



# JSPS QUARTERLY

JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE

FEATURE  
Thirteenth Award of JSPS Prize

No.60 2017 Summer



## Thirteenth Award of JSPS Prize

On 8 February, a ceremony was held to award the 13<sup>th</sup> JSPS Prize, which is given to young researchers under the age of 45 who possess excellent records of scientific inquiry and show exceptional promise as trailblazers of Japan's future scientific research.

### Selecting JSPS Prize Awardees

Some 380 young researchers in a variety of fields were nominated by Japanese universities, research institutes and academic societies and screened by the JSPS Prize Selection Committee. Convened at the JSPS Research Center for Science Systems and chaired by Dr. Ryoji Noyori (2001 Nobel laureate in chemistry), the Committee, comprising top world-leading researchers, selected 25 outstanding young researchers for this year's JSPS Prize.

### Award Ceremony

Attended by Their Imperial Highnesses Prince and Princess Akishino, the ceremony for awarding the Prize was held at the Japan Academy. Following congratulatory remarks by JSPS president Dr. Yuichiro Anzai, Dr. Noyori delivered a report on the procedure used to select the 25 awardees, who were then presented 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 Dr. Hiroshi Shiono offered welcoming remarks, after which Dr. Naoyuki Osaka, chair of the Academy's selection committee, described the process for selecting the six awardees, who were then presented the Medal and a commemorative gift.

Following the presentation of the Medals, Prince Akishino offered



remarks and Mr. Toshiei Mizuochi, State Minister of Education, Culture, Sports, Science and Technology, offered a congratulatory message on behalf of Mr. Hirokazu Matsuno, Minister of Education, Culture, Sports, Science and Technology. To conclude the meeting, a message of appreciation from the Prize recipients was delivered by Dr. Kazuyo Moro, team leader, RIKEN Center for Integrative Medical Sciences (IMS).

After the ceremony, a celebrative tea 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.

For additional information about this Prize, please visit the following site: <https://www.jps.go.jp/english/e-jps-prize/index.html>  
Research Fellowship Division

### Remarks to Prize Recipients by Dr. Ryoji Noyori, Chair, JSPS Prize Selection Committee (excerpt)

*Having carried out a rigorous evaluation from multiple perspectives on the Prize candidates, the Committee members were highly impressed by the superb record of research accomplishments that this year's 25 Prize recipients have amassed. What*



*I admired most was the bold way in which each of you've gone about challenging the discovery of new knowledge, driven by the promptings of intellectual curiosity. Endowed with fresh powers of creativity and a strong belief in yourselves, you have leaped forward across many daunting hurdles along the path to achieving your goals. It was getting a glimpse into that spirit which motivates you, the Prize recipients, that I enjoyed most about participating in this screening process.*

*Last year, Dr. Yoshinori Ohsumi won the Nobel Prize in Physiology or Medicine. During a related press conference he remarked, "To challenge is the very spirit of science." Also being what defines a gifted young researcher, this spirit that impels one to take on difficult challenges is given the greatest weight in the Prize's screening process. It will be you, excellent young researchers, who will shoulder the next generation of scientific advances by*

*transcending what's conventional knowledge as you forge ahead in challenging yet-uncharted realms of scientific discovery. Providing you with catalysts to do so is incumbent upon my generation.*

*The boundless quest for scientific enlightenment will continue to create new depths and genres of knowledge. Meanwhile, depleting energy resources and unprecedented climate change are severely impacting human society. The current generation of researchers must muster all our strength in passing on optimum conditions for survival to future generations of people.*

*I entreat you, this year's JSPS Prize laureates across the spectrum of the natural sciences, humanities and social sciences, to bear this weighty responsibility as you play leading roles in advancing science in collaboration with colleagues both here in Japan and abroad.*



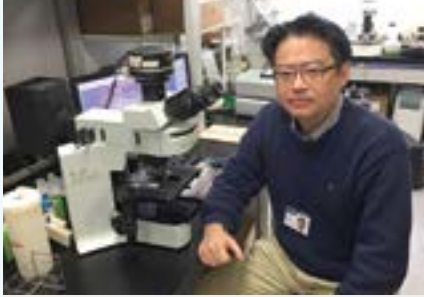


## Thirteenth JSPS Prize Awardees: Their Work and Aspirations

Twenty-five researchers were awarded the 13<sup>th</sup> JSPS Prize. Among them, six were also given the Japan Academy Medal.

They describe their research initiatives in the following essays.

For more information about the Japan Academy Medal, please visit the following website: <http://www.japan-acad.go.jp/en/news/2017/011201.html>



**Dr. Yasuhiro Yamada**

Center for iPS Cell Research and Application (CiRA), Kyoto University  
Research Subject: Tumor Pathology

### Dissecting Cancer Biology with iPS Cell Technology

The discovery of induced pluripotent stem cells (iPSCs) has enabled the control of somatic cell fate. My research group has been applying iPSC technology to dissect cancer biology and regulate cancer cell fate. We established an *in vivo* reprogramming system in which somatic cells can be reprogrammed into iPSCs in living mice. When incomplete reprogramming was induced, the mice developed tumors resembling pediatric cancers. Notably, no remarkable genetic mutations were observed in these cancers, and the cancer cells were readily reprogrammed into iPSCs which are capable of differentiating into apparently normal cells.

Our results provide proof of a concept for epigenetics-driven cancer that is independent of genetic transformation. They also demonstrate that cancer cell identity can be altered with iPSC technology.

The ultimate goal of my future research is to develop an efficient method for controlling cancer cell identity. I believe that such control could eventually contribute to novel therapeutic strategies for the treatment of cancer patients.



**Dr. Kazuyo Moro**

RIKEN Center for Integrative Medical Sciences  
Research Subject: Immunology

### Discovery of Group 2 Innate Lymphoid Cells

My research team focuses on the role of group 2 innate lymphoid cells (ILC2), a new innate lymphocyte that is distinct from previously known lymphocytes such as T cells, B cells, and natural killer cells. ILC2 produce large amounts of the cytokines IL-5 and IL-13 in response to stimulation with IL-25 or IL-33 and induce eosinophilia and goblet cell hyperplasia during infection and allergic inflammation. Since we discovered ILC2 in 2010, many other research groups have joined this research field and identified new immune responses that are regulated by ILC2. In particular, the importance of ILC2 in allergic diseases has received a fair amount of attention and new evidence indicates that allergic disorders occur not only from allergen-specific pathways but are also induced by allergen non-specific pathways due to ILC2 activation. We are excited to continue investigating the functions of ILC2 and hope to discover novel roles for them in the regulation of homeostasis in our bodies.



**Dr. Naoki Yoshida**

Graduate School of Science, The University of Tokyo  
Research Subject: Cosmology

### Supercomputer Simulations of Structure Formation in the Early Universe

The first generation of stars in the universe are the first sources of light and also the first sources of heavy elements. I performed a series of *ab initio* computer simulations of the formation of the first stars. The simulations include all the relevant physical processes on a first-principle basis, and follow the evolution of a diffuse interstellar gas to the birth of a star through to its early phases with thermonuclear burning. The result shows that the first stars are typically heavy, but have a wide range of masses from several to thousand times that of the sun. Such heavy stars end their lives either as energetic supernovae or as massive black holes. Future astronomical observations utilizing ground-based and space-borne telescopes will be able to detect the direct and indirect signatures of the first stars. I expect that the early history of our universe will be deciphered both by our models and by direct observations.



**Dr. Daiji Kawaguchi**

Graduate School of Economics,  
The University of Tokyo  
Research Subject: Labor Economics

### Inequality in the Japanese Labor Market

I analyze changes in wage inequality that have occurred in Japan over the last three decades. Contrary to the surge of wage inequality in the US or UK, Japan's wage inequality has evolved in a relatively steady manner. Researchers on the economies of the US and UK point to technological changes and the globalization of economic activities as the primary sources of increased wage inequality. As Japan, however, shares the same experiences, something else is considered to be driving its different trend. In attempting an explanation, previous studies postulated an increase in the supply of skilled workers as the reason, but failed to quantify its impact on wage inequality.

My study, conducted together with Yuko Mori of Tsuda University, demonstrates that population decline is a primary source of the increased supply of college graduates in Japan, quantifying its impact on wage inequality. Our study has revealed that the difference in the trends of college graduate supply explains two-thirds of the difference in wage inequality between Japan and the US.



**Dr. Masashi Sugiyama**

RIKEN Center for Advanced  
Intelligence Project  
Graduate School of Frontier Sciences,  
The University of Tokyo  
Research Subject: Machine Learning

### Machine Learning: Towards Computers that Learn Like Humans

Machine learning, aimed at developing computers that learn like humans, is a central research topic in artificial intelligence and has made dramatic advances over past decades. In this exciting research field, I am interested in developing a new framework that allows a wide range of machine-learning tasks to be solved in a unified manner. My key idea is to directly estimate the ratio between two probability densities without estimating each separately. Together with excellent colleagues, I have developed practical algorithms for direct density ratio estimation and applied them to various challenging real-world problems.

Nowadays, machine learning is regarded as a key technology for the future. Deep learning, which is the current state-of-the-art, requires a huge amount of data and high-performance computers, while human learning does not rely on such big data and rich computation power. My current research challenge is to create a novel machine learning paradigm that allows artificial intelligence to learn from limited information with moderate computational resources.



**Dr. Motoki Nomachi**

Slavic-Eurasian Research Center,  
Hokkaido University  
Research Subject: General Linguistics,  
Slavic Linguistics

### How Can We Account for Grammatical Changes? The Multilevel Approach to Kashubian Grammar

Treated as a subject of Polish dialectology, the Kashubian language has traditionally been neglected in morphosyntactic studies. Having, however, been in close contact with the German and Polish languages, Kashubian morphosyntax has experienced various interesting contact-induced changes. My research is based on an analysis of material derived from my field work and various types of written documents. I am working to elucidate the dynamics of grammatical changes in Kashubian by (1) comparing it with other Slavic languages, (2) studying it within the context of linguistic typology and contact linguistics, and (3) considering it within the context of changing sociolinguistic situations. I am applying this multilevel approach in an effort to understand the peculiar features of Kashubian morphosyntax and place them within a broader context. My intent is to extend this diverse approach used in my study of Kashubian to advancing the field of Slavic linguistics while yielding interesting results within the general field of linguistics as well.



## Award Ceremony Held for Seventh *Ikushi* Prize

Graced by the presence of Prince and Princess Akishino, the Seventh *Ikushi* Prize award ceremony was held by JSPS at the Japan Academy on 8 March.

### Purpose of the Prize

In 2009, JSPS received an endowment from Emperor Akihito on the 20<sup>th</sup> 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 educational and scientific pursuit.

### Selection Process

For the Seventh *Ikushi* Prize, last year some 130 outstanding doctoral students were nominated by Japanese universities and academic societies. A preliminary screening of these candidates was carried out by JSPS's Research Center for Science Systems, after which the program's Selection Committee made the final selection of 17 awardees.

### Award Ceremony

JSPS president Dr. Yuichiro Anzai opened the ceremony with congratulatory remarks, followed by Selection Committee chair Dr. Takeshi Sasaki, who reported on the process used for vetting the 17 recipients, who were then presented an *Ikushi* certificate and medal along with a purse of ¥1.1 million. Afterwards, Mr. Toshiei



Mizuochi, State Minister of Education, Culture, Sports, Science and Technology, offered a congratulatory message on behalf of Mr. Hirokazu Matsuno, Minister of Education, Culture, Sports, Science and Technology. To conclude the meeting, a message of appreciation from the Prize recipients was delivered by Ms. Megu Gunji, Graduate School of Agricultural and Life Sciences, The University of Tokyo.

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

For additional information about this Prize, please visit the following site: <https://www.jspss.go.jp/english/e-ikushi-prize/index.html>  
Research Fellowship Division

### Speech "On Receiving the Seventh *Ikushi* Prize"

By Ms. Megu Gunji, Graduate School of Agricultural and Life Sciences, The University of Tokyo

*I wish to begin by extending our deepest appreciation to Their Majesties the Emperor and Empress for the enduring support they offer to young researchers like us and for the endowment they so graciously donated to establish this *Ikushi* Prize. Our sincere appreciation is also extended to Prince and Princess Akishino, who honor us with their esteemed presence in this ceremony. We greatly appreciate the opportunity given us to bask in the splendor of this radiant Prize, though it is an honor far too great to be deserved.*

*My research has attempted to solve the long-unanswered question of how the giraffe's evolution gave it a long neck. Up till now, it has been thought that mammals, both humans with short necks and giraffes with long necks, possess the same number of seven neck bones. My research, however, has shown the giraffe to be different. By dissecting the carcasses of 27 giraffes which I obtained from zoos around Japan, I found that part of the giraffe's trunk has been anatomically modified in a way that gives it high degree of mobility which contributes to its neck movement. The discovery of what I call the giraffe's "eighth neck bone" was not*



*made from working with a model animal but rather via a process of accumulating knowledge through actual investigation of the giraffe. This process was to me a reiteration of the importance of compiling knowledge using a variety of living organisms as well as model animals.*

*I have from childhood embraced an interest in nature, especially fascinated by the curious body plan of the giraffe. My research so far has had a clear objective, which I have worked straightforwardly to achieve. This experience has given me a renewed sense of the need to be steadfast in the pursuit of one's research goals. While devoting myself to the pursuit of even bigger dreams and challenges in the future, I want to continue sharing the special allure of the natural sciences with as many people as possible.*

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*Using today as a fresh starting line, our group of *Ikushi* laureates will go on to challenge new dreams and ever-more daunting issues, while never forgetting the joy of scientific pursuit. Now, we take this opportunity to extend a special word of gratitude to our mentors, whose warm tutelage has been invaluable in advancing our research. We also wish to extend a hearty thanks to our colleagues who work with and assist us in our joint endeavors, and to our families for their understanding and unrelenting support.*





## 9<sup>th</sup> HOPE Meeting Held in Tokyo

First launched in 2008, HOPE Meetings are held for excellent graduate students and young researchers specially selected from countries/areas around the Asia-Pacific and African regions. They provide an opportunity for the participants to engage in interdisciplinary discussions with Nobel Laureates and other distinguished scientists who are pioneering the frontiers of knowledge. The meetings also give the participants a unique chance to build international networks with peers throughout the regions while lodging together over the course of the event.

The 9<sup>th</sup> HOPE Meeting, chaired by Prof. Makoto Kobayashi, was held in Tokyo from 27 February to 2 March with a focus on physics, chemistry, physiology/medicine and related fields. It was attended by 110 doctoral students and young researchers from 22 Asia-Pacific and African countries and regions, including first-time participants from Nepal.



Group discussion with Prof. Jean-Pierre Sauvage



Lecture by Prof. Takaaki Kajita

Over the course of the event, the participants engaged in a multifaceted program that included lectures by the Nobel Laureates and a distinguished scientist and small group discussions with them. The participants were also given an opportunity to introduce their own research through “One-Minute Flash Talks.” In the poster sessions, they shared ideas and told each other about their research activities.

The success of this year’s HOPE Meeting excites our expectations for next year’s, which will set the one-decade landmark in the HOPE Meeting series.

For photos and more information about the 9<sup>th</sup> HOPE Meeting, please see its webpage:

<https://www.jps.go.jp/english/e-hope/outline9.html>

Research Cooperation Division

### Participants Activities



#### Team Presentations

The 110 participants were divided into 11 multinational teams, whose members delivered presentations on the last day of the meeting.

#### Research Facility Visit and Cultural Program

The participants visited RIKEN. Located in the city of Wako near Tokyo, it is one of Japan’s largest comprehensive

research institutions renowned for high-quality research in a diverse range of scientific disciplines. They also got a taste of Japanese tradition and culture by trying their hand at the tea ceremony and Japanese calligraphy, while enjoying a musical performance played with classical Japanese instruments. Topping it off, they took a trip to the Asakusa district of Tokyo, with its traditional shopping lane leading to an historic Buddhist temple.



Visiting RIKEN (Nishina Center for Accelerator-Based Science (RNC))

#### Nobel Laureates at the 9<sup>th</sup> HOPE Meeting

- Makoto Kobayashi (2008 Physics)
- Ryoji Noyori (2001 Chemistry)
- Klaus von Klitzing (1985 Physics)
- Jean-Pierre Sauvage (2016 Chemistry)
- Takaaki Kajita (2015 Physics)
- Edvard I. Moser (2014 Physiology or Medicine)



## WPI Booth Complements AAAS Annual Meeting

The 2017 annual meeting of the American Association for the Advancement of Science (AAAS) was held in Boston from 16-20 February, during which JSPS set up a booth to introduce the World Premier International Research Center Initiative (WPI program). The booth disseminated information on the WPI program and the research activities of the nine WPI centers in Japan, while providing a sphere for spawning science communication on the world's most advanced research undertakings. WPI program director Dr. Toshio Kuroki and a team of WPI outreach staffs manned the booth. While introducing the program's leading-edge research activities, they engaged in exchanges with other researchers, booth exhibitors, and science journalists. Designed with a wall-tapestry that gave an overall picture of the WPI program, the booth carried out PR activities, distributing a one-page leaflet on each of the nine WPI centers that highlighted two of their centerpiece research activities. Novel in content and easy carry, the leaflet could be seen in the hands of many of the 300 booth visitors over the course of the event.



Considering venues such as this to be an ideal opportunity to widely circulate the latest information on the WPI program and its research centers, we will continue to keep the international science community abreast of WPI program developments through future outreach activities like this one.

AAAS URL: <https://www.aaas.org/page/2017-aaas-annual-meeting>

WPI URL: <http://www.jspss.go.jp/english/e-toplevel/index.html>

University-Industry Cooperation and Research Program Division



WPI Secretariat and WPI center outreach staffs

### Nobel Laureate Dr. Kajita Speaks in Harvard

A public science lecture was held on 18 February at the Tsai Auditorium, Harvard University in Cambridge, Massachusetts. At it, Dr. Takaaki Kajita, director of the University of Tokyo's Institute for Cosmic Ray Research and winner of the 2015 Nobel Prize in Physics, gave a lecture entitled "Sciences at a Deep Underground Observatory in Kamioka." The event was organized by Consulate-General of Japan in Boston and JSPS.

In his lecture, Dr. Kajita described the three types of neutrinos and how they are observed using the detector known as "Super-Kamiokande." He told about the difficult process of constructing the Super-Kamiokande facility and explained the phenomenon of neutrino oscillation. His



lecture, given in a language easy for the general public to understand, excited the audience's interest in the research activities of the Super-Kamiokande detector and the subject of particle physics, evoking a lively Q&A discussion with the audience, whose some 170 members filled the lecture hall.

JSPS Washington Office

## JSPS-NIH Forum Held in Bethesda

The JSPS Washington Office and Fogarty International Center of the National Institutes of Health (NIH) joined forces in organizing the 2017 JSPS-NIH Forum, held on 10 March on the NIH Bethesda Campus in Maryland.

Following opening remarks, the forum's centerpiece "special lectures" were given by two invited speakers: Dr. Toshi Kawate, assistant professor, Cornell University, and Dr. Junko Murai, research fellow, NIH's National Cancer Institute and former JSPS-NIH fellow (KAITOKU-NIH fellow). Then, three current/former JSPS-NIH fellows delivered presentations on their research activities, followed by 11 new Japanese fellows who gave 3-minute

talks on the research agendas they plan to carry out at NIH. This assorted mix of presentations spurred a highly animated Q&A session, ending the forum on a vibrant note.

A reception held afterwards opened with welcoming remarks from Dr. Peter Kilmarx, deputy director, Fogarty International Center, and with a toast proposed by Dr. Michael Gottesman, deputy director, NIH Office of Intramural



Dr. Toshi Kawate



Dr. Kilmarx (center) delivering a welcome address

Research. The reception closed with remarks by Dr. Keiko Ozato, former chair of Review Panel, National Institute of Child Health and Human Development. Attended by JSPS-NIH fellows and NIH-affiliated researchers, all enjoyed the opportunity that the gathering gave them to make and renew collegial acquaintances.

For more information, please see the following website:

[http://jpsusa.org/wp/03102017\\_2017-jps-nih-forum-bethesda-md/](http://jpsusa.org/wp/03102017_2017-jps-nih-forum-bethesda-md/)  
JSPS Washington Office



## JSPS London Office Holds Pre-Departure Seminar

On 21 April, JSPS London held a pre-departure seminar for UK researchers who were selected for various JSPS fellowships and would soon be departing for Japan. Many of these fellowships include tenures for the long period of up to two years. While the UK researchers selected for them look forward with expectation to their upcoming stays in Japan, some also feel anxiety about adapting to life and culture in such a faraway country. Designed to dispel their anxiety and enrich their experience in Japan, the pre-departure seminar comprises three programs: a Japanese language lesson, a session on how to prepare for living in Japan, and an evening reception. The Office holds these pre-departure seminars in April and October of each year.

### Learning Japanese

Geared to beginners, the Japanese language lesson was conducted in cooperation with The Japan Foundation. Taking this course is voluntary; nevertheless, each time it is very popular among almost all the seminar participants, with the rare exception being fellows who specialize in the Japanese language. The course was taught by native Japanese instructors dispatched from The Japan Foundation, which has extensive know-how in Japanese language education. Beginning with how to introduce themselves in Japanese, the participants learned Japanese expressions that will be immediately useful to them as they begin their fellowships in Japan.

### Practical Advice on Preparing to Live in Japan

Following the Japanese lesson was a session in which the participants were provided practical advice on living in Japan. In the session, a member of the Office staff delivered a briefing on the support provided to JSPS program participants, and members of the JSPS Alumni Association of the UK and the Republic of Ireland gave presentations in which they talked about their first-hand experiences in Japan while offering advice to the participants on a wide range



of related matters such as visa processing, Japan's national health insurance system, the issuing of resident cards, how to cope with Japan's hot and humid summers, contracting for cell phones, and working time in Japanese research labs.

As many of the participants in this seminar were doctoral students who would be participating in the JSPS Summer Program, a special briefing was prepared for them.

### Evening Reception

Joined by members of the alumni associations and of the Japanese Researcher's Network Based in the UK (JBUK), the reception began with a message from the newly elected alumni chair Dr. John Fossey (University of Birmingham), who introduced both the alumni association's exclusive activities and those carried out together with JSPS, such as the BRIDGE Fellowship revisit Japan program and JSPS London's symposium scheme. Throughout the event, the newly departing fellows engaged in a spirited exchange of views and information with each other and with the alumni and JBUK members, while enjoying a smorgasbord of Japanese food and wine.

For more detailed information, please visit the London Office's website: <http://www.jps.org/news/2017/04/>

JSPS London Office

## UC Berkeley and JSPS Cosponsor a Japanese Studies Symposium



UC Berkeley

On 24-25 February, the JSPS San Francisco Office and UC Berkeley Center for Japanese Studies (CJS) held a joint symposium on the topic "New Topics, Technologies, and New Times: Japan Ahead," venue at International House on the UC Berkeley campus. Since the San Francisco Office's establishment in 2003, it has each year held joint academic symposiums in partnership with CJS.

In the realm of area studies, research on Japan has attracted considerable interest in the United States over many years, giving advent to many prominent scholars and a voluminous body of literature. However, the role of area studies is changing in the current era of globalization. The objective of this symposium was to bring together scholars in Japanese studies from Japan and the US to discuss the current and future status of Japan studies within the academic community.

The symposium opened with remarks by CJS chair Prof. Dana Buntrock and JSPS San Francisco Office director Dr. Toru Tamiya. Over the course of the 2-day event, more than 20 scholars gathered to discuss five topics: "Cross-Cultural Exchanges: Study Abroad and Its Impact," "Language Education and Where It Leads," "Are Science, Technology, Engineering and Math a Part of Area Studies or Above it?," "Media Gateways, Transnational Frames," and

"Area Studies Under Threat: How Will Japan be Taught in the Years Ahead?" In each session, two guest speakers gave presentations and dialogued with an attentive audience on such subjects as "What the merits are of studying abroad now that the Internet and social media are so internationally expansive," "Why it is important to deal with controversial topics, such as territorial disputes, within the Japanese language curriculum," and "How media will influence culture and globalization."

These sessions were followed by a keynote address given by Prof. Patricia Steinhoff from the University of Hawai'i at Mānoa. In her speech, titled "Japanese Studies in the Age of Globalization," Prof. Steinhoff shared a wealth of research experience and insight on Japanese studies with the audience, delving into how the nature and role of area studies will be recast amidst rapid changes within the world's societies and the international environment.

JSPS San Francisco will continue to support such meaningful academic symposiums as a vital part of its academic exchange agenda. Please visit our website for more information about the Office and its activities.

<http://www.jpsusa-sf.org/index.php>



Session speaker, Prof. Fujimoto

JSPS San Francisco Office



## Multidisciplinary Science Forum Held in Egypt

On 11 February, an Egypt-Japan Multidisciplinary Science Forum was held by JSPS Cairo Research Station on the theme "Beyond the Border." Venued in Cairo at the National Research Institute of Astronomy and Geophysics, the forum was convened in parallel with the annual assembly of the JSPS Alumni Association in Egypt (JSPSAAE).

Egypt-Japan University of Science and Technology (E-JUST) vice president Prof. Masaaki Suzuki offered welcoming remarks in the forum's opening session, which was followed by three sessions on Nano-biotechnology, Water, and Material Science. Presentations were delivered on related research topics by a pair of Egyptian and Japanese researchers in each of the sessions. They were Prof. Masaharu Seno of Okayama University and Prof. Mohamed S. Elnouby of City of Scientific Research and Technological Applications (SRTA-City) in the first session; Prof. Yoshinobu Kitamura of Tottori University and Prof. Waleed Abu El Hassan of the National Water Research Center in the second session; and Prof. Masayoshi Fuji of Nagoya Institute of Technology and Prof. Mohamad Mohamad Ayad of E-JUST in the third.

In his presentation, Prof. Fuji captured the audience's fascination when he veered from his topic on inorganic powder to demonstrate an experiment on non-firing ceramics. Also of riveting interest to the audience was a breakthrough in cancer treatment introduced by Prof. Seno. He explained how artificially generated iPS cancer cells can be used to kill cancerous cells. Placing focus on Egypt, Prof. Kitamura also caught the audience's attention as he spoke about sustainable water usage and its important role in creating a recycling-intensive society.

On the theme "Beyond the Border," the discussion addressed perceived difficulties encountered in conducting joint research and



scientific exchange across national borders and research domains. In his summary of the discussion, Prof. Suzuki suggested the melding of a collaborative relationship between JSPSAAE and E-JUST, which would give the alumni members access to E-JUST's new research facilities acquired through its cooperation with Japan. If but for a moment, this suggestion evoked the feeling of a barrier hurdled.

These Multidisciplinary Fora can play the important role of reconfirming the position of collaboration in various specialized fields, which is desirable as breakthroughs are made collaboratively, not just theoretically. This Science Forum provided an ideal platform for brainstorming the topic "Science and Science Management for Sustainable Development," which will be the theme of a forum scheduled to be held with Germany's Alexander von Humboldt Foundation later in this fiscal year.

JSPS Cairo Research Station

## Sweden: Alumni Club Seminar and Academic Network Events Held



Dr. Kitagawa

On 23 February, the JSPS Stockholm Office and JSPS Alumni Club in Sweden (SAC) jointly held their "JSPS SAC Seminar Event" at the Royal Swedish Academy of Sciences (KVA). Themed "Future Collaboration between Sweden-Japan: Towards Sustainable Societies and Environments," the program included a lecture by Kyoto University professor Dr. Susumu Kitagawa and presentations by five young Swedish and Japanese researchers, who introduced the research they are conducting in a variety of fields, including chemistry, materials, medicine, agriculture, textiles and oceanology, all of which with an eye to realizing a sustainable society.

Then, JSPS Stockholm Office, Embassy of Japan in Sweden, and KVA combined forces to hold the next event: "The 5<sup>th</sup> Sweden-Japan Academic Network." Having as its purpose the expansion and strengthening of the collegial network between Japanese and Swedish

researchers, the event was attended by some 60 people. Continuing from the previous Seminar Event, Dr. Kitagawa took the podium to talk on the subject "Gas Science and Technology for Sustainable Future." Highlighted in his speech was the development of a new porous coordination polymer (PCP) which, having uniform nanosized spaces, can be applied to the efficient transport of gases. Next, Chalmers University of Technology professor Dr. Lars Öhrström spoke on the theme "Collaborating with Japan: A Perspective from a Personal, Chemical and International Organization Point of View," in which he elaborated the achievements forged through long years of collaboration between his university and counterparts in Japan and described his work at the International Union of Pure and Applied Chemistry (IUPAC), which has the naming rights for new elements on the periodic table. During the Q&A session that followed, both lecturers were asked questions related to the next year's 150<sup>th</sup> Anniversary of Japan-Sweden Diplomatic Relations, including about what's of importance in building good relationships with people of different cultures.

After these events, a mingling was held in which Ambassador Jun Yamazaki of the Embassy of Japan in Sweden set the tone by offering remarks and proposing a toast. Amidst a congenial atmosphere, the participants enjoyed conversing with each other while strengthening their ties as colleagues and friends.

JSPS Stockholm Office



Dr. Öhrström

## JSPS Alumni Association of Indonesia Holds Inaugural Ceremony



JAAI executive members

On 9 March, the JSPS Alumni Association of Indonesia (JAAI) held a ceremony at Century Park Hotel in Jakarta to officially inaugurate its establishment.

To prepare for the association's launching, JAAI members held their first workshop in November 2015, in which they elected a temporary executive council. The initial members were mostly former JSPS fellows affiliated with Indonesian Institute of Sciences (LIPI) and other JSPS counterpart organizations in Indonesia. After that, they held several more workshops and meetings to discuss the association's constitution, activity plan and other preliminary matters. They also held a JAAI Declaration and Congress at LIPI's Center for Innovation in Jakarta on 17 November 2016. More than 100 people attended the ceremony in which four keynote speeches were delivered by Indonesian researchers on the themes "Social Issues," "Food & Agriculture," "Energy," and "Environment," which are all areas of high interest in Indonesia.

Propelled by that success and the members' concerted efforts, the JSPS Alumni Association of Indonesia was formally launched on 9 March as the 17<sup>th</sup> entry within JSPS's worldwide network of alumni associations. It is now officially recognized as a legal organization by Indonesia's Ministry of Law and Human Rights.

### Inauguration Ceremony

The Inauguration Ceremony started off with a traditional Indonesian

dance, followed by welcome remarks from JAAI president Dr. Subyakto, JSPS executive director Mr. Takaaki Iwasa, and LIPI chairman Dr. Iskandar Zulkarnain. A commemorative lecture was delivered by Dr. Mitsuyasu Hasebe, National Institute of Natural Sciences, who talked about how he appreciated being a basic plant scientist. Dr. Hasebe enjoys a close relationship with Indonesian researchers, which began through his participation in a JSPS fellowship program about 30 years ago. Emphasizing the need for researchers to be curious, Dr. Hasebe drew upon his own experience in describing the wide-reaching fruits that intellectual curiosity can produce. To further enrich the benefits that science bequeaths to society, he spoke about the need to increase the number of researchers, especially in the basic sciences.



Dr. Subyakto

The afternoon session began with presentations from four Indonesian principal investigators whose projects have been carried out under JSPS's Bilateral Collaboration Program and Core-to-Core Program. A discussion among them was moderated by Dr. Wahyu Dwianto. In the last segment of the program, two former JSPS fellows spoke about their fruitful research experiences in Japan. They were Dr. Yopi, Indonesian Institute of Sciences, and Dr. Christofora Hanny Wijaya, Bogor Agricultural University.

### General Assembly

After the inaugural ceremony, JAAI held its first general assembly. Among the plans they discussed was an international academic symposium to be held in October in tandem with a LIPI ceremony to commemorate the 60<sup>th</sup> anniversary of diplomatic relations between Indonesia and Japan.

For details on the ceremony, please see the following website:

[http://jpsps-th.org/jpsps\\_en/2017/03/09/1410/](http://jpsps-th.org/jpsps_en/2017/03/09/1410/)

JSPS Bangkok Office

## Japan Alumni and Researcher Assembly Held in Denmark

Open to the public, the Japan Alumni and Researcher Assembly 2017 was held on 10 March. It was preceded by the second general assembly of the JSPS Alumni Club in Denmark (ACD). Both meetings were held on the campus of the Technical University of Denmark (DTU Lyngby).

This year's Japan Alumni and Researcher Assembly celebrated the 150<sup>th</sup> anniversary of Danish-Japanese diplomatic relations, a partnership that has come to see scientific innovation as one of its vanguard fields. Throughout the day, the participants, who included Japanese Ambassador Toshiro Suzuki, emphasized in their discussions the importance of collaboration between Danish and Japanese researchers, while encouraging business people and students of the two countries to meet and discuss new ideas. They also expressed a desire for expanded Japan-related research and student scholarships.

The event was co-organized by the Embassy of Japan in Denmark, Tokai University Alumni Association in Denmark, ACD, JSPS Stockholm Office, and DTU Executive School of Business.

In the ACD General Assembly, the members revisited the first year of the Club's initiatives and elaborated vistas for its second-year activities, including seminars held in cooperation with the Stockholm Office, and a membership drive. As of March, ACD



JSPS Stockholm Office staff together with ACD board members

had 35 members, and is extending a welcoming invitation to other Danish researchers who have had JSPS fellowships or participated in JSPS research programs to apply for membership and expand their collegial ties and engagement with Japan.

For more information on ACD, please visit the following website:

<http://www.jsps-sto.com/alumnidenmark.aspx>

JSPS Stockholm Office





## Science Dialogue

### Scientific Adventure of a French Fellow in Japan

Dr. Maxime Renaudie



On 22 April, JSPS fellow Dr. Renaudie gave a lecture to 20 students at Tokyo Metropolitan High School of Science and Technology on his research topic, transition of the legal education system in Japan. He took the students on a journey which narrated the remarkable evolution of law and legal thinking, from the ancient Middle East where

one of the oldest deciphered laws, the Code of Hammurabi, was established, to modern Japan where thoughtful reflections about legal globalization are now taking root.

#### Japan: A Crossroad of Western Legal Models

As a French lawyer who comes to Japan with a background of research experience in the United States, Dr. Renaudie is well positioned to analyze the Japanese legal system as it crisscrosses European and American legal cultures. The focus of his current research is on legal education reform in Japan, especially the recent system of graduate law schools established in 2004.

After introducing himself to the students, Dr. Renaudie began his lecture by saying that because the laws of every nation are rooted in indigenous cultures and histories, it is important to know how they evolved from their origins. To illustrate, he spotlighted three milestones in the evolution of law: the Code of Hammurabi, Napoleonic Code, and the Universal Declaration of Human Rights. Then, the process of legal globalization in the modern era segued

his lecture to Japan.

After the Meiji Restoration in the late of 19<sup>th</sup> century, Japan first looked to France and Germany when establishing its modern legal system. However, since the Second World War and the drafting of its



new Constitution, Japan has been heavily influenced by American legal philosophy and concepts of jurisprudence. Amidst this uniquely hybrid legal environment, Dr. Renaudie told the students about his challenges in analyzing the incongruities that exist between American and European models of legal education. The coexistence between those two models of legal education in Japan is highly informative for comparative legal thinkers. It also reveals the complexity of legal education reforms and the conflicting perspectives occurring between reformers and the legal establishment.

In concluding, Dr. Renaudie offered the students two messages of encouragement: One was to pursue research as a career if they felt so inclined. Drawing upon his own experience, he told the students that it takes much effort and dedication to do so but that the rewards are definitely worth it. The other was that they should consider studying abroad after graduating from high school, as doing so would be for them a wonderful mind-opening and growing experience.

Overseas Fellowship Division

The following fellows participated in JSPS's Science Dialogue Program during the period from January through March 2017. For details about the program, please see its website: [www.jspss.go.jp/english/e-plaza/e-sdialogue](http://www.jspss.go.jp/english/e-plaza/e-sdialogue)

Venue	Lecturer	Nationality	Venue	Lecturer	Nationality
Akita Prefectural Yokote Seiryogakuin High School	Dr. FATEMA, C. N.	Bangladesh	Shizuoka Prefectural Iwata Minami High School	Dr. ECHUE, G.	UK
Fukushima Prefectural Iwaki High School	Dr. ADRIANO ORTEGA, B.	Peru	Aichi Prefectural Jishukan Senior High School	Dr. HOUWEN, A. Dr. NGUYEN, N. Dr. SHIM, J.	Netherlands Vietnam Korea
Ibaraki Prefectural Takezono High School	Dr. LOPEZ ALVAREZ, Y.	Cuba	Aichi Prefectural Kariya Senior High School	Dr. PARK, D. Dr. RENTIER, C.	Korea France
Gunma Prefectural Kiryu High School	Dr. WALLEN, H. L.	USA	Aichi Prefectural Okazaki High School	Dr. NAIR, R.	India
Saitama Prefectural Kumagaya High School	Dr. BARDON, C. N. Dr. CONWAY, C. E. Dr. CORTES SUA, M. L. Dr. FABRY, D. C.	France New Zealand Colombia Germany	Nagoya City Meito Senior High School (Aichi)	Dr. GOLDIE, B. J.	Australia
Chiba Prefectural Sakura High School	Dr. NAWROCKI, R. A.	USA	Mie Prefectural Kawagoe High School	Dr. KUMAR, A. Dr. WILKINS, T. S.	India UK
Senior High School at Komaba, University of Tsukuba (Tokyo)	Dr. HAIMES, P. W.	Australia	Shiga Prefectural Hikone Higashi High School	Dr. MUNGSE, H. P.	India
Tokyo Metropolitan High School of Science and Technology	Dr. BRUOT, N.	France	Kyoto Prefectural Yamashiro High School	Dr. KISS, G. G.	Hungary
Hosei Univ. Girls' High School (Kanagawa)	Dr. MOSTOFA, M. G.	Bangladesh	Hyogo Prefectural Kawanishi Midoridai Senior High School	Dr. CARMEAN, C. M.	USA
Kanagawa Prefectural Sagamihara Secondary School	Dr. SHAND, F. H.	Australia	Kobe Municipal Rokko Island High School (Hyogo)	Dr. DUBOSCQ, J. A.	France
Fukui Prefectural Fujishima Senior High School	Dr. FAVA, E. Dr. FERNANDEZ-MELGAREJO, J. J.	Italy Spain	Nara Prefectural Seisho High School	Dr. OUTRAM, B.	UK
Fukui Prefectural Koshi Senior High School	Dr. KIEFFER, T. J. Dr. THOMAS, D. G.	Canada France	Tezukayama Junior & Senior High School (Nara)	Dr. BUTLER, D. L. Dr. EPRON, D. Dr. MAJHI, P. K.	Australia France India
Fukui Prefectural Wakasa High School	Dr. DE CORTE, D. Dr. NAGARKAR, S. S.	Italy India	Wakayama Prefectural Koyo High School	Dr. MOHAMMED YUSSUF, M. B.	Malaysia
Yamanashi Prefectural Hikawa High School	Dr. SON, Y.	Korea	Kagawa Prefectural Takamatsu Sakurai High School	Dr. BHAKTA, J. N. Dr. DEMETER, Z. Dr. KHAN HIRA, M. Dr. LE, T. B. Dr. ROY, A.	India Hungary Bangladesh Vietnam India
Yamanashi Prefectural Kofu Minami High School	Dr. UNNI, S. M.	India	Fukuoka Prefectural Meizen High School	Dr. LEE, J.	Korea
Yamanashi Prefectural Yoshida High School	Dr. ABDULLAH, A. Dr. EBLING, U. Dr. PALL-GERGELY, B.	Indonesia Germany Hungary	Miyazaki Prefectural Miyazaki Kita High School	Dr. LIM, S. Dr. MONTENEGRO GONZALEZ, J. A. Dr. TSAI, Y. Dr. YOO, H.	Korea Colombia Canada Korea
Yashiro High School (Nagano)	Dr. BRADAK, B. Dr. SANKARANARAYANAN, S. Dr. TOLA, G. Dr. CHEN, H. Dr. OVADIA, B.	Hungary India Italy Taiwan France	Okinawa Prefectural Kyuyo Senior High School		
Gifu Prefectural Ena High School	Dr. DAY, T. F.	USA			



# Top Global University Project

## Introducing the Participating Schools



### Okayama University



#### PRIME Program: Producing Practically-Oriented Human Resources in a Global Community

Under the university's PRIME (PRACTICAL Interactive Mode for Education) Program, students not only acquire three core powers (liberal arts strength, linguistic ability, and specialized knowledge), but are also given opportunities to utilize these powers through global experiences in three spheres (interdisciplinary, intersocietal, and intercultural). As a result, the students cultivate a wealth of abilities, including communication skills, leadership prowess, and decision-making expertise—abilities that we call “global practical wisdom.”



#### Discovery Program for Global Learners

Okayama University is pleased to use this page to announce the launch of its “Discovery Program for Global Learners,” a bachelor's program that can be completed entirely in English. Beginning in October, the program will bring together students from Japan and abroad to study in an interactive, collaborative environment. Both the Japanese and international students will develop intercultural communication skills through daily interaction and exchange with classmates from diverse cultural and language backgrounds.

The Discovery Program will offer an interdisciplinary curriculum leading to bachelor degrees in the arts and sciences in three areas of focus: (1) transdisciplinary sciences for global sustainability, (2) cultural diversity and communities, and (3) social innovation and entrepreneurship. The program will emphasize the acquisition of critical thinking and problem-solving skills related particularly to issues of globalization and sustainability. Complementing the students' specialized



education, a liberal arts background is provided to hone their cross-disciplinary perspectives. Students may focus on one area or develop a personalized curriculum drawing on two or more areas. International students with sufficient Japanese language ability may also design their curriculum around classes offered through other departments across the campus.

Students will work closely with their academic advisors to integrate coursework with practical experience including internships, fieldwork, and/or study abroad. Discovery graduates will be prepared to work comfortably in interdisciplinary and intercultural environments. With employers increasingly desiring applicants who possess specialized knowledge coupled with general communication and problem-solving skills, graduates of the Discovery Program will find themselves well-positioned for careers in a wide range of occupations.

Website: <http://discovery.okayama-u.ac.jp/en/>



Dr. Prajakta Khare

Associate Professor,  
Discovery Program for Global Learners

A graduate of the University of Mumbai's Department of Economics, Dr. Khare will lecture in the Social Innovation and Entrepreneurship area of the Discovery Program.

“This cluster of social innovation and entrepreneurship includes courses in economics, business, philanthropy, non-profits and management, along with internships and fieldwork. Social entrepreneurship is an emerging area of study the world over. In simple terms, it refers to identifying social issues and organizing resources in ways to achieve innovative solutions. Social entrepreneurs across the world are venturing out in an effort to solve a wide spectrum of issues related to such things as the environment, healthcare, education, and

racial, gender and other forms of discrimination—basic human issues that contemporary political, societal and economic institutions have difficulty solving. Through our curriculum in this cluster, we aim to create a platform upon which our students, who come from different societies and backgrounds and have diverse perspectives on social issues, will exchange views, learn from each other, and collectively design solutions. I believe that millennials have radically different views of the world: they are not afraid to question, they can think independently, and they are more sensitive to problems that exist around them. We are excited to welcome our first batch of international millennials to the Discovery Program in October.”



The aim of the Top Global University Project is to enhance the international compatibility and competitiveness of higher education in Japan. It provides prioritized support for top world-class and highly innovative universities that can lead the internationalization of Japanese universities.

Top Global University Project website: <http://www.jsps.go.jp/english/e-tgu/index.html>



## The University of Aizu

The University of Aizu was established in 1993 as the first university in Japan to be solely dedicated to computer science and engineering. Based on its founding philosophy “to advance knowledge for humanity,” the university has three major characteristics: Advancing ICT education and research, providing specialized courses in English, and cultivating a venture spirit in its students. To become a leading global university in computer science and engineering, the university is developing an extensive program of international education.

Through our participation in the “Top Global University Project,” the university is working to nurture global ICT talent via an educational program underscored by three student-development concepts: entrepreneurial spirit, technological excellence, and multicultural adaptability.



Along with being selected for the Top Global University Project, the University of Aizu began to proactively admit international students into its undergraduate school. The University has introduced an ICT Global Program as an Undergraduate Course.

All general education and specialized courses are taught in English and cover the requirements for graduation. Students may be admitted based on such external exams as TOEFL, IELTS, SAT, ACT and IB.

Our centerpiece programs for Japanese students include an Honors Program, Internship Program in Silicon Valley, and Challenger Badge System. The Honors Program employs an activity menu that responds to students’ interests and ambitions. It works to help the students discover their exceptional talents and cultivate them. Through our Internship in Silicon Valley, students experience firsthand one of America’s most vibrant centers of technological and entrepreneurial innovation. Amidst that business-startup climate, the students acquire a feel for Silicon Valley’s unique *monozukuri* spirit (craftsmanship spirit); they receive training in leading-edge ICT technologies and gain hands-on experience in actually making things. Wrapping up their internship, the students give presentations in English to engineers and entrepreneurs working in Silicon Valley. The Challenger Badge System records and displays in a special app badges acquired by students for their participation in multicultural activities, programing contests, hackathons, and other ICT activities on and off campus. The process of accumulating these badges is meant to stimulate the students’ enthusiasm for multicultural development.

The Top Global University Project helps us to further advance the University’s program and achieve our goal of being Japan’s front-running university in global ICT research and education.

Website: <https://www.u-aizu.ac.jp/sgu/en/>



**Prof. Shigaku Tei**

Vice President of University of Aizu, General Manager of Center for Globalization

I am a founding faculty member of the University of Aizu and am in charge of advancing the university’s Top Global University Project. For the purpose of implementing the Project, a system has been established led by the university’s president and carried out by its executives. My plan is to make this system a campus-wide nexus centered upon the Top Global University Project, one that interconnects the university’s faculty and students in one dynamic body.

At this juncture in our implementation of the Top Global University Project, we have opened a “Silicon Valley Office for University of Aizu,” created an on-campus *monozukuri* “Aizu Geek Dojo,” and introduced an ICT Global Undergraduate Course using English as the medium of instruction along with a variety of admission systems for international students from the around the world. Another initiative we’ve taken is to establish a “Buddy System” for supporting overseas students by pairing them with our Japanese students. This system has become very useful in helping international

students adapt to life in Japan. Yet another initiative is accepting international students in our “Workshop for Experiencing Start-up Ventures,” which gives students venture business experience.

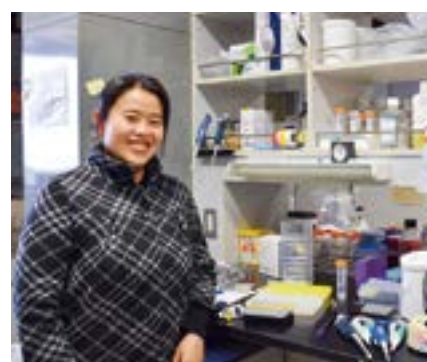
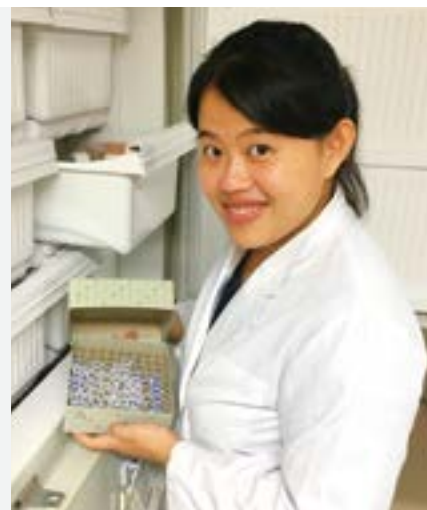
By continuing to advance our Top Global University Project, I am very confident that we can provide an excellent incubator for students who want to test and develop their own ideas, one in which they can acquire ICT expertise and English proficiency. Already, a framework has been established for each of the Project’s programs, students are being sent abroad for study, and some have already won awards in international programing contests and ICT hackathons.

As these activities linked to our Top Global University Project attract more student to participate in the program and elevate their enthusiasm for ICT pursuits, I look forward to the University of Aizu gaining in worldwide visibility as a place for generating global innovation.

Research and Life in Japan  
By a JSPS Fellow  
No. 42

Dr. Suang Suang Koid  
“Unravelling the Mystery of Cardiorenal Syndrome”

JSPS Postdoctoral Fellow, The University of Tokyo, 2016-2018  
Ph.D. (Cardiovascular Pharmacology), University of Melbourne, 2015  
Tutor and Demonstrator, University of Melbourne, 2008-2015



Coming to Japan from Malaysia, Dr. Suang Suang Koid is conducting research as a JSPS Postdoctoral Fellow at the University of Tokyo. Her host, Prof. Tatsuo Shimosawa, transferred to International University of Health and Welfare, Mita Hospital in April, but remains a visiting professor at the University of Tokyo. We asked Dr. Koid about her research activities and life in Japan.

**Q: What are you currently researching under the JSPS fellowship?**

My research topic under the JSPS fellowship relates to the role of immune cells in a condition known as cardiorenal syndrome (CRS), in which kidney and heart disease occur at the same time. Under this condition, kidney problems are thought to accelerate the progression of heart problems, and heart problems are thought to accelerate the progression of kidney problems. The cause of CRS remains unclear. We are working to identify the key immune cell populations involved in the pathogenesis of this syndrome and eventually develop therapeutic strategies to prevent premature death in patients resulting from this condition.



Today in the fall

**Q: How did you first become interested in your research subject?**

I became interested in CRS when I was doing my PhD research back in Melbourne, Australia. In my doctoral project, I investigated the cardioprotective effects of a drug called aliskiren. Many patients with cardiovascular disease develop kidney diseases, and half of the people with kidney failure die from heart disease. Current treatments alleviate the symptoms of CRS, but are still not very effective in helping patients feel better and live longer. I chose to study CRS during my JSPS fellowship because I want to help improve the quality of life for these patients.

**Q: What were your research experiences before coming to Japan?**

I received a prestigious Australian Government National Health and Medical Research Council (NHMRC) scholarship for conducting my doctoral research. During that time, we elucidated the mechanism of cardioprotection of the drug aliskiren, and reported our findings in the journal *Hypertension*, which is well-regarded in my field. I won awards for oral and poster presentations at domestic and international conferences, and participated in a number of collaborations, including work on a paper published in the journal *Proceedings of the National Academy of Sciences of the United States of America*. I was also invited to act as a peer reviewer for a journal in my field, which really made me feel like a member of the scientific community.

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

I first got to know my host researcher, Prof. Tatsuo Shimosawa, through his mentor Prof. Fujita, who has done a lot of work on kidney disease. I met Prof. Shimosawa at one of the biennial meetings of the International

Society of Hypertension, and he agreed to host me in his laboratory for a week in 2014. Based on that experience, we decided to submit an application for a JSPS fellowship.

**Q: Other than the relationship you formed with Prof. Shimosawa, why did you choose Japan to pursue your research?**

I have always had an interest in Japan. I loved the “Sailor Moon” and “Dragon Ball” comics when I was growing up, and studied Japanese as a hobby during my undergraduate days. During my PhD studies, I saw very good research coming out of Japanese laboratories, and was lucky enough to spend an enjoyable month in an immunology lab at the University of Tokyo. Another important reason that I chose Japan to pursue my research was that my husband was also offered a JSPS fellowship to do research here in Tokyo.

**Q: What is your impression of Japan's research environment?**

In some regards, the technology I am using here in Japan is more advanced than that in Australia, but in other regards, the technology is more advanced in Australia. The Japanese research environment values practice—lots of it. My project is surgery-based and therefore highly technical. Here, I have had a lot of opportunities to practice, to get to the highest standard of reproducibility



in my disease models, and thus to achieve robust results. In addition, there seems to be more money allocated to research in Japan. The pharmaceutical industry in Japan appears to contribute to academic research and development, which is still not very common in Australia.

**Q: Before coming to Japan, what was your image of the country? Has your perception changed?**

Prior to living in Japan, I had the impression that working hours here were long and inflexible and that employees generally had very little time for their family or friends. However, after I started living in Japan, I saw that a lot of the local people actually make time to travel, and enjoy their private lives as well as their work. I also had the impression that Japan was very strict about rules. But since living here, I have found that even though there might be a consensus about the right way of doing things, people can also be flexible and even happy to work around the rules when necessary!

**Q: What do you plan to do after your fellowship ends?**

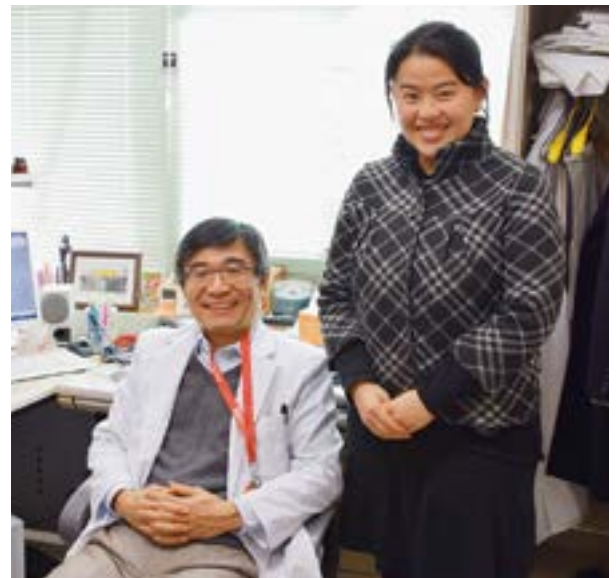
I would like to continue to contribute to improving the lives of patients around the world.

**Q: How about in Malaysia? Would you like to apply your research to societal betterment in your country as well?**

I think that science is a very important part of any society and that scientific thinking is essential to improving the health and wellness of the general population. I hope to be able to apply the outcomes of my research to creating new medicines that improve the lives of people around the world. I would also like to remain involved in science education so as to train the younger generation of scientists.

*Soon after beginning our interview with Dr. Koid, our preconceived notion of somebody who performs heart surgery being a bit intimidating was dispelled. Her unwavering commitment to the daunting challenge of elucidating the mechanisms of CRS have in no way diminished her radiating charm and outgoing friendliness. Dr. Koid's immune-cell research, which she is pursuing on this syndrome that occurs in the relationship between the heart and kidneys, is painstaking and must be very*

*stressful. She told us that she finds a happy balance by hiking in the mountains of Japan and joking around with her colleagues. We were extremely impressed with the loftiness of her goals, which are not only highly scientific but also deeply humanitarian. As Dr. Koid continues advancing her research, we look forward to her work contributing to the achievement of the milestones she seeks in the treatment and care of CRS patients around the world.*



Dr. Koid's host Prof. Shimosawa

## Introducing Japan: Tokyo—The University of Tokyo and Its Neighborhood

My lab is based at the University of Tokyo (also known as “Todai”). Todai has five campuses: Hongo, Komaba, Kashiwa, Shirokanedai and Nakano. The Hongo campus is built on the location of the previous Maeda Clan residence in the Edo Period. One of the famous landmarks on the campus is the Akamon gate, or Red Gate. In 1827, Lord Nariyasu Maeda built the gate to welcome his bride, Lady Yasu, who was the daughter of

the 11<sup>th</sup> Tokugawa *shogun*. It is said that the gate was painted red in accordance with the conventional practice when marrying a shogun's daughter. The Akamon gate in Hongo is designated a national treasure, being the only such gate still in existence.

Next to the Akamon, there is a row of ginkgo trees, whose fan-shaped leaves are the symbol of the University of Tokyo. Every summer the trees are lush and green, but by autumn their leaves turn yellow and the distinct scent of ginkgo nuts fills the air. It is common to see people scavenging for the ripe nuts that fall off the trees. When the temperature drops, fallen leaves from the trees carpet the streets running through the campus in yellow. I love seeing



With her husband in springtime Ueno Park



Red Gate at Hongo Campus



the trees go through this transformation in the different seasons.

The Hongo campus is a short walk from Ueno Park and Shinobazu Pond, which are famous spots for viewing spring cherry blossoms. There are about 600 *yoshino* cherry trees in the park. Every year between mid-March and mid-April, large crowds of people lay plastic sheets under the cherry trees, and enjoy chatting, eating and drinking with friends and colleagues while viewing the blossoms. During the evening in the cherry blossom season, the park is illuminated with 1,000 lanterns, celebrating the arrival of spring and the end of the winter cold!





#### **Tanabata Festival**

Called the Star Festival because it celebrates the getting together of two stars Vega and Altair, which personify two lovers, Orihime and Hikoboshi, in Japanese mythology. Separated by the Milky Way, they can only meet on the seventh day of the seventh month—the July 7th festival day.

### **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@jsps.go.jp](mailto:quarterly@jsps.go.jp)