

JSPS QUARTERLY

JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE

■ FEATURE

Annual Meeting of Global Research Council
Held in Tokyo

No. 52 2015 Summer

GRC Annual Meeting Held in Tokyo

On 27-28 May, the Global Research Council's fourth annual meeting was held in Hotel Okura Tokyo. It featured two thematic sessions: "Research Funding for Scientific Breakthroughs" and "Building Research and Education Capacity." This year's meeting was co-hosted by JSPS and the National Research Foundation of South Africa, represented by Dr. Yuichiro Anzai and Dr. Beverly Damonse, respectively. Participating in it were the heads of 57 research funding agencies assembled from countries around the world and representatives of three international organizations.



Annual meeting



JSPS president Dr. Anzai

One of the goals in preparing this annual meeting was to increase the numbers of heads of research councils (HORCs) from developing countries, particularly from Africa, who participate in the worldwide GRC community. Of the 56 participating HORCs, nine of them were from African countries, which was nearly five times more than participated in last year's meeting. Many more African HORCs who were unable to make the long trip to Japan were ushered into the GRC fold through an Africa regional GRC meeting and a continent-wide symposium of African HORCs held in the lead-up to the annual meeting.



Video message from Prime Minister Abe

In the plenary session of the annual meeting, a video message was offered by Prime Minister Shinzo Abe, who emphasized that research based on researchers' own free ideas and creativity is what begets innovation and that steadfast investment in basic research is a critical investment in society's future.

A new innovation made to this year's GRC annual meeting was the holding of two preliminary meetings, "Global Symposium on Scientific Breakthroughs" and "Roundtable on Building Education and Research Capacity in Africa." The discussion advanced among their respective stakeholders yielded content to be incorporated in the GRC meeting's "Statement of Principles for Funding Scientific Breakthroughs" and "GRC Approaches to Building Research and

Education Capacity." These statements were endorsed by the entire body of participating GRC members, and group discussions were held to brainstorm future GRC avenues and trajectories toward achieving their objectives.

Included in the Statement of Principles was a consensus on the need for "freedom, flexibility and risk-taking" in the pursuit of scientific breakthroughs, and on the need for "partnership with stakeholders," such as government, the scholarly community, industry and the public, in garnering support for breakthrough science. It was also agreed that to maximize the chance for achieving breakthroughs GRC participants should create effective linkages among themselves while employing a diverse portfolio of approaches and instruments aligned with their respective organizational missions. With a view to promoting international linkage and collaboration, it was concluded that initiatives should be taken to share expertise and good practices through such means as holding workshops and creating a domain for inter-organizational communication within the GRC's website. Other proposed initiatives included collaborative funding, bottom-up researcher networking, and providing GRC-wide access to core research facilities and infrastructures.

Considering the fact that this was only the fourth annual meeting in the newly established Global Research Council, it took yet another epochal step in setting objectives, marking milestones and staking out future paths for the massive and highly diverse GRC community. Its program of meetings, receptions and excursions gave the participants an ideal opportunity to strengthen their ties yet another notch both professionally and personally as well as inter-organizationally. All looked forward to meeting back up in next year's annual meeting to be co-hosted by India and the UK, if not sooner.



At press conference

Nobel Prize Dialogue Held in Tokyo

On 1 March, JSPS and Nobel Media held the Nobel Prize Dialogue Tokyo 2015, venues at the Tokyo International Forum.

Since 2012, the Nobel Week Dialogue has been held annually around the same time that the Nobel Prize Ceremony is convened. This Tokyo event was the first time for the Dialogue to be held outside of Sweden. It assembled an eminent group of Nobel laureates and other leading authorities, who advanced a vigorous discussion on life sciences and on what it is bringing to people now and will spell for society in the future.

This landmark event attracted an audience of approximately 800 people, while reaching a multitude more via a live broadcast over the Internet. All of the lectures and the panel discussion are archived and can be viewed on the following website:

<http://www.nobelprizedialogue.org/tokyo2015/>

The theme of this Dialogue was “The Genetic Revolution and Its Future Impact.” Its discussion illuminated ways in which the genetic revolution is engendering changes, starting with how we conceive life, including human life, and extending to societal transitions spawned by the multifaceted impact of genetic advances including on medicine and agriculture. Among the topics explored by the panelists were the application of iPS-cell research to regenerative medicine, the development of personalized therapies, and risks involved in the use of genetically modified products. They also delved into what the results of rapidly advancing research in the life sciences will hold for future society.

Among the lecturers in the morning session was Prof. Shinya Yamanaka, 2012 Nobel laureate in physiology or medicine, and director of the Center for iPS Cell Research and Application (CiRA). He spoke about how the advancement of basic research led him to the discovery of induced pluripotent stem cells (iPS cells) in 2006, and how he is working to expand that research to the development of new medical treatments. He explained how iPS cells can multiply indefinitely and can be turned into any cell in the body, such as muscle and blood. The research, he said, that is currently being advanced at CiRA includes work to produce blood from iPS cells, and to develop new drugs by using iPS cells to model illnesses. In such ways, CiRA’s goal, Prof. Yamanaka explained, is to apply iPS cells to actual medical treatments.



Concluding plenary session

A special message was also delivered by Dr. Hiroshi Amano, 2014 Nobel laureate in physics, and professor, Nagoya University, who introduced research being started to apply LEDs to regulating animal behaviour and treating skin diseases. He explained how

advances in linking medicine and engineering are triggering expectation for unprecedented advances in medical therapies.

Three sessions were held in the afternoon on the following themes: “The Promised Land of Genomic Medicine,” “Exploring Public Attitudes to Genetics and Life Science Research,” and “Understanding the Future of Human Evolution.” In them, spirited Q&A exchanges were held between the panelists and members of the audience. In another session titled “The Development of Research Interfaces in Asia,” Mr. Koichi Tanaka, 2002 Nobel laureate in chemistry, and senior fellow and general manager, Mass Spectrometry Research Laboratory, Shimadzu Corporation, conveyed his views on how culture can exert a positive effect on creativity—creativity which impels the kind of qualitative analysis that sparks interdisciplinary fusion. He used Japan’s lead as an innovator in the field of *manga* as an example of such culturally driven creativity. He went on to say that while natural science is commonly pursued by countries throughout the world, methodologies employed to seek truth differ; consequently, ideas that spring forth from the unique cultures of Asian countries are capable of generating uniquely new methodologies.



Stream session

The program ended with a panel discussion, in which the six Nobel laureates summarized the various views expressed during the day’s discussions in a way that configured a scenario for the future. In the discussion, Dr. Kurt Wüthrich, 2002 Nobel laureate in chemistry, professor, Institute of Molecular Biology and Biophysics, Swiss Federal Institute of Technology Zürich, said that as breakthroughs cannot be planned, funding agencies should refrain from giving researchers set goals.

A reception was held after the conclusion of the Dialogue in the presence of Their Majesties the Emperor and Empress, who engaged the Nobel laureates and young researchers in pleasant conversation.



Reception

Eleventh Award of JSPS Prize

On 24 February, a ceremony was held to award the 11th JSPS Prize. Selected were 25 talented young researchers with excellent records of scientific inquiry and exceptional promise to be trailblazers of scientific research in Japan. The ceremony for this FY2014 Prize was held at the Japan Academy in the presence of Their Imperial Highnesses Prince and Princess Akishino.

Selection of JSPS Prize Awardees

JSPS sent out requests for Prize nominations to 3,596 Japanese research institutions and academic societies, from which it received 212 in April. Adding the carryovers from the prior year, 339 nominees were screened by the researchers of JSPS's Research Center for Science Systems. Based on the results, the JSPS Prize Selection Committee, chaired by Dr. Ryoji Noyori (2001 Nobel laureate in chemistry) and comprising 13 members, made the final decision on the 25 awardees.

Award Ceremony

The ceremony for awarding the JSPS Prize was held in conjunction with the awarding of the Japan Academy Medal. At the ceremony on 24 February, JSPS president Dr. Yuichiro Anzai offered an opening message, followed by a report on the selection process from Dr. Noyori. Then, Dr. Anzai presented the



Their Imperial Highnesses Prince and Princess Akishino and JSPS Prize awardees

25 recipients with a certificate of merit, a medal, and a purse of ¥1.1 million.

A tandem ceremony was held to confer the Japan Academy Medal on six of the JSPS Prize recipients. First, Japan Academy president Prof. Takashi Sugimura delivered welcoming remarks, after which Dr. Takeshi Sasaki, chairman of the Academy's selection committee, explained the vetting process. Then, Prof. Sugimura presented the medal and a commemorative gift to each of the awardees.

Prince Akishino offered remarks and Mr.

Motoyuki Fujii, State Minister of Education, Culture, Sports, Science and Technology, gave a congratulatory message on behalf of the Minister. To conclude the meeting, a message of appreciation from the Prize recipients was delivered by Dr. Keiji Tanaka, professor, Graduate School of Engineering, Kyushu University.

After the ceremony, a celebration party was held. Attended by Prince and Princess Akishino, the Prize recipients, their guests, and the ceremony attendees, an atmosphere conducive to pleasant conversation was enjoyed by all.

Report and Remarks on 11th JSPS Prize by Dr. Ryoji Noyori

As chair of the JSPS Prize Selection Committee, I wish to describe the selection process for the eleventh annual JSPS Prize and to offer some words of encouragement to the young recipients.

This time, the Committee received 339 nominations from universities, research institutes and related academic societies. The Research Center for Science Systems, established within the Japan Society for the Promotion of Science, carried out the preliminary screening, based on the results of which the 13-member Selection Committee chose the recipients for this year's JSPS Prize.

Having carried out a rigorous evaluation from multiple perspectives including the candidates' research results, originality, and future potential, the Committee selected you, the 25 gifted young researchers gathered here today,

as the 2014 JSPS Prize recipients. When considering the fact that only one out of every 14 of the initial nominees was chosen, the Prize's vetting process, through which you were selected, is indeed a very competitive one.

On your selection for this prestigious award, I wish to extend both you and the colleagues who support your work a most hearty word of congratulations.

Last year, Drs. Isamu Akasaki, Hiroshi Amano, and Shuji Nakamura won the Nobel Prize in physics for their invention of the blue light-emitting diode, causing Japan to buzz with excitement and overflow with joy. Though this achievement was a product of Japanese research, it must be borne in mind that the Nobel Prize has no borders: It was Alfred Nobel's last will and testament that the Prize be given to people who make the

greatest contributions to humankind. Once again, the Nobel Prize shows us how the worldwide spread of scientific discovery and invention carries with it great benefits and blessing for human society. Science being the wellspring of knowledge, the results it produces are the common assets of all people.

While the nature of science is unchanging, eras evolve. In this era, the survival of civilization is jeopardized by climate change and other globally amassing problems that transcend national borders. In seeking ways to mitigate and solve these problems, science will need to play an ever-more instrumental role. Bearing this imperative in mind, I look forward to you, the recipients of the JSPS Prize, giving maximum expression to your still-latent potentials and, while cooperating with people around the world, elevating your activities to yet loftier heights.

Eleventh (FY2014) JSPS Prize Awardees

Integrated Disciplines		
Tsuyoshi Takagi	Professor, Institute of Mathematics for Industry, Kyushu University	"Security Analysis and Efficient Implementation of Public-key Cryptography"
Mami Tanaka (Oji)	Professor, Graduate School of Biomedical Engineering, Tohoku University	"Investigation of Tactile Mechanism and a Tactile Sensor System"
Takahiro Hara	Associate Professor, Graduate School of Information Science and Technology, Osaka University	"Data Management Technologies in Advanced Network Environments"
Yusuke Miyao	Associate Professor, Digital Content and Media Sciences Research Division, National Institute of Informatics, Research Organization of Information and Systems	"Syntactic Parsing and Semantic Analysis of Natural Language and Its Applications"
Humanities and Social Sciences		
Keiko Ishii	Associate Professor, Graduate School of Humanities, Kobe University	"A Psychological Study on Culture and Cognition"
Koichi Suwabe	Associate Professor, Graduate School of Humanities and Sociology, The University of Tokyo	"Study on the Modern American Novel"
Tadashi Sekiguchi	Professor, Institute of Economic Research, Kyoto University	"A Dynamic Game Theory and Its Application to Economics"
Taro Tsurumi	Associate Professor, Research and Development Bureau (Faculty of Liberal Arts), Saitama University	"A Historical Sociological Study on the Zionist Worldview as an Origin of the Israeli-Palestinian Conflict"
Shuichi Hasegawa	Associate Professor, College of Arts, Rikkyo University	"Studies on the History of the Southern Levant in the First Millennium B.C. Based on Epigraphic and Archaeological Sources and Critical Analysis of Biblical Text"
Mathematics; Physical Sciences; Chemistry; Engineering Sciences		
Kazuhide Ito	Associate Professor, Interdisciplinary Graduate School of Engineering Sciences, Kyushu University	"Studies on Evaluating Respiratory Exposure by Fluid Engineering and Its Application in Indoor Environmental Design"
Shinichi Komaba	Professor, Faculty of Science Division I, Tokyo University of Science	"Study on Electrode Materials for Advanced Rechargeable Batteries"
Hirohide Saito	Professor, Center for iPS Cell Research and Application, Kyoto University	"Synthetic RNA Design Technologies to Control Cell Fate"
Junichi Tatami	Professor, Graduate School of Environment and Information Sciences, Yokohama National University	"Reliability Improvement of Ceramics by Advanced Powder Processing Based on Elucidation of Fracture Mechanisms"
Keiji Tanaka	Professor, Graduate School of Engineering, Kyushu University	"Study on Structure, Physical Properties and Function of Polymers at Interfaces"
Yukinobu Toda	Project Associate Professor, the Todai Institutes for Advanced Study, Kavli Institute for the Physics and Mathematics of the Universe, The University of Tokyo	"Derived Category of Coherent Sheaves and Counting Invariants"
Satoru Nakatsuji	Associate Professor, Institute for Solid State Physics, The University of Tokyo	"Exploration of Novel Quantum Phenomena in Strongly Correlated Electron Systems"
Masataka Higashiwaki	Managing Director/Director of the Center, Advanced ICT Research Institute, National Institute of Information and Communications Technology	"Pioneering Research and Development on Wide Bandgap Semiconductor Transistors"
Biological Sciences; Agricultural Sciences; Medical, Dental, Pharmaceutical Sciences		
Tatsushi Igaki	Professor, Graduate School of Biostudies, Kyoto University	"Genetic Study for Cell Competition that Regulates Tumorigenesis"
Masaru Ishii	Professor, Graduate School of Frontier Biosciences, Osaka University	"Mechanism for Bone Remodeling by In Vivo Imaging of Bone Immune Cell"
Kenji Kabashima	Associate Professor, Graduate School of Medicine, Kyoto University	"Study toward the Control and Non-invasive Diagnosis of Atopic Dermatitis via Understanding of Its Mechanism"
Yutaka Sato	Associate Professor, Graduate School of Bioagricultural Sciences, Nagoya University	"Studies on Plant Embryogenesis and Genome Evolution through the Action of Small RNA Pathways"
Atsushi Suzuki	Professor, Medical Institute of Bioregulation, Kyushu University	"Development of Methodologies for Isolation and Characterization of Hepatic Stem Cells, and Identification of Factors Determining Hepatic Cell Fate"
Kazuhiro Nakamura	Associate Professor, Center for the Promotion of Interdisciplinary Education and Research, Kyoto University	"Study of the Neural Mechanism that Controls Thermal Homeostasis"
Yoshimitsu Hamano	Associate Professor, Department of Bioscience, Fukui Prefectural University	"Biosynthetic Mechanism of Homopoly Amino Acids Produced by Microorganisms"
Atsushi Mochizuki	Chief Scientist, Theoretical Biology Laboratory, RIKEN	"Study for the Relation between the Dynamics and Structure of Regulatory Networks in Biology"

Titles and affiliations current as of 1 December 2014

Award Ceremony Held for Fifth JSPS *Ikushi* Prize

Graced by the presence of Their Imperial Majesties the Emperor and Empress, the fifth *Ikushi* Prize award ceremony was held by JSPS at the Japan Academy on 4 March. At the ceremony, 18 young researchers received an *Ikushi* certificate and medal.

In 2009, JSPS received an endowment from Emperor Akihito on the 20th year of his reign. Amidst a severe economic environment in Japan, His Majesty's desire was to encourage and support young scientists who are working diligently to advance their studies and research. In deference to his wishes, JSPS established the *Ikushi* Prize program and placed it into operation in FY 2010. It functions to formally recognize outstanding doctoral students who can be expected to contribute to Japan's future scientific advancement, while seeking to fan the flames of their enthusiasm for education and research pursuits.

For this conferral of the fifth *Ikushi* Prize, in March 2014 a request to nominate candidates was sent out to 2,706 Japanese universities and academic societies, from which 157 nominations were received by June. Over a 6-month period, JSPS's Research Center for Science Systems conducted preliminary document and panel reviews on the nominees, upon which the program's Selection Committee made the final decisions. Meeting on 6 January, the Committee members engaged in a vigorous discussion of the nominees, taking into account their current research activities and



FY 2014 awardees

future potential, they finally came to the difficult decision on which 18 nominees to select for the Prize.

JSPS president Dr. Yuichiro Anzai opened the ceremony with introductory remarks and was followed by Selection Committee chair Dr. Takeshi Sasaki, who reported on the vetting process. Then, Dr. Anzai presented an *Ikushi* certificate and medal to Ms. Honami Sato, a doctoral student in the Graduate School of Sciences at Kyushu University, who received them as a representative of all the awardees. This was followed by a congratulatory message from the Minister of Education, Culture, Sports, Science and Technology, read by Administrative Vice Minister of Education, Culture, Sports, Science and Technology Shinichi Yamanaka. The program concluded with a message of appreciation and future resolve on behalf of

the awardees by Ms. Sato.

After the ceremony, a tea party was held at the Japan Academy, in which Emperor and Empress enjoyed pleasant conversation with Mr. Yamanaka, Dr. Sasaki, and the *Ikushi* laureates.



Receiving the *Ikushi* certificate and medal

On Receiving the Fifth *Ikushi* Prize by Ms. Honami Sato

*On behalf of this year's 18 *Ikushi* Prize recipients, I wish to express our gratitude and to offer a short message. I first want to extend our deepest appreciation to Their Majesties the Emperor and Empress, who accord young researchers*

unceasing support and through whose graciousness this esteemed Prize has been created to encourage us. We also thank everybody engaged in administering the JSPS Prize program. Again, I express our sincere appreciation for the opportunity

given us to bask in the glory of receiving this treasured Prize, though it is an honor far too great to be deserved.

In my research, I use geomaterials found in Japan to reconstruct vestiges of past

meteorite collisions with the Earth. The results of this research are about to prove that large meteorite impacts some 215 million years ago caused environmental changes, animal extinctions and sparked new chains of evolution. By also verifying the record of meteorite crashes that occurred in much earlier periods than 200 million years ago, I believe I was able to facilitate further progress in research on meteorite collisions.

So far, I have been able to elucidate a

terrestrial record going back 4.6 billion years. Within that record, I would like, if even marginally, to find reasons why humans inhabit the Earth today and to consider our future destiny. The history of the Earth and life, as elucidated by this research, is a very interesting one. It is my hope to convey this fascinating message to many more people.

Further encouraged by the receipt of this Prize, our group of Ikushi laureates will continue challenging new frontiers,

while never forgetting the joy of scientific pursuit. We extend a special word of gratitude to our mentors, who have taught us the importance of never giving up but continuing to persevere even when weary or discouraged. We also want to extend our hearty thanks to our colleagues who work with and assist us in our joint research, and to our families for their understanding of our dedication to research and their unrelenting support.

Fifth (FY2014) JSPS Ikushi Prize Awardees

Awardee Name	Affiliation	Research Subject of Doctoral Course
Takuya Akiba	Graduate School of Information Science and Technology, The University of Tokyo	"Unified Algorithmic Approach for Real-world Large-scale Networks"
Yasushi Ueda	Graduate School of Music, Tokyo University of the Arts	"The Piano Education at the Conservatoire National de Musique de Paris from 1850s to 80s: Processes and Factors of Canonization of Repertory"
Shinnosuke Uno	Graduate School of Medicine, The University of Tokyo	"Development of Fluorescent Probes Based on Intramolecular Spirocyclization for Live-cell Super-resolution Imaging"
Yuuki Obata	Graduate School of Medical and Pharmaceutical Sciences, Chiba University	"The Regulatory Mechanism of Gut Immune Homeostasis"
Takahiro Kubo	Graduate School of Agriculture, Kyoto University	"Social Scenario Analysis toward Coexistence between Human and Wildlife"
Shogo Kumagai	Graduate School of Environmental Studies, Tohoku University	"Feedstock Recycling of Hard-to-Recycle Polymeric Materials"
Kaoru Kumazaki	Graduate School of Science, The University of Tokyo	"Structural Basis for Sec-independent Membrane Protein Insertion by YidC"
Honami Sato	Graduate School of Sciences, Kyushu University	"Large Impact Event and Its Environmental Effects in the Triassic"
Sho Sugiura	Graduate School of Science, The University of Tokyo	"New Formulation of Statistical Physics Based on Thermal Pure Quantum States"
Wakana Suzuki	Graduate School of Human Sciences, Osaka University	"Resistance and Accommodation: the Ethnography of Regenerative Medicine"
Masako Tatsumi	Graduate School of Humanities and Sciences, Ochanomizu University	"Research on Inheritance and <i>Shobunjo</i> in Medieval Japan"
Sota Tanaka	Graduate School of Humanities and Sociology, The University of Tokyo	"A Study on Hentai Kambun"
Masaki Nakahata	Graduate School of Science, Osaka University	"Functional Supramolecular Materials Based on Stimuli-responsive Macroscopic Self-assembly"
Kyohei Nakamura	Graduate School of Medicine, Tohoku University	"Natural Killer Cell Death Mediated by Intercellular Communication, Trogocytosis"
Takashi Hayakawa	Graduate School of Science, Kyoto University	"Elucidation of Mechanism of Molecular Evolution and Ecological Adaptation of the Bitter Taste Receptor Gene Repertoire in Primates"
Fumie Magata	Graduate School of Animal Husbandry, Obihiro University of Agriculture and Veterinary Medicine	"Mechanism of the Negative Impact of Endotoxin on Ovarian Functions Associated with Endometritis in Dairy Cows"
Izumi Mashima	Graduate School of Dentistry, Health Sciences University of Hokkaido	"Development of Molecular Biological Control Method for Oral Biofilm at Early Stage"
Guangqin Li	Graduate School of Science, Kyoto University	"Creation of Innovative Function by Hybrid of Metal Nanoparticles and Metal-organic Frameworks"

Titles and affiliations current as of 1 May 2014

Seventh HOPE Meeting Held

On 1-5 March, the seventh in the annual series of HOPE Meetings was held in Tokyo. As with last year, its theme was physics, chemistry, and physiology and medicine (including related fields). It assembled 97 outstanding young researchers, specializing in various fields, from 17 countries and areas of the Asia-Pacific and Africa. Receiving lectures from seven distinguished scientists including five Nobel laureates, the young researchers also participated in discussions with them. In putting together poster sessions and team presentations, they exercised ingenuity in communicating their ideas to other participants with different scientific and cultural backgrounds. Another dimension was added to their experience

through Japanese cultural activities and an observation visit to the Japan Agency for Marine-Earth Science and Technology (JAMSTEC).

On 1 March, the HOPE Meeting participants also attended the Nobel Prize Dialogue Tokyo 2015, held at the Tokyo International Forum, where they took part in a dialogue between a panel of science authorities and the attentive public.

For more information, please visit our webpage at:
<http://www.jsps.go.jp/english/e-hope/outline7.html>

The 7th HOPE Meeting was really fruitful for me. One of the biggest outcomes from the meeting was that I could meet many scientists who have the power to create the future world. To take a step toward becoming a top researcher, I would like to use the human network I established in this meeting.

Mr. Kosuke Shiraishi (Japan)



Group discussion with Prof. Negishi



Participants

The team presentation was particularly interesting and enjoyable, as it demonstrated team work between scientists and how different ideas came together in the end. I feel inspired by the HOPE Meeting in knowing that science is progressing in every field. I will continue my career in Oncology research, hoping to be able to collaborate with young scientists around the world.

Dr. Wei Scarano (Australia)



Lecture by Dr. Bednorz



Preparing team presentation

Lecturers

- Dr. Johannes Georg Bednorz, 1987 Nobel Laureate in Physics
- Prof. Douglas Dean Osheroff, 1996 Nobel Laureate in Physics
- Prof. Makoto Kobayashi, 2008 Nobel Laureate in Physics
- Prof. Hideki Shirakawa (HOPE Meeting Jr.), 2000 Nobel Laureate in Chemistry
- Prof. Ei-ichi Negishi, 2010 Nobel Laureate in Chemistry
- Prof. Dan Shechtman, 2011 Nobel Laureate in Chemistry
- Prof. Kazutoshi Mori, Kyoto University; 2014 Lasker Awardee for Basic Medical Research
- Prof. Gunnar Öquist, Professor Emeritus, Umeå University, Former Secretary General of Royal Swedish Academy of Sciences

A leap forward for young scientists

HOPE Meetings feature lectures by Nobel laureates, but it is also the excellent young researchers from the Asia-Pacific and Africa regions who receive them that makes these meetings so meaningful. JSPS holds HOPE Meetings upon the foundation of cooperation and trust it has cultivated over many years with the countries and areas in these regions. As meetings of this heft couldn't be borne by any one university or research institution, JSPS is proud to be able to fulfill this broad-shouldered role. So as to provide this kind of unique opportunity to yet many more young researchers, JSPS would like to continue holding HOPE Meetings in future years as well.

Research Cooperation Division

JSPS Program Introductions Given at Five UK Universities

During the period of 23-25 February, the JSPS London Office held program briefings at five universities, all of which are highly appraised for the quality of their research programs: University of Leicester, De Montfort University, the University of Manchester, Lancaster University, and University of Central Lancashire. Being held upon the request of the universities, the briefings attracted about 150 participants in total. In addition, this was the office's first formal visit to these universities, with the exception of the Universities of Leicester and Manchester.

Taking the visits one at a time, the University of Leicester is renowned for its research in such fields as cosmology, genetics and museology. After the briefing, the participants from the museology faculty went out of their way to show us their facilities. Various posters and artworks displayed there make the facilities hands-on training sites for the students.

At De Montfort University, the attending researchers, many of whom being from different faculties were meeting each other for the first time, chatted spiritedly over coffee before the briefing session started. The staff was very impressed by this show of affinity among the researchers as colleagues though of differing fields.

The University of Manchester is a large-scale research institution that ranks among approximately the top 50 universities in the world. Before the briefing, the staff met with Prof. Matt Lambon Ralph, Associate Vice-President for Research, to discuss ways to strengthen the linkage between the university and Japan,

especially among young researchers.

Situated in a historical city, Lancaster University also boasts a high world ranking. The staff was enamoured by the university's research environment, with vast lawns inside the campus and gently-sloping grasslands spotted with sheep outside it.

University of Central Lancashire is highly appraised for its research in such fields as astronomy, nanotechnology, linguistics and journalism. Before the briefing, the staff was given a tour of the university's quantum physics and chemistry labs and of its School of Art, Design and Performance. At the School, the staff was shown the operation of its printing plate-making machinery, very valuable equipment possessed by only a few universities in the UK. They discovered that the university has departments with unique characteristics far exceeding what would generally be imagined.

In the office's briefings at three of the universities, JSPS alumni gave presentations on their research experiences in Japan. One of them emphasized the quality of Japanese scientific research, focusing on the importance of exchanges with Japanese research institutions. Their introductions having prompted the listeners to want to use JSPS programs to go to Japan to do research, the cooperation accorded us by these former JSPS fellows added an inspiring dynamic to our program briefings.

JSPS London Office



Plate-making machinery at University of Central Lancashire



JSPS program briefing at Leicester University

JSPS Publishes Book on Research Practices and Ethics

JSPS has compiled a book entitled *For the Sound Development of Science—The Attitude of a Conscientious Scientist*, which is being released by Maruzen Publishing Co., Ltd. Targeted to people engaged in research across the spectrum of the humanities, social sciences and natural sciences, the book covers points that they should be cognizant of when carrying out their research as well as ethical and behavioral standards that they are expected to observe. Also addressing how to publicize the fruits of research activities and the proper



use of research funds, the book offers important information for researchers to keep in mind as they advance their work based on their own creativity and free ideas.

The cover of the book is colored green, as its content is likened to the budding sprouts of hale and hardy scientific advancement. Dubbed the "Green Book," we hope that all of you will read and use it.

Priced at ¥1,400, the English edition can be purchased from the following website: <http://pub.maruzen.co.jp/shop/9784621089385.html>
Priced at ¥900, the Japanese edition can be purchased from the following website: <http://pub.maruzen.co.jp/shop/9784621089149.html>

Planning and Analysis Division

FAPESP-JSPS Joint Research Workshops

Launched in FY 2014, FAPESP-JSPS Joint Research Workshops are held based on a Memorandum of Understanding between JSPS and São Paulo Research Foundation (FAPESP). Their aim is to promote research collaboration in all scientific disciplines including the humanities and social sciences.

In the program's first fiscal year, FAPESP and JSPS selected two



At workshop in São Paulo

workshops to hold in the field of "Biodiversity and Environmental Conservation." One themed "Contribution of Genetics to Plant Conservation" was held from 2-4 February 2015 in São Paulo, Brazil. The other themed "Biodiversity and Conservation of Continental Margin Ecosystems: From Observation to Management" was held from 25-27 March in Izu, Shizuoka. In them, young researchers engaged in probing discussions and participated in hands-on exercises, such as collecting and sorting biological samples, carried out both in the lab and onboard a research vessel.

Through these two events, a total of about 60 excellent young Japanese and Brazilian researchers enjoyed an exciting three days full of new discoveries, while building strong networks among each other.

For more information on this program, please visit its website: https://www.jsp.go.jp/english/e-asia_seminar/index.html

Research Cooperation Division

Toward Strengthening Ties with Russian Scientific and Funding Institutions

Recently, the JSPS Bonn Office held talks with Dr. Vladimir Nikolaevich Fridlyanov, chairman of the board at the Russian Foundation for Humanities, which disburses grants for research in the humanities and social science. Directed at supporting Russo-Japanese joint research not funded by the Russian Foundation for Basic Research (RFBR), the discussion, which considered the drafting of a cooperative agreement, was both concrete and probing, and will continue.

The staff also visited Russian Foundation for Basic Research, with which JSPS has concluded of memorandum of understanding, where the discussion included an appraisal of the JSPS-RFBR joint research program and ways to further enhance its effectiveness. Then, the staff visited the Russian Academy of Sciences and sought its cooperation in publicizing JSPS's fellowship and other programs to researchers around Russia. A visit was also made to Lomonosov Moscow State University, which was holding a joint seminar in mathematics with Tohoku University. They allowed us to take advantage of the occasion to introduce JSPS's programs.

As, during our visits, both Russian researchers and organizations voiced ardent interest and need in conducting joint research with Japanese colleagues and in doing research in Japan, we came away feeling that there exists considerable potential to strengthen scientific cooperation with Russia.

JSPS Bonn Office



JSPS Bonn Office director and vice president of Russian Academy of Sciences

JSPS Nairobi Research Station Held Symposium on Maasai Olympics

On 6 March, the JSPS Nairobi Research Station cosponsored a symposium with the Embassy of Japan in Kenya. Held at the Embassy, its theme was "The 2nd Maasai Olympics Symposium: Competition for Wildlife Conservation?"

The Maasai people have for long years practiced their cultural rite of passage to manhood by hunting and killing lions. However, this



traditional practice has become detrimental to the conservation of lions, which are now on the brink of extinction. In order to protect wildlife, the Maasai have replaced their lion hunt with an athletic competition, the Maasai Olympics. Held in December 2014, the second Maasai Olympics attracted hundreds of spectators to watch young Maasai "warriors" compete in Amboseli National Park. The sporting events mirrored such traditional Maasai warrior skills as "hunting, running, herding, and even dancing."

At the symposium, the main speaker, Dr. Toshio Meguro (Research Associate, Research Institute for Languages and Cultures of Asia and Africa) explained how these Olympics have converted the Maasai's hunt for lions into a pursuit for wildlife conservation. The approximately 60 people who attended the symposium enjoyed a lively panel discussion, giving them a renewed chance to think about the meaning and value of African cultural and environmental conservation.

JSPS Nairobi Research Station

Symposium and Medal Award Ceremony Held in Thailand

On 27 February, two events were held in Thailand: a JSPS-NRCT RONPAKU Medal Award Ceremony, in which the new RONPAKU laureates presented their PhD theses, and a JSPS-JAAT-NRCT Seminar on “Health and Aging.”

The medal award ceremony was held to both recognize the great efforts made by the RONPAKU fellows who received their PhDs from Japanese universities in the previous fiscal year and to give them added encouragement as they go on in advancing their research activities. Six of the seven FY2013 RONPAKU graduates attended the ceremony. At it, Mr. Krishawat Nopnakepongse, deputy secretary-general of



Awarded RONPAKU fellows

the National Research Council of Thailand (NRCT), and Dr. Suneel Mallikarjun, president of the JSPS Alumni Association of Thailand (JAAT), offered congratulatory remarks, after which Prof. Kuniaki Yamashita, director of the JSPS Bangkok Office, presented the medals to the RONPAKU laureates.

That afternoon, the JSPS-JAAT-NRCT Seminar was held. Its keynote lecture was delivered by Prof. Kazuhiko Hamamoto of Tokai University on the theme “An Intuitive Human-Interface: Web Usability and Virtual Reality.” It addressed measures that can be taken to make the Internet easier for the elderly to use. Then, JAAT executive committee member Dr. Wichet Leelamanit, assistant professor at Mahidol University, gave a presentation on the topic “Herbal and Dietary Supplements for Elderly People.” In developing this theme, he introduced from a pharmaceutical perspective various nutrients and their benefits in sustaining the health and youthfulness of seniors, while giving concrete examples of how efficacious vegetables and supplements should be utilized.

After these speeches, the six RONPAKU laureates gave presentations on their respective research themes.

JSPS Bangkok Office

JSPS French Alumni Association Holds Commemorative Meeting

On 17 April, the JSPS Strasbourg Office and JSPS French Alumni Association teamed up to hold a meeting for the purpose of celebrating the tenth anniversary of the alumni association. Co-hosted by the Embassy of Japan in France, it was attended by some 100 people, including the alumni, Japanese researchers living in France, and members of French and Japanese government ministries and science agencies.

The meeting began with welcoming and congratulatory remarks from Alumni Association president Dr. Isabelle Sasaki and Ambassador Yoichi Suzuki, followed by a keynote lecture from Dr. Jean-Marie Lehn, professor, University of Strasbourg (1987 Nobel laureate in chemistry and honorary president of the alumni association). It was titled “Towards Complex Matter: Chemistry? Chemistry!” Standing in front of an audience of diverse backgrounds, he spoke about the role of chemistry and its future prospects and potentialities. Drawing upon examples of scientists who have made great achievements, he said that chemistry is not a matter of mere discovery, but of “creativity.” Having listened intently, the attendees engaged Dr. Lehn in a vigorous exchange of questions and answers.

At the following reception, Dr. Marie-Claire Lett, professor of University of Strasbourg and director of Maison Universitaire France-Japon (former president of the alumni association), offered remarks and

posed a toast in celebration of the association’s landmark anniversary, after which all enjoyed the chance offered by the reception to pleasantly chat, renew acquaintances, and make new friends.

It was thanks to the generous cooperation of the Embassy of Japan in France that this meeting could be carried out so successfully. Its holding gave many people a good opportunity to learn about the alumni association, while offering French and Japanese researchers a chance to meet and get to know one another.

JSPS Strasbourg Office



Lecture by Prof. Lehn

18th Meeting of Japan-India Science Council Held in Tokyo

Cosponsored by JSPS and India’s Department of Science & Technology (DST), the eighteenth meeting of Japan-India Science Council was held in Tokyo on 16 March. The meeting, which assembled 14 Council members, all distinguished Japanese and Indian



Holding the signed minutes

scientists, was co-chaired by High Energy Accelerator Research Organization (KEK) director general Prof. Atsuto Suzuki and Saha Institute of Nuclear Physics director Prof. Milan Kumar Sanyal. It was also attended by JSPS president Dr. Yuichiro Anzai and executive director Dr. Makoto Asashima.

Against a backdrop of increasingly far-reaching and widely diversifying demands for Indo-Japanese scientific collaboration, the Council selected the joint research projects and seminars to be carried out in the 2015 fiscal year and planned the upcoming activities of the Japan-India Cooperative Science Program, including the Special Lecture Tour Program implemented under it. Also discussed were future exchange activities and a publication commemorating the Cooperative Program’s 20-year anniversary. It was decided to hold the next meeting during the first quarter of 2016 in Chennai, India.

Bilateral Cooperation Division



For Comprehensive Understanding and Control of Autoimmune Diseases

Osaka University Immunology Frontier Research Center (IFReC), directed by Prof. Shizuo Akira, works to advance high-level research expected to accrue to making it an internationally renowned research institute in the field of immunology.

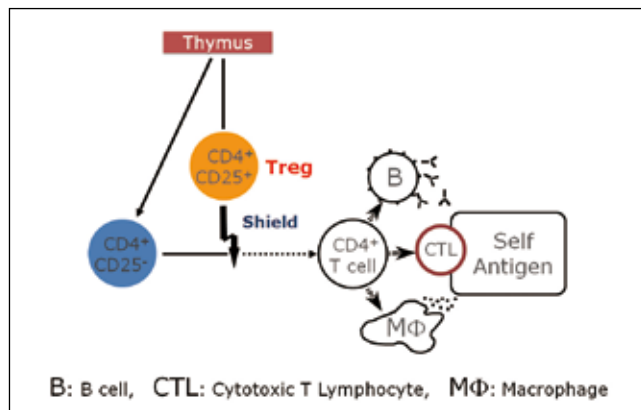


IFReC Building inspired by cherry blossoms in April

Immunology is a field which explores and elucidates the mechanisms that protect the body against various pathogens such as bacteria and viruses. Because the immune system is needed to eliminate infectious pathogens from the body, its malfunction gives rise to various immune disorders, including allergies, cancers, autoimmune diseases, and allograft rejection during transplants.

One of the main thrusts of our research at IFReC is work to overcome various autoimmune diseases. They are caused by abnormal immune responses of the body to substances and tissues normally existing in people. Regulatory T cell (Treg) plays an extremely important function in immune therapies for various autoimmune diseases, cancer treatment, and organ transplants. Prof. Shimon Sakaguchi's research group is studying the cellular and molecular bases of immune self-tolerance and autoimmune diseases. They have found Treg to be the most critical immune cell, as it regulates various kinds of inflammation and immune reactions. They are now endeavoring to elucidate the entire

realm of Treg mechanics, while high expectation is placed on their research results bearing fruit in future therapies for immune diseases including cancer and allergies.



Tregs (CD25⁺CD4⁺) occur in the thymus, and actively engage in the maintenance of immunological self-tolerance and immune homeostasis.

Prof. Sakaguchi won the 2015 Gairdner International Award for his discovery of Treg, clarification of its role in immunity, and its application in the treatment of autoimmune diseases and cancer. At the Gairdner award ceremony, he commented, "I recognize science as an international endeavor, and am happy to be able to pursue what I love."



Prof. Sakaguchi (right) at a press conference

Dr. Nicholas Isaac Smith



Profile

2002 Ph.D. (Engineering/Applied Physics) Osaka University
2002-2003 JST Postdoctoral Fellowship at Osaka University
2003-2007 Assistant Professor, Dept. of Frontier Biosciences, Osaka University
2010- Associate Professor/Principal Investigator of IFReC

Dr. Nicholas Smith came to Japan after graduating from the University of Sydney. He earned his PhD in the laboratory of Prof. Satoshi Kawata, Graduate School of Engineering, Osaka University. His thesis was titled "Femtosecond laser-tissue interactions with nanoscale resolution and related biological applications."

One of the leading themes of Dr. Smith's research at IFReC is titled "In-situ laser fabrication of nanoprobe inside living cells for analysis of biofunctions." By combining laser beam irradiation, local electric field enhancement, and cell thermal response, Dr. Smith and his group are working to create a range of applications from probes and nano-measurement techniques to photodynamic therapies. One of the most significant outputs of their research to date was published last year in *Nature Communications*.

All the members of the Biophotonics Laboratory led by Dr. Smith are from overseas. Some are students in IFReC's Japanese language course, implemented by the Center's administrative staff.



Microscopic imaging of photofabricated characters of gold particles inside a cell (scale bar, 12 micro meters). The *kanji* characters mean "Osaka University" (Smith et al. *Nature Communications* 2014).

For more detailed information about IFReC, please visit its website: <http://www.ifrec.osaka-u.ac.jp>



Dr. Alexander Holm Viborg



“5,000,000,000,000,000,000,000,000,000”

All the students were stunned when this huge number appeared on the screen and learned that there are 5 nonillion microbes in the world. “100,000,000,000,000” appeared next, surprising them again when they learned that it is the number of bacteria in and on each person’s body. The students were also surprised to learn that there are 10,000,000,000,000 cells in the human body. What shocked them was

that there are ten times more bacteria than cells, making each of us a walking bacteria colony. Dr. Alexander Holm Viborg gained the students’ riveted attention with these intriguing numbers.

After introducing himself and the culture of his home country, Denmark, Dr. Viborg told the students of Hosei University Girls’ High School about his research on “*how oligosaccharides are consumed by Bifidobacterium and Lactobacillus*” at the University of Tokyo. Though the title appears extremely complex, he explained the topic in a manner that made it easy for the students to grasp.

He told us that it is important for high school students to

encounter *something* that stimulates their interest and motivates them to act upon it. To that end, he said, that it is important for students at an early age to meet *someone* who can be a role model for them in considering their future paths.

Dr. Viborg had expressed interest in giving a lecture to Japanese high school students so as to offer them some insight into what it’s like to pursue an exciting career in international research. While preparing his Science Dialogue lecture, he structured his presentation in such a way that it would not only be informative but also motivational. Simplifying the content, he used appealing pictures and examples to enhance the students’ understanding of the topic.

Lastly, he told the students that what attracted him to his research field was a desire to help people by solving problems related to the dairy products they eat. He said that this research is both challenging and rewarding as well as knowledge expanding.

Before his lecture, Dr. Viborg thought that *Japanese students are shy*. It turned out, however, that he was not only peppered with questions (some in English) but also shown a biology experiment being conducted by the students. He suggested that future Science Dialogue lecturers might allow the students to introduce what they are studying even though their fields may differ from the lecturer’s.

The following fellows participated in JSPS’s Science Dialogue Program during the period from January through March 2015. For details about the program, please see its website: <http://www.jps.go.jp/english/e-plaza/e-sdialogue/>.

Overseas Fellowship Division

Venue	Lecturer	Nationality
Iwate Prefectural Kamaishi High School	Noemi Basso	Italy
Akita Prefectural Yokote Seiryu Gakuin High School	Ali Jamshidi	Iran
Ibaraki Prefectural Takezono High School	Amrit K. Nanda	Denmark
	Vikas S. Padalkar	India
Saitama Prefectural Kumagaya High School	Venkata R. Kotagiri	India
	Eric O. Larsson	Sweden
	Mengnjo J. Wirmvem	Cameroon
Chiba Prefectural Chosei Senior High School	Gabriele Chiaro	Italy
	Jungmi Kwon	Korea
Junior High and Senior High School at Komaba, University of Tsukuba (Tokyo)	Felix G. Marx	Austria
	Bretislav Smid	Czech
Tokyo Metropolitan High School of Science and Technology	Alvin Christopher G. Varquez	Philippines
Hosei University Girls’ High School (Kanagawa)	Alexander H. Viborg	Denmark
Niigata Prefectural Kokusai Joho High School	Md. Shahjahan	Bangladesh
	Kishan K. Nyati	India
Fukui Prefectural Fujishima Senior High School	Marco Pellitteri	Italy
	May S. Aung	Myanmar
Fukui Prefectural Koshi Senior High School	Gang Liu	China
	Arnau S. Carne	Spain
Fukui Prefectural Wakasa High School	Petr Paus	Czech
	Jacqueline B. Pocklington	Australia
	Mark S. P. Ravinet	UK
	Tamas J. Szidarovszky	Hungary
Yamanashi Prefectural Hikawa High School	Tamas J. Szidarovszky	Hungary
Yamanashi Prefectural Tsuru High School	Si-Young Bae	Korea
	Martin M. Casco Robles	Nicaragua
	Ilpo O. Niskanen	Finland
	Agnes Roevindne Bogardi-Meszoely	Hungary
Yamanashi Prefectural Yoshida High School	Ingviild Bode	Germany

Venue	Lecturer	Nationality
Gifu Prefectural Ena High School	Michael Campbell	UK
	Emilio S. Hara	Brazil
	Jungjoon Seough	Korea
Shizuoka Kita High School	Deepa K. Kasaragod	India
	Ahmad Nadeem	Canada
Shizuoka Prefectural Hamamatsu Kita High School	Roger Haeusermann	Switzerland
Aichi Prefectural Kariya High School	Paulina M. Neisch	Poland
Aichi Prefectural Kasugai High School	Roel R. Suralta	Philippines
	Anandha Babu Govindan	India
Aichi Prefectural Okazaki Senior High School	Paul P. Brooks	UK
Kyoto Prefectural Yamashiro High School	Ndubuisi S. Machebe	Nigeria
	Elia Marin	Italy
Osaka Prefectural Tennoji High School	Alexandre C. Benod	France
Wakayama Prefectural Koyo High School	Denis Frath	France
Wakayama Prefectural Tanabe High School	Michael D. Craig	USA
	Scott V. C. Groom	Australia
	Jatishkumar	India
Fukuyama Junior and Senior High School Attached to Hiroshima University	Eliza O. Lungu	Romania
	Ashraf M. Ahmed	Egypt
Tokushima Prefectural Jonan High School	Basilua A. Muzembo	DR Congo
Saga Prefectural Chienkan Senior High School	Saliu A. Amolegbe	Nigeria
	Cindy Y. Kok	Australia
	Robin O’Day	Canada
	Jasmina Stevanov	Serbia
	Wilfred T. H. Wan	USA
Miyazaki Prefectural Miyazaki Kita High School	Arif Widiatmojo	Indonesia
	Yayan Sofyan	Indonesia
Okinawa Prefectural Kyuyo Senior High School	Adriana Ledezma Estrada	Mexico
	Taryn L. March	Australia
	Etienne Skrzypek	France
	Dharmendra K. Tiwari	India

Hailing from Greece, Dr. Panagiota Tsounapi conducted research with her host Prof. Atsushi Takenaka at Tottori University from April 2013 to June 2015 under a JSPS postdoctoral fellowship. After having worked as a research fellow in the Department of Urology at University of Ioannina, she traveled across the globe to attend a doctoral course at the Graduate School of Medical Sciences of Tottori University. Upon successfully obtaining her PhD, she applied for the JSPS fellowship to continue her research with Prof. Takenaka.

What are you currently researching under JSPS fellowship?

Generally speaking, my main research interest is male infertility. Under the JSPS fellowship, I am presently focused on mechanisms that mediate the detrimental effect of exposure to cigarette smoke on the epididymal sperm maturation process. Smoking not only leads to overall diminished health, but also affects the person's fertility potential. According to a study published by the American Society for Reproductive Medicine, available epidemiological, biological, and experimental data indicate that up to 13% of infertility is attributed to cigarette smoking. I am interested in the male factor, so my research investigates the molecular mechanisms by which cigarette smoke affects the ability of the spermatozoa to move. When this function is diminished, spermatozoa produced inside the seminiferous tubules are not able to perform forward motility. Normally, they are able to move inside the epididymis (an organ attached to the testis) through a process called the epididymal sperm maturation. This is the target of my research on the reproductive organ at present.

How did you become interested in your research subject?

Now you take me back 10 years when I was an undergraduate student at the Department of Biological Applications and Technologies in the School of Sciences and Technologies at University of Ioannina in Greece. During the fifth and last year of my studies, I carried out my graduation thesis research at the Department of Urology in the School of Medicine under the supervision of Prof. Nikolaos Sofikitis. He is an expert in the field of andrology and reproductive medicine, both at the clinical and basic research levels. At that time, I became fascinated by this field, especially by the structure of the male reproductive cell, the spermatozoon. Attending Prof. Sofikitis' outpatient clinic, I had the chance to interact with infertile couples. That interaction greatly influenced me and strongly motivated me to pursue this line of research. The agony, the physical and mental pain and stress, that I saw couples go through to have their own child as well as all the effort they go through was really touching to me. When a couple finally reaches their goal of bearing a child, there is an explosion of feelings and happiness. This may sound a little romantic, but if you consider that

20-25% of couples worldwide are infertile it is a big issue.

How did you get to know your Japanese host researcher?

Prof. Atsushi Takenaka was also my supervisor during my PhD study. In 2008, I first moved to Japan under a MEXT scholarship for international students. In the first year, I took a 6-month intensive Japanese language course, and for the next six months I joined the Division of Urology of Tottori University as a research student. After taking the entrance examinations, I entered a doctoral course in the Graduate School of Medical Sciences at Tottori University in April 2009. At that time, my supervisor was Prof. Ikuo Miyagawa. When he retired a year later, Prof. Takenaka became the university's professor of urology in 2010. I felt very lucky and honored to be able to work in his department under his supervision. He is one of the pioneers in robotic surgery worldwide and is an excellent leader. Before I graduated, he suggested that I apply for a JSPS fellowship. I designed a research protocol, he approved it, and we applied for the fellowship. Fortunately, we were accepted by JSPS.

Why did you choose Japan to pursue your research?

This is an interesting question. To be honest when I first applied for the MEXT scholarship in 2007, coming to Japan to do research seemed like a dream to me, a dream difficult to realize. I had no knowledge of the language, so I thought that my chances would be very low. It turned out that the language was not a barrier. Japan is one of the leading countries in promoting research and science, and it really supports international exchange.

Now, why did I choose Japan? My previous professor, Dr. Sofikitis had also been a MEXT scholarship PhD student during the period from 1989-1993. After graduating, he became an assistant professor at Tottori University until 2000. After that, he was elected as a professor in Greece. Throughout the years from 2000-2008, he continued his collaboration with the Division of Urology at Tottori University, allowing resident urologists from Greece to visit the division at Tottori for six months of training. After I graduated from my university, I continued as a research associate in his department and also started my PhD course at the University of Ioannina. While there, he informed me of the scholarships from the Japanese government for international students, and suggested that I apply. That was a challenge for me, but I was able to make it all the way through!

What is your impression of your host institution?

Although located in the least populated prefecture of Japan, Tottori University offers a high level expertise and technology. It has two campuses, one is Koyama in Tottori city, which includes the majority of its faculties; the other



Dr. Panagiota Tsounapi

JSPS Postdoctoral Fellow, Graduate School of Medical Sciences, Tottori University, 2013-present
 Research Assistant, Division of Urology, Department of Surgery, School of Medicine, Tottori University, 2010-2013
 Ph.D. Graduate School of Medical Sciences, Tottori University, Japan, 2013
 Research Fellow, Department of Urology, School of Medicine, University of Ioannina, Greece, 2006-2008
 B.Sc. (Biology), Department of Biological Applications and Technologies, University of Ioannina, Greece, 2006

is its Faculty of Medicine located in Yonago. I was privileged to enjoy working in both. When I first came to Japan, I stayed in Koyama for the first six months. I studied under the supervision of Dr. Kurie Otachi; and with the help of all the staff at the Center for International Affairs, I had my first opportunity to learn Japanese while interacting with many international students from different countries. It was a great experience! Moving to Yonago I had the chance to focus on my research subject. At Tottori University, the excellent academic environment, the well-trained staff, and the interaction and collaboration between the departments are all very impressive.

Generally speaking, what is your impression of Japan's research environment?

As I think everyone expects: top quality and outstanding. Japan is one of the world's leading countries in research advancement. Additionally, Japan is very supportive of young researchers, not only Japanese but also foreign researchers as well. It provides all the necessary equipment, technology and conditions for a researcher to advance his/her work.

Please describe your research achievements so far in Japan?

From 2008 up to last year, I had the chance to publish 28 papers in peer-reviewed journals as either the first author, co-author, or even corresponding author. Additionally, I was given two trainee travel awards to present my studies at the annual meetings of the American Society of Andrology in 2013 and 2014, one from Lalor

Foundation and the other from the National Institutes of Health.

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

It is very interesting that although Japan is a leading country in science and technology, it retains a strong bond with its culture. That young people have a lot of respect for their culture and customs and are excited to teach foreigners about them is very impressive. Although there are some cultural differences between Japan and Greece, I did not have any problem adjusting. I do enjoy it whenever I have a chance to learn something new about Japanese customs—each is a discovery that enriches my knowledge of this beautiful country.

What do you do outside your research work?

Actually I am also a mother, so outside my work I try to enjoy time with my family. When there is time, we travel a little or go to the sea to listen to the waves, or we visit the Daisen mountain, which is very beautiful! I really like visiting new places and discovering their main attractions, the characteristics of the locals, or their language differences and unique expressions.

Has your perception of Japan changed since coming here?

Before coming here, my image of Japan was mainly that of a country with high technology,

tall buildings, and hard-working people. I knew about martial arts, the art of bonsai, and Japanese cinema. I had also read a book by the Greek writer, Nikos Kazantzakis, entitled *The Rock Garden*. In it, he described his travel in China and Japan in 1936 and, as the title refers, he wrote about the Japanese rock garden at Ryoan-ji temple in Kyoto. Reading that book really made me want to learn more about Japan.

Coming to Japan, I discovered a whole different country. Of course, I was not mistaken about the level of Japanese technology, which is abundant everywhere; it was Japan's beautiful nature that I discovered as something new, and was really impressed! I did not know that 68.5% of Japan is covered by forests! I feel so happy whenever I have a chance to travel and see Japan's beautiful green hills and fluvial valleys! On the other hand, the Japanese people are very friendly, kind, sincere, and always willing to help. The hospitality that I have experienced here in Japan is really amazing, not only in stores, restaurants and hotels but also regular people who I meet in my daily life.

What do you plan to do after your fellowship ends?

I wish to continue my research in the fields of andrology/urology. I will need to discuss and consult with my professor, Dr. Takenaka, about my future path. If I have a chance to do so, I would like to continue my research in Japan before moving back to Greece.

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

I strongly advise them to give it a try. There is no way that they'll be disappointed. The high level of research conducted in Japan and its academic environment are excellent. Also, it will be a great experience to add to their CVs. Moreover, they will have a chance to experience a country that is beautiful in every aspect, and to interact with a wonderful and kind people.

From very start of our interview with Dr. Panagiota Tsounapi, we were dazzled by her exuberance. We soon understood that her vitality comes from raising two children while pursuing her research. As a mother herself, Dr. Tsounapi empathizes with couples who want to have children but can't because of infertility. Her research is dedicated to helping such people by making scientific progress in her chosen field of andrology. As seen in the large number of papers she has already authored or co-authored, Dr. Tsounapi has established a vibrant foundation for her future research. We've just received good news that she will be promoted to assistant professor in Tottori University from July and will continue to advance her research in collaboration with her Japanese colleagues. Their research is sure to make increasingly bigger contributions to real people's lives.

Introducing Japan: Yonago

Facing the Sea of Japan, Yonago is located in Tottori Prefecture. It is a beautiful city that combines both the sea and mountains. In Yonago, there are many things to do and enjoy during the whole year—from skiing or snowboarding to surfing, canoeing or kayaking, and trekking, even horseback riding. One thing that I appreciate about Yonago is its urban structure; though a small city compared to Osaka or Tokyo, nothing is missing in way of convenience or availability.

There are many cultural events that take place throughout the year, with the most popular being the Gaina Matsuri, which means "big festival." Held during the summer, it is a 2-day event with a lot of dancing and singing, a *mantos* parade, and beautiful fireworks on the last day. Mantos are paper lanterns lit with real candles and hung by the dozens from several crossbeams on 10-or-so meter poles, which in a completion are balanced nimbly in the air by a single team member. Both days, people can enjoy the amazing rhythmic sound of the *taiko* drums! Although the season is very hot and humid, everybody comes out to enjoy this festival. In fact, meeting those friendly and polite

residents, always ready to help with a warm smile, is one of the most enjoyable things about the city's events.

Yonago is also famous for its Kaike Onsen, a hot springs that wells up from the seabed, the soaring 1,729-meter volcanic Daisen Mountain, and Tottori Hanakairo Flower Park, one of the largest flower parks in Japan—really beautiful with many seasonal flowers and themes all year around! Furthermore, Shigeru Mizuki, who wrote the *manga* series "Ge Ge Ge no Kitaro" was born in Sakaiminato, a city close to Yonago. In his honor, the city built the Mizuki Shigeru Road, lined with 153 bronze-casted *yokai* (Mizuki's cute goblin characters). The lane is very interesting and fun to walk! All of these places are very easy to access either by car, train or shuttle bus.

All of you who intend to visit Yonago should prepare yourselves to eat the most delicious freshly caught fish meals, experience wonderful hospitality, stroll through beautiful parks, and bask in lovely sunsets!



Sunset at Minatoyama Park



Gaina Matsuri





Cover photo:

Mosquito Coil
Made of extract from a chrysanthemum plant and other ingredients, these coils emit a musty fragrance that repels mosquitos but for people spells summertime in Japan.

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.

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