morocco is an African country located far away from Japan, we don't have close contact with Japanese researchers and only rare opportunities to meet them. In my case, I got to know about Prof. Kyoko Kohara, who would become my host researcher, via the Internet by searching the website PubMed, which posted her research papers and noted her many scientific accomplishments in the field of hepatitis. I wrote to Prof. Kohara and asked her about the possibility of becoming my host. She kindly accepted and gave me this opportunity to come to Japan. Before arriving, we communicated by email to discuss my proposal.

**- Why did you choose Japan to pursue your research?**

Japan is recognized as a leader in technology, while offering an excellent academic environment with wide educational



### Dr. Ezzikouri Sayeh

JSPS Postdoctoral Fellow, Joint Faculty of Veterinary Medicine, Kagoshima University, Japan, 2013-present  
 Researcher, Pasteur Institute of Morocco, 2008-present  
 Ph.D. Genetic & Molecular Biology, Chouaib Doukkali University, Morocco, 2008  
 DESA (M.Sc.) (Genetic & Biostatistiques), Chouaib Doukkali University, Morocco, 2004  
 B.Sc. (Animal Biology), Chouaib Doukkali University, Morocco, 2001

and research opportunities. In addition, Japan has many prominent scientists who are making big contributions to science.

**- What is your impression of your host institution?**

Kagoshima University promotes and offers an interdisciplinary curriculum including law, economics and humanities, education, science, medicine, dentistry, engineering, agriculture and fisheries. It has also recently established a Joint Faculty of Veterinary Medicine. I enjoy the atmosphere that fills our laboratory and the friendship and support that all its members give to me in both my work and life in Japan. It is a great place for me to not only focus on my research but also enjoy meeting people from different cultural backgrounds.

**- More generally, what is your impression of Japan's research environment?**

To be clear and concise regarding this point, Japan's research environment is very good: It provides a comfortable setting for researchers to optimize the productivity of their work.

**- What are your research achievements under the JSPS fellowship so far?**

Up till now, my research achievements under the JSPS program include a new finding on a natural compound that inhibits

HCV replication in a wild type HCV replicon and a Telaprevir-resistant HCV replicon system, and also in humanized chimeric mice. In addition, we found that this new compound has a synergistic effect with interferon and an additive effect with Telaprevir on HCV replication (a paper has been submitted for publication). In another aspect of my research, we identified a new biomarker for liver cancer diagnosis mainly in patients with HCV infection (a paper is in the writing stage). Finally, I wrote a review on new achievements in HBV-host interactions (published as Ezzikouri et al., 2014).

Ezzikouri, S., Ozawa, M., Kohara, M., Elmdaghri, N., Benjelloun, S., Tsukiyama-Kohara, K., 2014. *Recent insights into hepatitis B virus-host interactions*. *J Med Virol* 86, 925-932.

I have also had the chance to participate in four meetings (giving oral and poster presentations).

Now, I will try my best to advance my research during the rest of my tenure.

**- What do you do outside your research work?**

When I have free time, I spend it with my family visiting historic sites of interest, making friends from other countries, and playing some sports.

**- What do you think of life in Japan—its culture and customs?**

It's totally different from Moroccan culture and customs. Culture and customs in Japan

are a mixture of the ancient and modern, making them very interesting on one hand but also quite difficult to understand in a short time on the other. Now, I am working step by step to learn more about the intricacies of Japanese culture by communicating with Japanese people.

**- Before coming to Japan, what was your image of the country, and has that perception changed?**

My initial image of Japan was mainly influenced by its hi-tech machinery and cars. Also, when I was younger I liked Japanese movies (ninja and samurai movies) and manga. Then in 2009, I saw a TV program (*Khawater* 5) about Japan's experience of progress and the reasons underscoring that success, tailored to Arab and Muslim viewers. I hoped one day to see Moroccans develop our country like the Japanese did theirs. As I expected, upon arriving in Japan I found a high level technology, very polite people who are honorable and hospitable, and a very clean and beautiful country.

**- What will you do after your fellowship ends?**

I will continue my research on hepatitis viruses in the Viral Hepatitis Laboratory at Pasteur Institute of Morocco. The greater experience I've gained in Japan will allow me to participate in other projects in the future. I hope to not only continue my collaboration with my colleagues in this laboratory but

also to strengthen the relationship between Pasteur Institute of Morocco and Kagoshima University in Japan.

**- Please give some advice for young researchers who may be thinking about doing research in Japan?**

I would recommend that they come to Japan because the research groups here are very professional and the well-equipped laboratories offer an excellent research environment. Japan is also a beautiful and safe country. You will find the Japanese to be a very polite and hospitable.

*As seen in our interview with him, Dr. Ezzikouri is very enthusiastic about his research, which is being advanced one successful step at a time with Prof. Kohara and his lab mates at Kagoshima University. Needless to say, his research, which is applicable to the diagnosis and treatment of hepatitis viruses, can yield very important benefits not only for Moroccans and Japanese but also for people around the world.*

*When Dr. Ezzikouri's tenure as a JSPS fellow ends next March, he intends to use the personal and professional ties he has made in Japan in advancing his research back in Morocco. We look forward to Dr. Ezzikouri being a bridge between researchers in his country and Japan over which collegial networks are maintained and expanded and future milestones marked in the battle against viral infections and communicable diseases.*

## Introducing Japan: Kagoshima

Kagoshima city is the capital of Kagoshima Prefecture. Located on Kyushu island in southwestern Japan, the city is approximately 40 minutes from Kagoshima Airport. Historically, Kagoshima was the center of the Shimazu samurai clan who ruled the Satsuma *han*, second largest domain in feudal Japan, until the end of the Edo Period.

Kagoshima city is compared with its Italian sister city Naples due to a similarly mild climate and palm-tree lined streets. The climate is very hot during summer and relatively cold and dry in the winter. One of the best places to see in Kagoshima is the famous active volcano just across the bay on

Sakurajima Island. It regularly erupts spewing ash over the city. There is also a very nice aquarium with diverse collection of marine life in the Kagoshima port area and what's called Dolphin Port with many shops and restaurants commanding a beautiful view of the bay in the foreground with Sakurajima in the background. Many festivals and fireworks are also held, mainly in summer, in Kagoshima city.

During my stay in Kagoshima, I spend time with my family visiting some gardens, dining in the restaurants, shopping, and meeting with friends. In addition, I have plans to visit Yakushima to see the deep forests and indigenous animals, including red-bottomed macaques and deer, living on the island.



Dr. Ezzikouri



Sakurajima





**Cover photo:**  
*Bonsai Plum Tree*  
Celebrating Japanese New Year's, an ornamental display of a miniature plum tree (*bonsai*) set against a gold-leaved folding screen.

## About JSPS

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

## Crowing Rooster



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.

**Contact Information** [quarterly@jps.go.jp](mailto:quarterly@jps.go.jp)