

# Japan: the Horned Islands

## JSPS Nordic & Baltic Newsletter (12)

### 2012/13 Autumn & Winter



*Festive Reception at Karolinska Institutet for Nobel Prize Medicine laureates Gurdon and Yamanaka*

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The newsletter may be accessed at the JSPS Stockholm homepage <http://www.jsps-sto.com/>

## I. Prologue

### The Nobel Prize and the Globalization of Universities

Yoshiaki Fujii

Although short in Stockholm, autumn is a season of harvest. People in Sweden are willingly going into the forests to enjoy picking bilberries called lingon and blueberries and looking for various mushrooms, while listening to birdsong and sometimes coming across wild animals such as deer and hare. The forests are rich in various kinds of colorful mushrooms. Swedes enjoy taking these berries and mushrooms home for cooking. However, all mushrooms are not edible and some are so poisonous and life-threatening that warning against them is issued. Probably because autumn and spring are quickly passing and playing only a linking role between long summers and winters respectively, Swedish people do not seem to leisurely enjoy these short seasons like the Japanese with spring and autumnal Equinox Day being national holiday. Around these days, people in Sweden sense that daytime is getting shorter day by day and prepare for the coming harsh winter.

The annual announcement of Nobel Prize winners takes place in October when the results from extensive investigations and serious discussions about the candidates recommended worldwide till January 31 of the year is published. It is the time when the attention of journalists from around the world is focused on Stockholm in unison.

It is well known that the Nobel Prize, the most traditional, reliable award with standard value of all the awards was established by the will of Alfred Nobel, an idealist with foresight. When he died on Dec. 10, 1896 and his testament was published in the papers in Sweden on Jan. 2, 1897, most of the newspapers inside and outside Sweden showed a positive response. It is said, however, that the voices of protest were raised from here and there within Sweden. Here follows an excerpt of Nobel's testament from the book *Alfred Bernhard Nobel* by Kenne Fant (Norstedts Forlaget AB, 1991, Stockholm): "the interest on which shall be annually distributed in the form of prizes to those who, during the preceding year, shall have conferred the greatest benefit on mankind. The said interest shall be divided into five equal parts, which shall be apportioned as follows: one part to the person who shall have made the most important discovery or invention within the field of physics; one part to the person who shall have made the most important chemical discovery or improvement; one part to the person who shall have made the most important discovery within the domain of physiology or medicine; one part to the person who shall have produced in the field of literature the most outstanding work of an idealistic tendency; and one part to the person who shall have done the most or the best work for fraternity between nations, for the abolition or reduction of standing armies and for the holding and promotion of peace congresses. It is my express wish that in awarding the prizes, no consideration be given to the nationality of the candidates, but that the most worthy shall receive the prize, whether he be

Scandinavian or not."

In those days Sweden was recovering from the exhaustion of the Napoleonic War but was still one of the poorest countries in Europe. It is said that one third of the Swedish population; i.e. 1.25 million people emigrated to America. With the background of the rise of patriotism, it is said that even the Swedish king at that time showed intentions of protesting against the testament by arguing that the testament without beneficial contribution to the Swedish people was contrary to the spirit of patriotism. Under such conditions, Alfred Nobel's nephew Emanuel Nobel and two testament executors who had been appointed by Nobel during his life made their devoted contribution to establishing the basis of the Nobel Prize that gains nowadays extraordinarily high reputation as a global prize, and makes invaluable contribution not only to the development of Sweden as an award symbolizing Sweden, a nation of science and technology, but also to the advancement in science and technology in the world as an award admired by scientists worldwide. Looking through the achievements of Nobel laureates of natural sciences, you can feel the strong stance of the selection committees that stick to the will of Nobel.

This autumn brought very grateful news to the Japanese that Dr. Yamanaka, professor at Kyoto University was awarded the Nobel Prize in Physiology and Medicine in 2012. This is a joyful occasion to all Japanese and especially those who work in a funding agency of science and technology of Japan.

Recently, following globalization tendencies and the need to attract talented foreign students, many universities in Japan are considering the enrollment of students in autumn in order to eliminate the time gap between spring and fall enrollment, as this constitutes an obstacle to the recruitment of foreign students. The University of Tokyo was first to announce this strategy and a considerable number of universities followed. Generally, the industry seems favorable to this movement. When I asked Swedish scientists who had studied in Japan about the difficulties encountered by foreign people living in Japan, they said that the language barrier is the largest obstacle even in the universities. Since this is not an easy problem to solve, there is no choice but to improve language communication in the long run. These two problems are major challenges to be overcome in order for universities in Japan to survive in the midst of globalization. Since universities in Western countries like Sweden have frequent contact with those in the surrounding countries, I assume that these universities are not much affected by the pressure of globalization. However, some friends of mine who are professors at Karolinska Institute told me that in the past 5 years or so, the number of grants that promote the international research cooperation has been increased in the SRC or ERC grant program probably due to promoting the globalization and many scientists in Karolinska Institute

have obtained this sort of grants. It is said that in Karolinska Institute, about 30 % of the doctoral students, 70 % of postdoc, 25 to 30 % of about 350 professors are foreigners. Taking it into consideration that the research activities of the laboratories are mainly carried out by postdocs, the globalization in Karolinska Institute has already advanced considerably.

The issue of Feb. 17, 2012 of *Science* reported with a slightly exaggerated title “Foreign Takeover at Swedish Academy” that the Royal Academy of Sciences selected a non-Swedish president. The Academy announced on February 7 that the British citizen Barbara Cannon,

professor of physiology at the Wenner-Gren Institute for Experimental Biology at the University of Stockholm would begin a 3-year term as president of the Swedish Academy on July 1. Dr. Cannon was elected a member of the Academy in 1989 and said that foreign members of the Academy who live in Sweden have the same privileges; her election did not pose any bureaucratic problems and she expressed hope to be a strong advocate for basic research during her tenure. These things make me wonder about the future of globalization and how fast and far the globalization of universities in Japan is progressing.

## II. News

### 2012 Nobel Prize

The Nobel Prize laureates 2012 were John B. Gurdon, and Shinya Yamanaka (Medicine or Physiology); Serge Haroche and David J. Wineland (Physics); Robert J. Lefkowitz and Brian K. Kobilka (Chemistry); Mo Yan, (Literature); the European Union (Nobel Peace Prize)

and Alvin E. Roth and Lloyd S. Shapley (Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel). The JSPS president Dr. Yuichiro Anzai attended the Nobel Prize ceremony and the thereafter following banquet.

### Finland Alumni Club Holds General Meeting and Seminar

On 17 September, the JSPS Alumni Club in Finland held its general meeting and a seminar at the University of Helsinki. At the meeting, a report was given on the current year's activities, new members confirmed, executives rotated, and honorary members selected. A proposal was voiced to enhance the Club's webpage embedded in the JSPS Stockholm Office's website operated by the Office's local staff, and a decision made to proceed in doing so with the cooperation of the Club's executives.

Then, a seminar was held on the theme “Ice and Snow.” The seminar had been planned in cooperation between the Club and Hokkaido University's Helsinki Office. Attended by about 50 people, the seminar began with a Finnish student who had studied in Japan telling about

his experiences, followed by lectures from Prof. Takeo Hondoh, vice president, Hokkaido University, Dr. Ralf Greve, professor, Hokkaido University, and three specialists in the subject field. Their presentations and the animated discussion they spawned culminate in a very successful event.



At the seminar “Ice and Snow”

### The 1<sup>st</sup> Japan-Sweden Fellowship Research Network

On the 20<sup>th</sup> of September 2012, the 1<sup>st</sup> Japan-Sweden Fellowship/Research Network was held at The Royal Academy of Sciences (KVA) and was co-hosted by Embassy of Japan, JSPS & KVA. The Sweden-Japan Academic Network was established with the purpose to provide a platform for JSPS alumni, Japanese researchers currently working in Sweden, former Japanese government scholarship fellows and Swedish researchers interested in exchanges with Japan. Greetings were given

by the KVA Permanent Secretary Staffan Normark and JSPS Stockholm office director Prof. Yoshiaki Fujii. Thereafter, Japan's ambassador to Sweden, Yoshiki Watanabe and three JSPS alumni members and former fellows spoke about their research experiences in Japan. The event was visited by over 130 researchers. From next year onward, this event will continue under the title “Sweden-Japan Academic Network”.

## JSPS Sweden Alumni Club's General Assembly

The SAC General Assembly was held on September 20 2012, at the Royal Academy of Sciences (KVA) in Stockholm. The GA meeting was opened by Deputy Chair Ma-Li Svensson. Deputy Director of JSPS Stockholm office Prof. Yoshiaki Fujii offered welcome remarks. Attending the meeting was eight SAC members and JSPS Stockholm office staff. Ma-Li Svensson was elected new Club chair and resumed her chairmanship in January 2013. Further, the activities of 2012 were reviewed and up-coming activities were discussed. Among those was the invitation for SAC-members (regular & honorary) to apply for seminar funding. Ten new SAC members were welcomed to the Club. By holding the GA meeting in conjunction with the very



**Participants of the JSPS Sweden Alumni Club's general assembly**

first Sweden-Japan Academic Network, many visitors became aware of the SAC activities.

## The 7<sup>th</sup> Sweden-Japan BioNano Workshop

On 15-18 October, the seventh Sweden-Japan BioNano Workshop was held in Stockholm. In it, the discussion was advanced around presentations by Prof. Masuo Aizawa, former president, Tokyo Institute of Technology, and Prof. Teruo Okano, Tokyo Women's Medical University, on the Japanese side, and researchers from the Karolinska Institutet on the Swedish side. In addition to those high-quality research presentations, the workshop provided an opportunity for a number of young researchers to participate in the discussion. This series of workshops was introduced in the Japan-Sweden Joint Committee on Cooperation in Science and Technology held in May as a successful example of joint research and researcher exchanges carried out between the two countries. On the eve of the workshop, a reception hosted by the JSPS Stockholm Office and the Embassy of Japan in Sweden was held at the Ambassador's residence. Attended by some 40 researchers from the two



**Evening reception of the BioNano workshop held at the Ambassador's residence.**

countries, the reception provided a good opportunity for them to get acquainted with each other and exchange views in prelude to the next day's workshop.

## Colloquium on Cell Research Held in Stockholm

On 23 October, the JSPS Stockholm Office held a colloquium titled "Current Concepts in Regulation of Metabolism, Cell Differentiation and Function" at the Nobel Forum in the Karolinska Institutet (KI). Planning for the event was mainly carried out by Prof. Toshio Suda, Keio University, and Prof. Lorenz Poellinger, KI. At the colloquium, JSPS Stockholm Office director Prof. Yoshiaki Fujii offered welcoming remarks and gave a brief introduction to the Office's programs, followed by presentations from six researchers from each the Japanese and Swedish sides. They addressed issues on the forefront of life sciences, particularly propagation and

differentiation in cancer, neural, and hematopoietic stem cells as well as chromatin cell division mechanisms, cell visualization, and cell differentiation under oxygen tension.

The colloquium was attended by some 70 Swedish and Japanese researchers and students, who engaged each other in a spirited exchange of views. Thus, the event offered an ideal opportunity for the young researchers to hone themselves as future science trailblazers.

## Lectures Held in Northern Europe via S&T Diplomacy

In FY 2012, Japan's Ministry of Foreign Affairs launched the new "Professionals Exchange Program for Promoting Diplomacy in Science and Technology" aimed at introducing Japanese science and technology abroad through lecture series by Japanese specialists. The Embassy of Japan in Sweden linked up with the JSPS Stockholm Office to apply for support under this program. Our selection led to cooperation between the Japanese embassies in Sweden, Denmark and Finland, and to our Stockholm Office requesting Hokkaido University's Helsinki Office to dispatch a lecturer to Northern Europe. In this way, a new form of collaboration was established among the JSPS Office, Japanese embassies, and Japanese universities.

Over the period of 21-27 October, Dr. Masaaki Morikawa, professor, Hokkaido University, visited three countries in the region and spoke at the following listed institutions on green innovation and possibilities for cooperation among specialists in related fields: The Royal Swedish Academy of Engineering Sciences, Royal Institute of Technology, Swedish University of Agricultural Sciences, University of Helsinki, Aalto

University, Finnish Cleantech Cluster, and Technical University of Denmark.

In his lectures at these universities, Dr. Morikawa introduced work being advanced in the field of biotechnology under the Advanced Low-Carbon Technology Research and Development Program at his university. He placed focus on the development of high-order plant bioprocesses using symbiotic microorganism interactions in the rhizosphere, while speaking about future possibilities of producing efficient biomass energy by increasing plant growth through the optimal design of biofilm on plant-root surfaces, and of achieving water purification with only solar energy by designing effective plant-root symbioses.

These lectures evoked probing discussions and volleys of questions. At each university, he also held confabs and seminars with research groups in similar fields, with whom he considered forming cooperative relationships.

## JSPS Stockholm Office Participated in Danish Research Funding Meeting

On 27 November, a forum titled "Information Meeting on Danish, European and Japanese Funding Sources for Collaboration and Exchange" was held at Aalborg University (AAU) in Denmark. At it, presentations were given on a variety of relevant funding sources and exchange projects by a key group of authorities; namely, Mr. Toshio Sano, Ambassador of Japan to Denmark, Dr. Toshiyasu Ichioka, EU-Japan Centre for Industrial Cooperation, Asahi, Shionogi Pharmaceutical Research Center, Prof. Yoshiaki Fujii, director, JSPS Stockholm Office, former JSPS fellow Rasmus Bertelsen postdoctoral researcher, AAU's Department of Learning and Philosophy, and Mr. Soren A. Nielsen, technology director, Universal Foundation. Prof. Fujii used the platform to introduce the role of the Stockholm Office

and the heretofore implementation of JSPS's international joint research and fellowship programs in Denmark. The meeting was a great success having attracted the attendance of more than 70 people including researchers in Danish corporations, university faculty, and researchers across a range of natural and social science fields.

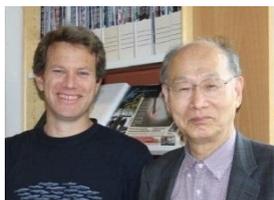
Former JSPS fellow Dr. Bertelsen had asked the JSPS Stockholm Office to participate in this meeting. We look forward to using future meetings as an opportunity for our office to create ties with past Danish fellows and initiate new exchanges with Denmark.

## Meeting with VINNOVA/STINT

VINNOVA, STINT and JSPS Stockholm Center gathered for a meeting on September 27<sup>th</sup> 2012. Background to the meeting was altering nomination prerequisites of VINNOVA, which is changing its scholarship nomination policy away from a wider base towards mere innovation oriented. STINT, on the other

hand, will continue to support nominations from all fields of research. Main issues of discussion were future cooperation between JSPS, VINNOVA and STINT. At present, there is an on-going dialogue with JSPS Tokyo Head Office concerning future cooperation between the three organisations.

## Board Member's Visits to JSPS Stockholm Office



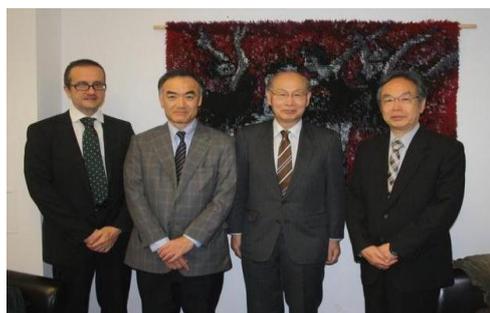
Board member Craig Wheelock with JSPS Stockholm Office Director Fujii

Between August and September 2012, SAC Board members Craig Wheelock, Jan Sedzik, and Göran Thor visited the JSPS Stockholm office and generously

offered their advice in matters concerning future SAC activities, and discussing ideas on how to further develop research cooperation between Japan and the Scandinavian countries, and increase the number of young and promising researchers.

## Visit to Hokkaido University Helsinki Office

JSPS Stockholm Office's director Yoshiaki Fujii and staff members visited the Hokkaido University Helsinki office on the premises of Helsinki University, and were received by director Shinichiro Tabata and deputy director Tero Salomaa on 17 September 2012. Present was also Vice President for International Affairs at Hokkaido University, Prof Takeo Hondô. Issues discussed were future cooperation between the two offices, development of activities in Finland such as the annual symposium co-hosted by Oulu University and Hokkaido University, and the plans for a Finland All Alumni Meeting in the first quarter of 2013.



From left: Tero Salomaa, Shinichiro Tabata, Yoshiaki Fujii and Takeo Hondô.

## III. Reports

### Dr. Shinya Yamanaka Wins Nobel Prize and JSPS President Participates in Nobel Week Events

JSPS Stockholm Office

The Nobel Prize Award Ceremony is held every year on 10 December. The week surrounding the ceremony is called Nobel Week, over which various events are carried out. Most prominent among them are the Nobel Ceremony and Banquet, attracting worldwide attention. Especially with Dr. Shinya Yamanaka (director of the Center for iPS Cell Research and Application at Kyoto University) having won the 2012 Nobel Prize in Physiology or Medicine, these events were covered with much gusto over several days on the full array of Japanese media including television.

On the 7<sup>th</sup>, Dr. Yamanaka delivered a Nobel Lecture in the Jacob Berzelius Lecture Hall of Karolinska Institutet. The lecture hall and its monitoring room overflowed with more than 700 media people from around the world and students from in and outside Sweden. Thanking his mentors, colleagues and family, Dr. Yamanaka sprinkled his lecture with humor and anecdotes when talking about his background and research experience, evoking an exuberant reaction from the audience. On the 8<sup>th</sup>, the Embassy of Japan

in Sweden held a special congratulatory reception attended among others by Japanese researchers studying and working in Sweden, who derived new zeal from episodes Dr. Yamanaka shared with them of his own challenging experiences as an overseas student.

The 10<sup>th</sup> saw Nobel Week's main events: First was the Award Ceremony held in the Stockholm Concert Hall from 4:30, coinciding with the date and time that Alfred Nobel had passed away. Shifting venues to the Stockholm City Hall, the Nobel Banquet was then held in the presence of the Royal Family of Sweden. Covered live on local television, the banquet is always the talk of the town with the handsome attire of its guests, sumptuous meals and splendid tableware, and entertaining shows. A long span of coverage was given to Dr. Yamanaka chatting with H.R.H. Princess Madeleine. Both the Nobel Award Ceremony and Banquet were attended by JSPS president Dr. Yuichiro Anzai, representing the funding agency that has and continues to support Dr. Yamanaka's research. Meeting Dr. Yamanaka in person, Dr. Anzai

congratulated him on his momentous achievement. While in Stockholm, Dr. Anzai also visited the Karolinska Institutet, Nobel Museum and the Japanese Embassy, where he engaged in stimulating

conversations while promoting international exchange in scientific research between Sweden and Japan.

## FAC Activity Seminar: A Year in Japan with the Vulcanus Program

Tommi Tynell, PhD Student, Aalto University School of Science and Technology

In 2005-2006 I spent a year in Japan through the European Commission-funded *Vulcanus program*, which is an internship program for engineering students from European universities. The program consisting of a 4-month long Japanese language course and an 8-month long traineeship in a Japanese company, with the aim of familiarizing the trainees in Japanese working culture and thereby facilitating future cooperation between Japanese and European businesses. Included in the language course were also lectures on Japanese culture, customs and other topics that might be relevant during the internship period. The Vulcanus group of my year consisted of 30 students from all over the EU, most of who had never been to Japan before.

The language course took place in Tokyo, where the group was divided into classes according to their existing Japanese skills. The classes lasted about 5 hours a day, with extra lectures on various topics or excursions to some culturally relevant places in Tokyo about once a week. Some examples of the excursions include going to see a sumo tournament, taking part in a tea ceremony and once even doing meditation in a Buddhist temple. That left us lots of time to go and explore Tokyo in the afternoon and during the weekends, which was what really characterized the language course part of the year for me; just taking in the atmosphere of the different areas that formed Tokyo, learning a bit more of Japanese every day and simply getting used to everyday life in Japan. After four months we weren't exactly fluent in Japanese or knew everything about the local business culture, but we did know enough to be able to work efficiently and contribute to the host companies where we were heading. After all, the traineeship part of the program would be the greatest learning experience; the first four months just prepared us for that.

After the language course finished, it was time to move to where your host company was located and start the main part of the program, namely the 8-month internship. For many students of the program, this was not much of a move at all since about half of the host companies were located in or around Tokyo, but in my case the location of the traineeship was in a town called Anan, in Tokushima-ken on Shikoku. It was quite the transformation to go from the urban landscape of Tokyo to somewhere where I was riding my bike to work among rice fields to a small industrial area where my company was based. It did present an opportunity to see another side of the country though, which I really appreciated.

The work at Anan Kasei, my host company, was largely what I expected; it was R&D work on materials for automotive catalysis, a really good match for my background in inorganic chemistry. The boss of the R&D department was French, which meant that I ended up giving all my presentations in English, but the fact that everyone else at the company was Japanese ensured that I had plenty of chances to put the language course lessons to use. This was doubly true for my free time, because there were few foreigners in Anan apart from the occasional English teachers.

All in all, the year I spent in Japan with the Vulcanus program was quite the learning experience, not only culturally, but also professionally as the traineeship provided an opportunity to get valuable experience in working in a high-level research environment. It also served as an opportunity to forge many personal as well as professional connections with various people in a country that seemed very foreign when we first arrived, but was very familiar by the time we left a year later.

For more information on the Vulcanus program please visit <http://www.eu-japan.eu>



Tommi Tynell shared his study & work experience in Japan.

The first *Sweden-Japan Academic Network* was held at the premises of the Royal Academy of Sciences (KVA) on 20 September 2012 and gathered about 130 participants. The administrators and co-sponsors behind the network event were KVA, JSPS Stockholm Office and Embassy of Japan.

The event was initially known as the *1<sup>st</sup> Sweden-Japan Research Network Event*; however the plan was to rename the event with the help of the guests that evening. A questionnaire was handed out to the participants enquiring about their overall opinion and an open request for name suggestions for the event. At the end of the evening, several artful name proposals had been provided. The winning proposal *Sweden-Japan Academic Network* was chosen as favorite by Japan's Ambassador in Sweden, Yoshiaki Watanabe. The purpose of establishing the annual Sweden-Japan Academic network was to consolidate already existing research connections between Sweden and Japan and provide a platform for upcoming research cooperation between the two countries. Invited speakers were Ma-Li Svensson,



**KVA's Permanent Secretary Normark and Ambassador Watanabe.**

business researcher Niklas Modig and Professor Tomohiko Sakao. After the sessions followed a sushi buffet in grand style and together with the representative environment at KVA bestowed a grand yet familiar atmosphere to the evening.



**PhD. Ma-Li Svensson of Linköping University spoke with much enthusiasm about her research experience with Japan.**



**Business Researcher Niklas Modig spoke about his experience of living and working in Japan and gave a vibrant introduction to his book 'This Is Lean'.**



**Environment Professor Tomohiko Sakao of Linköping University.**

## Questionnaire Result (72 respondents)

### Respondents:

JSPS Sweden Alumni Club Members:	12
Japanese Researchers:	12
Government exchange students:	13
Foreign Researchers:	16
Others (students):	19

### Impression of the event

Very satisfied:	55
Mostly satisfied:	15
Slightly disappointed:	1
Very disappointed:	0
No response:	1

### Did the Event meet your expectations?

Yes:	58
No:	2
I didn't have any particular expectations:	12

### At what intervals should the event be held?

Twice/year:	27
Once/year:	43
Once/2 years:	2
Once/3 years:	0



The sushi buffet was much appreciated element among the guests of the evening.



The information table of Japanska Föreningen i Stockholm



The JSPS Stockholm Office's information table

On October 15<sup>th</sup>, 2012, leading scientists from both Japan and Sweden within such diverse fields as nanotechnology, chemistry, biology and medicine met for a 3-day workshop to exchange results, ideas, and stimulate new collaborations. This was the 7<sup>th</sup> BioNano Workshop organized between the two countries, and since its initiation in 2000 it has provided a stable platform for continued collaborations within biotechnology and life science.

Each year the workshop includes leading senior scientists from each country and a selection of junior faculty. Merging such interdisciplinary researchers creates an innovative environment where the future of our medical healthcare system can be developed. The needs and challenges of the medical field meet the forefront in biotechnology, resulting in ideas for new tools, devices, or methods. Yet another purpose of the meeting is to allow the junior faculty to establish their own collaborations within such an interdisciplinary field, and become exposed to an international arena.

This year Sweden was the host, and the program was organized by Prof. Agneta Richter-Dahlfors and Dr. Gunilla Jacobson at the Swedish Medical Nanoscience Center at Karolinska Institutet, together with the Swedish Foundation for Strategic Research (SSF). The meeting started with a welcoming opening reception at the residence of the Japanese Ambassador Watanabe, hosted by the Japanese Embassy and the Japan Society for the Promotion of Science (JSPS). This delightful evening set the stage for an open and enthusiastic workshop. The group spent the following two days at Högberga Gärd, a conference center built in 1911, with a fantastic view over the Stockholm archipelago.

This year the Japanese delegation was organized by Prof. Teruo Okano, Tokyo Women's Medical University, and Prof. Yuji Miyahara, Tokyo Medical and Dental University. The delegation represented 7 Japanese universities, along with representatives from Sony Corporation, Hitachi Ltd., and Panasonic Corporation. The addition of industrial partners in these meetings brings another important dimension to the discussions. From Sweden, GE Healthcare participated.

This year the discussions focused on areas such as new tools for intravital imaging, designed polymers for smart surfaces and implants, tissue engineering to construct 3D tissues and organs for transplant, novel methods for early diagnostics of cancer from blood samples, and many more. The results from this year's interactions will be seen at the next meeting, which will be held in Japan.



## Joint JSPS – Karolinska Institute Symposium: Current Concepts in Regulation of Metabolism, Cell Differentiation and Function

Tomohiro Sawa, Associate Professor, Department of Microbiology, Graduate School of Medical Sciences, Kumamoto University

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The Joint JSPS – Karolinska Institute Symposium: Current Concepts in Regulation of Metabolism, Cell Differentiation and Function was held on October 23, 2012 at the Nobel Forum, Karolinska Institute, where is known as the place for the announcement of the Nobel Prize winner in Medicine or Physiology.

The Symposium started with the Opening Address given by Dr. Yoshiaki Fujii, the Director of the JSPS Stockholm Center, for introducing the activities of JSPS Stockholm and the concepts of this Symposium. This Symposium was organized by Dr. Lorenz Poellinger from the Karolinska Institute and Dr. Toshio Suda, from Keio University, Japan, and consisted of 12 lectures by leading scientists. The topics covered very recent

progresses in broad ranges of biological and medical fields including cell differentiation, metabolic regulation, redox signaling, hypoxia responses, and so forth. The Discussion periods really livened up with a lot of questions and comments by the audiences. Many of the speakers also introduced the outstanding contributions of young Japanese scientists in the fields.

I would like to express my sincere appreciation to Dr. Fujii and Ms. Mari Nakajima of the JSPS Stockholm Center for their kind support and hospitality.



The Entrance of the Nobel Forum



Dr. Yoshiaki Fujii



Dr. Toshio Suda



Dr. Lorenz Poellinger

## Report of a lecture trip in Sweden, Finland, and Denmark (21<sup>st</sup> – 27<sup>th</sup> Oct. 2012)

Masaaki Morikawa, Prof. Hokkaido University

A Professionals Exchange Program for Promoting Diplomacy in Science and Technology was organized by the Ministry of Foreign Affairs of Japan and JSPS Stockholm Office. I am a professor of Environmental Science in Hokkaido University. Under this program, I was given a chance to visit Royal Swedish Academy of Engineering and Sciences (IVA), Royal Swedish Institute of Technology (KTH) in Stockholm, Swedish University of Agricultural Sciences (SLU) in Uppsala, Technical University of Denmark in Copenhagen, University of Helsinki in Helsinki, and Finnish Cleantech Cluster in Lahti from 21<sup>st</sup> to 27<sup>th</sup> Oct. 2012. The program was focused to the research fields in Green Innovation and Sustainable Energy.

I introduced Green Biotechnology including our ongoing project of Advanced Low Carbon Technology Research and Development Program (ALCA) supported by Japan Science and Technology Agency (JST) as follows.

One of my lectures was prepared by IVA on 24<sup>th</sup> Oct, 18:00-19:30 at IVA's conference center, which was entitled "Green Innovation, including Sustainable Energy ~ Could the utilization of biofilms, surface attached microbial communities, lead to a game-change in green biotechnology?" There were about thirty attendees, including Director Dr. Y. Fujii-Kuriyama at JSPS Stockholm Office, President Prof. B. O. Nilsson at IVA, and other members of IVA. After introductory remarks by H. E. Ambassador Y. Watanabe, I started my talk with recent biological topics showing how deeply environmental microorganisms are involved in the human health control and individuality. Then, I made a point that microbial unique features are often exhibited only after attaching to skins, respiratory organs, and gastrointestines, and forming biofilms, surface attached microbial communities. I also presented our experimental evidences and discussed future perspective about effective production of biomass-energy and sustainable solar energy driven water purification system by rational designing of symbiotic plant-root biofilms. My presentation was followed by the short talk by Dr. H. J. Federsel, Senior Principal Scientist, AstraZeneca, chairman of this lecture, about

increasing importance and potentials of microbial enzymes for development and production of novel medicines. Finally, Prof. J. Stenström, BioCenter SLU, perfectly summarized this session and gave comments toward our possible future collaboration. There were several questions about the biofilms and remarks from the audience that encourage early industrialization of my project.

On a day before the lecture at IVA, I visited Uppsala BioCenter at SLU, Uppsala. Prof. J. Stenström, Prof. Ingvar Sundh, Assoc. Prof. S. Håkansson, other members of Domestication of Microorganisms (DOM) group, and I had a solid discussion meeting for three hours. DOM is an environmental biotechnology program (FY2003-2011) supported by The Swedish Foundation for Strategic Environmental Research (MISTRA). CaptiGel is a venture company selling technologies of encapsulation, protection and slow release of biomolecules and cells, which was founded in 2009 based on a part of the scientific products of DOM. I believe that their sound platform of practical environmental biotechnology will be useful for industrialization of our research outcomes in near future. Lastly, I greatly appreciate Mr. Hideto Matsumoto at Embassy of Japan in Sweden, Ms. Naomi Yoshizawa at JSPS Stockholm Office, Mr. Edvard Fleetwood at Sweden-Japan Foundation, Ms. Tomoko Sumida at Embassy of Japan in Denmark, Mr. Norihiro Mihara at Embassy of Japan in Finland, and Mr. Tero Salomaa at Hokkaido University Helsinki Office for planning and organizing my fruitful lecture trip in Northern Europe.



Prof. Morikawa giving a lecture at IVA

## IV. Announcements

### JSPS Postdoctoral Fellowship Program (short-term & standard)

●The call for JSPS Postdoctoral Fellowship Program (short-term & standard) is now opening in JSPS's counterpart Institutions in Nordic and Baltic countries.

	JSPS Postdoctoral Fellowship for Foreign Researchers	
	Short-term	Standard
<b>Duration</b>	1 to 12 months	12 to 24 months
<b>Eligibility</b>	-Be a citizen or permanent resident of Sweden. -Hold a doctorate at the time the Fellowship goes into effect which must have been received within the past 6 years, or be enrolled in a doctoral course and be scheduled to receive a Ph.D. within 2 years.	-Be a citizen or permanent resident of Sweden. -Hold a doctorate degree when the Fellowship goes into effect, which must have been received within the past 6 years, or be scheduled to receive a doctorate degree before the fellowship goes into effect.
<b>How to Apply</b>	<p><b>【Sweden】</b>  <b>KVA</b>  <a href="http://www.kva.se/en/GrantsFunding/Scholarships/Astronomy-and-space-science/">http://www.kva.se/en/GrantsFunding/Scholarships/Astronomy-and-space-science/</a>  <b>STINT</b>  <a href="http://www.stint.se/en/scholarships_and_grants/jspc_fellowship_program">http://www.stint.se/en/scholarships_and_grants/jspc_fellowship_program</a></p>	<p><b>【Sweden】</b>  <b>KVA</b>  <a href="http://www.kva.se/en/GrantsFunding/Scholarships/Astronomy-and-space-science/">http://www.kva.se/en/GrantsFunding/Scholarships/Astronomy-and-space-science/</a>  <b>VINNOVA</b>  <a href="http://www.vinnova.se/en/EU-and-international-co-operation/International-training-and-exchange/Japan-Scholarships/">http://www.vinnova.se/en/EU-and-international-co-operation/International-training-and-exchange/Japan-Scholarships/</a>  <b>SSF</b>  <a href="http://www.stratresearch.se/en/Applicationguide/C-all-for-proposals/2013/Postdoctoral-fellowships-in-Japan/">http://www.stratresearch.se/en/Applicationguide/C-all-for-proposals/2013/Postdoctoral-fellowships-in-Japan/</a></p> <p><b>【Denmark】</b>  <b>DU</b>  <a href="http://dkuni.dk/">http://dkuni.dk/</a></p> <p><b>【Finland】</b>  <b>AF</b>  <a href="http://www.aka.fi/fi/A/">http://www.aka.fi/fi/A/</a></p> <p><b>【Norway】</b>  <b>RCN</b>  <a href="http://www.forskningsradet.no/no/Forsiden/1173185591033">http://www.forskningsradet.no/no/Forsiden/1173185591033</a></p> <p><b>【Estonia】</b>  <b>ETF</b>  <a href="http://www.etf.ee/">http://www.etf.ee/</a></p>
※The application deadline is different from each program. Please visit above website.		

●There is also another way of applying: Application through Open Recruitment in Japan (Application by a Japanese host researcher). Please visit JSPS Tokyo Head Office website.  
<http://www.jsps.go.jp/english/e-fellow/index.html>

## BRIDGE Fellowship Program

BRIDGE Fellowship Program is designed to encourage research networks between JSPS Alumni Club members and researchers in Japan, and is exclusively for JSPS Alumni Club regular members.

Where to submit: [jsp-sto@jps-sto.com](mailto:jsp-sto@jps-sto.com)

Deadline: Friday 8 March 2013

\* For further information please visit our website. <http://www.jps-sto.com/Page250.aspx>

## JSPS Upcoming Events

### **-JSPS Alumni activity seminar**

*ICT-ethics: Sweden and Japan*

Date: Friday March 8<sup>th</sup>, 2013

Venue: Centre for Applied Ethics, Linköping University

Organizer: Elin Palm, Assistant Professor, Linköping University

Invited Speaker: Kiyoshi Murata Professor, Meiji University

<http://www.liu.se/ikk/cte/startside-aktuellt/1.427843/ict-ethics-liu-march-2013.pdf>

### **- JAPAN-SWEDEN SCIENCE, TECHNOLOGY & INNOVATION SYMPOSIUM**

*Lithium Ion Battery ~The Inception, Development and Future~*

Date: Thursday March 7<sup>th</sup>, 2013, 18:00–19:30 followed by Light buffet/mingle.

Venue: IVA's Conference Centre, Grev Turegatan 16, Stockholm, Sweden.

Co-hosts: The Chemical Society of Japan / Asahi-Kasei Corporation

Supported by: IVA / Sweden-Japan Foundation / Embassy of Japan / JSPS

<http://www.iva.se/en/Press/Calendar/Lithium-Ion-battery-The-Inception-Development-and-Future/>

### **-First Finland-Japan All Alumni Meeting**

*Research and study possibilities in Japan*

Date: Wednesday March 13<sup>th</sup>, 2013

Place: Metsätalo, Unioninkatu 40, S1 Helsinki

Co-hosts: JSPS, Hokkaido University Helsinki office, Embassy of Japan, Finish institute



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