Dear members of the EURAXESS Japan community, dear colleagues, researchers and students of all nationalities and genders,

Gender equality is a fundamental value of the European Union. We EURAXESS Japan would like to take, as we did last year, the opportunity of the International Women’s Day on this 8 March 2017 to publish a special issue.

As this year also marks the 150th anniversary of the birth of Marie Sklodowska-Curie, we prepared for you a short presentation of the gender equality initiatives within the mobility programme Marie Sklodowska-Curie Actions, and we also interviewed three mobile female researchers under an MSCA grant who have experience in Europe and Japan.

Finally, we present two events of interest for the subject: one in Europe and one in Japan.

Wishing you a good read!

Matthieu Py

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Introduction: gender equality in human resources for research and Marie Sklodowska-Curie Actions

Gender equality or gender gap? About the ‘leaky pipeline’ and efforts to mitigate it in Europe

The evolution of careers of women in higher education and research has been described by numerous experts and by a wealth of studies as a ‘Leaky pipeline’.¹

Surveys and studies show indeed that we are still far from an even approximative gender equality in studies and employment in research, as proved with Figure 1.

![Figure 1. Proportion of women and men in a typical academic career, students and academic staff, EU-28, 1999-2003-2007-2013. Source: Women in Science database, DG Research and Innovation and Eurostat – Education Statistics](image)

European Commission, SHE FIGURES 2015, Gender in Research and Innovation, doi:10.2777/744106
Gender equality has been one of the priorities of a “Reinforced European Research Area Partnership for Excellence and Growth” (ERA) since 2012. To this end, Member States are invited to remove barriers to the recruitment, retention and career progression of female researchers.

**Gender-NET** is the first European Research Area Network (ERA-NET) to be dedicated to the promotion of gender equality through structural change in research institutions.

In Horizon 2020, gender is a cross-cutting issue and is mainstreamed in each of the different parts of the Work Programme, ensuring a more integrated approach to research and innovation.

More detailed information in our [2016 International Women’s Day Special Issue](http://ec.europa.eu/euraxess).

**Figure 1.** Perfectly illustrates the concept of the leaky pipeline: while women seem to represent more than half of the students enrolled and graduating from tertiary education in EU-28 (with even a slight increase between 1999 and 2003, since then sustained), the figures are reversed as soon as one looks at students in higher education, and ratios worsen continuously above that level.

If one only refers to the most recent data set (2013), although the numbers for university students and graduates are somewhat similar, a tendency is shown from post-doctoral employment to executive level that women are less and less well-represented, from 45% at post-doctoral level to just 21% at the executive/professor level. That is, although almost one in two researchers are women at the postdoctoral level, the ratio falls to only one to five at the most senior level.

This under-representation of women at mid-career and senior levels can be tackled though, as is shown by the substantial evolution of approximately +10% on all categories from University graduates to senior positions from 199 to 2013. Recent efforts in the EU Research and Innovation Policies have contributed to mitigate this gender gap (see sidenote).

This discrepancy is shown to be reconducted when focusing on a population of researchers that is of a particular interest to us at EURAXESS: that of the internationally mobile, post-PhD (or experienced) researchers.

**Figure 2.** Sex differences in international mobility in post-PhD careers, per country, 2012, calculated by subtracting the share (%) of internationally mobile women researchers (out of the total number of women researchers) from the share (%) of internationally mobile men researchers (out of the total number of men researchers). A positive value indicates that men are more mobile, and a negative value indicates that women are more mobile.

*Source: MORE 2 Survey; and European Commission, SHE FIGURES 2015, Gender in Research and Innovation, doi:10.2777/744106, p.107*

**Figure 2** proposes an insight on the ration of men to women within internationally mobile researchers. Although it is limited in range to European countries, it does include researchers at all (post-PhD) career stages and in all fields of science, defining ‘internationally mobile’ researchers as those who...
have worked abroad for three months or more at least once in the last decade. Therefore, one can estimate it draws a realistic representation of the gender ratio among mobile researchers. What is striking is that more than half of the surveyed countries (16 including EU-28) feature a gender gap superior to 5% in favour of men within their mobile researchers, while only one, the FYRo Macedonia, shows a gender gap in favour of women of more than 5%. None of the major countries in terms of numbers of their research workforce performs well on that indicator, with for example Germany at +20.2%, France at +10%, or Spain at +6.8%.

However once again, there are initiatives to tackle that specific issue, such as the policies and initiatives on gender equality towards experienced (potentially) mobile researchers within the Marie Sklodowska-Curie Actions (MSCA) Individual Fellowships (IF) programme.

**Gender equality initiatives in the MSCA programmes**

Since their creation, the MSCA have placed a strong emphasis on promoting gender and equal opportunities for their fellows, and within their projects. Indeed, the MSCA require transparent recruitment and high quality employment and working conditions for researchers, in line with the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers (see sidenote). In addition, MSCA grants permit part-time working and parental leave. Post-doctoral researchers who wish to resume their career after a break, for example to raise children, can apply to a dedicated panel of the MSCA Individual Fellowships.

As a result, MSCA are widely regarded as best practice in promoting gender balance: nearly 40% of MSCA fellows are women, a share significantly higher than in other parts of H2020, as shows Figure 3 which focuses on the gender breakdown within applicants and grantees for the MSCA IF 2016 call.

**Figure 3.** Proportion in total numbers and percentages of women (left) and men (right) within total applicants (outer circle) and A-list individuals (inner circle) for the 2016 call of the MSCA Individual Fellowship programme.
In line with Horizon 2020 commitments, the MSCA promote gender equality at several levels:

- **For evaluation of proposals**: evaluators receive training on unconscious gender bias;
- **For human resources**: equal opportunities are ensured in MSCA projects, both at the level of supported researchers and in project supervision;
- **In decision making**: The MSCA Advisory Group has more women than men.
- **In the research itself**: projects integrating the gender dimension in their research and innovation content, when relevant, have more chances to succeed ([https://youtu.be/Hq4eWo30RfY](https://youtu.be/Hq4eWo30RfY))

In the 2016 Individual Fellowship call, women represented only 39% of the applicants, however they were 43% of the selected fellows, which shows that they have a higher success rate than men.

On the occasion of the 150th anniversary of the birth of Marie Sklodowska-Curie, and only a few years after the 100th anniversary of her Nobel Prize in chemistry, which spawned a very interesting compendium of publications on gender equality in science, education and research,\(^2\) we hope that such measures will further contribute to reducing the gender gap that still exists as of today.

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More information: [European Commission](http://ec.europa.eu/euraxess)
Meet Louise WALPORT, MSCA IF Global Fellow, University of Tokyo

Louise, can you introduce your research interests to our readers?

I am interested in biochemical aspects of epigenetics (the study of changes in gene regulation that do not involve alterations to the underlying DNA sequence), particularly reactions involving lysine and arginine residues. During my DPhil I worked on a family of proteins involved in histone demethylation and am now applying the peptide screening technology developed in the Suga laboratory to these, and some related proteins, with the hope of developing probes that will help us further understand their cellular roles.

You're now under an MSCA IF (GF) mobility grant to Japan. Can you tell us a bit about your professional choices, and what particular circumstances led to your work in Japan under this very specific grant?

Given the international nature of science, doing a postdoc abroad seemed like a logical choice. As an undergraduate, I spent a summer working in a lab at the Broad Institute in Boston and felt that this time I'd like to use the opportunity to live somewhere in Asia. Scientifically I was also keen to learn the display technology pioneered by Professor Suga, so applying for this fellowship in Japan married these two desires. Of the postdoctoral fellowships available, the MSCA GF was a particularly attractive option, as it gave me the opportunity to live and work in Japan for two years knowing from the outset that I also had funding to return to the UK for a further year at the end of that time.

How did you obtain the grant? Were there specific hurdles that you managed to overcome in order to secure the position/the funding?

Like all grant applications, the MSCA GF took a substantial amount of time to prepare so starting early was key, especially with the additional specific hurdle of coordinating between two different universities on two different continents! I was lucky that both my outgoing and incoming hosts were extremely helpful in making the application as painless as possible.

Now that the grant is running, what would you say is its impact on your career?

As well as the most obvious impact of being able to pursue my own scientific ideas and the chance to learn from Professor Suga, the grant has a generous allowance for research expenses and professional development that has given me the opportunity to present my work at international conferences and to

Louise received her Master's degree in Chemistry from the University of Oxford, where she undertook her final year research project with Professor Timothy Donohoe. Following this she undertook a DPhil in the laboratories of Professor Christopher Schofield and Professor Christina Redfield working on proteins involved in the epigenetic response. She now works as a MSCA GF in the laboratory of Professor Hiroaki Suga at the University of Tokyo.

The MSCA Individual Fellowships fund researchers looking to enhance their career development and prospects by working abroad. There are two types of Individual Fellowships.

European Fellowships are:
- Held in the EU or associated countries for 1-2 years.
- Open to researchers either coming to Europe or moving within Europe.
- A support to restart research careers after a break such as parental leave.
- A support to reintegrate researchers coming back to Europe.

Global Fellowships feature:
- Secondments outside Europe for researchers based in the EU or associated countries (1-2 years).
- A mandatory one-year return period.

More information here

http://ec.europa.eu/euraxess
attend a course at Cold Spring Harbor. The new location has also allowed me to establish new collaborations such as with structural biologists at RIKEN. All these opportunities to expand my international network will be invaluable once I return to Europe.

- How would you say research environment compare between Japan and Europe?

Before I arrived here in Tokyo I was a bit worried that the research environment might be very different from Europe, but in fact, the Suga lab has a very international outlook with researchers from more than ten different countries, so day to day lab life is pretty similar to my days in the UK.

- What are the challenges of doing research in Japan for you?

Although we work in English in the lab, a lot of equipment and information from the wider university is, of course, in Japanese. As my Japanese level is still fairly basic this can be a challenge, but I’m lucky to have very friendly colleagues who are always able to help me out when needed!

- While being based in Japan, are you keeping ties with your former workplaces/labs/colleagues in Europe? If yes, how and to what end/objective?

I still have regular conference calls with my PhD supervisor and members of the lab. At the start of my stay in Japan we were still writing up papers from work during my time in Oxford and now as I will be returning to Oxford for the final year of my fellowship we skype to keep up to date with progress of my current project. Additionally, through a colleague from my old lab I have established a new collaboration with a lab in Edinburgh.

- From your perspective, how can/should researchers mobility flows between Europe and Japan (both ways) be improved? Also, what would be the barriers for research cooperation?

There are lots of good schemes like JSPS and MSCA that provide funding for the movement of researchers between Japan and Europe, but I think a lot of people are put off by the language and cultural barrier. In reality many labs now work entirely in English so these barriers shouldn’t put people off. However integrating into the research community beyond one’s immediate lab can still be difficult. Organisations like EURAXESS that help researchers once they have moved in country are invaluable in this respect and any extension of these initiatives would really help researchers get the most out of their stay abroad.
- A final, more personal question: how do you envisage your career and where once your grant is over?

I’m enjoying my time in Japan immensely, and will return with many great memories, but it is a long way from my family and friends, so in the long term I would like to establish an independent academic career working in Europe. I look forward to maintaining collaborations with people I have met here well into the future, however.

Thank you very much Louise, and all the best for your career!
Meet Isabelle VEA, MSCA IF Reintegration Panel grantee, Edinburgh University

- Isabelle, can you introduce your research interests to our readers?

As an evolutionary biologist, my research interests surround understanding the evolution of scale insects, agricultural plant pests that possess diverse and fascinating life histories (males and females look completely different) and genetic systems. During my Ph.D., I studied the diversity of fossil scale insects preserved in amber and investigated the relationships between living and extinct groups. Subsequently, I switched to research on how growth hormones influence scale insect development and went to Nagoya University for my first postdoctoral experience. Today, at the University of Edinburgh, I investigate the mechanisms by which males’ paternal genome are eliminated during sperm formation (an unusual genetic system found in scale insects), by examining how accessory chromosomes can actually escape this elimination.

- You were previously employed as a post-doctoral researcher at Nagoya University. Can you tell us a bit about your professional choices, and what particular circumstances lead to your work in Japan?

While finishing my Ph.D. I was thinking on switching fields of research in biology, and had a specific project in mind involving scale insect development. I found a publication from investigators at Nagoya University who were researching juvenile hormone regulation of insect metamorphosis. The PI showed enthusiasm in the project and suggested to apply for a JSPS Postdoctoral Fellowship. We first obtained a one-year fellowship that was extended to a total of three years after obtaining preliminary results.

- Anticipating the end of your contract, you applied with success to an MSCA IF grant under the reintegration panel. Congratulations! Can you tell us a bit about the grant, and the reason why you chose to apply for it?

Having spent most of my research career outside of Europe, I was interested in the opportunity to come back, rediscover the work environment here and network with the European scientific community before applying for a position. The reintegration panel allows European researchers who were based outside of Europe for a significant amount of time to come back and reconnect and reintegrate with European research, so this panel exactly fitted my situation and goals.

The Reintegration Panel is a dedicated, multidisciplinary panel (i.e. a specific category for the evaluation of proposals) of the MSCA IF European Fellowships, dedicated to researchers who wish to return and reintegrate in a longer term research position in Europe.

More information: MSCA IF guide for applicants

Isabelle Vea obtained her Ph.D in Comparative Biology in 2009 at the American Museum of Natural History, New York City. She was a postdoctoral fellow for three years in the School of Bio-Agricultural Sciences at Nagoya University before starting her MSCA Individual Fellowship at the University of Edinburgh in January 2017. She is an evolutionary biologist and entomologist.

http://ec.europa.eu/euraxess
- How did you obtain the grant? Were there specific hurdles that you managed to overcome in order to secure the position?

The key points I believe allowed me to secure an MSCA Fellowship was: 1) to show the potential Principal Investigator that I had skills and expertise that fit the project goals, and this despite my unconventional research profile (therefore also convince the reviewers in the proposal); 2) to carefully think about the project implementation and demonstrate its feasibility at the same time as being innovative 3) to not neglect the impact section by designing original but realistic outreach activities linked to the research field.

- Would you say that --outside of obvious eligibility criteria that it helped you fill-- your research stay to Japan improved your chances at securing the grant?

For my part, I switched fields of research, so this experience in Japan allowed me to learn new and useful techniques and discover new research literature closer to the subject of my proposal. It may have also shown my flexibility in learning new skills even though I did not have many years of experience in the study of genetic systems. Additionally, securing funding for a novel project in Japan may have shown my potential for research independence and initiative.

- How would you say research environment compare between Japan and Europe?

The difference that I noted was the very hierarchical research environment in Japan as opposed to Europe where younger researchers are more independent.

- While being based in Japan, how did you keep/create ties with your current employer in Europe?

My current Principal investigator and I already knew each other from a previous conference during my Ph.D. We reconnected 4 years after this conference because our interests and methods became closer due to my research topic switch but we never really worked together nor collaborated on research projects beforehand.

- From your perspective, how can/should researchers mobility flows between Europe and Japan (both ways) be improved? Also, what would be the barriers for research cooperation?

From my experience at Nagoya University, I have seen very disparate instances of collaborative work. Although in my former laboratory, European collaboration is not currently undertaken, some other departments have a lot of international (including European) postdoctoral researchers. Because the departments (and even laboratories of a same department) are often completely disconnected
from each other, the exposure to Europe-Japan collaboration examples just within the University is lost. I was very surprised to see a clear division between Japanese-only and very international laboratories. So basically, international laboratories continue to have international collaborators, while Japanese-only laboratories stay as such. During my stay in Nagoya University, I founded an international early career researcher association (NUECRA) to help increase communication among young researchers from different departments in the University.

Young researchers who have more opportunity for mobility can be a bridge to build those connections, either by having Japanese researchers come to Europe or European researchers stay in Japan. Although there are already means to create collaborative projects (through JSPS programmes for example), some laboratories might not be willing or ready to break the communication barrier to start these collaborations, or just lack exposure or contacts in Europe. It would be worth providing more exposure to successful Europe-Japan collaborations (e.g., showcasing success stories in a portal available to Japanese/European investigators) to show that the effort in building these collaborations are worth the time. Moreover, because I only have experience from the Japanese side, it is important to provide young Japanese investigators more opportunity to network with European researchers and emphasizing that this activity is almost as important as the research itself.

Thank you very much Isabelle, and best of luck for your continued career in Europe!
Meet Eri SAKATA, MSCA IF Fellow, and Group Leader at Max Planck Institute

- Eri, can you introduce your research interests to our readers?

In my scientific career, I have studied structural aspects of the ubiquitin-proteasome protein degradation system (UPS) using hybrid approaches of structural biology, such as cryo-electron microscopy, NMR spectroscopy, X-ray crystallography and mass spectrometry. My research interests focus on understanding how UPS enzymes efficiently perform their functions to degrade components that are no longer useful. I am currently working at the Max Planck Institute of Biochemistry as a project group leader and studying the structural dynamics and functional mechanisms of the 26S proteasome using cryo electron microscopy. I am funded by an MSCA - Career Integration Grant.

- You are under an MSCA mobility grant in Europe. Can you tell us a bit about your professional choices, and what particular circumstances lead to your work in Europe under this grant?

I am still founded under my MSCA IF grant because I was able to suspend it during my six-month maternity leave. I first came to Germany as a JSPS postdoc fellow after my Ph.D at Nagoya University. At that time I was not planning to pursue my career abroad and had rather planned to go back to Japan after a short stay. However, as my project was not finished within the limited time of my JSPS fellowship, I decided to extend my stay. With time, I realised it was easy for me to work in Germany, where work and personal life are balanced and gender equality is better achieved. After a short second postdoc at another lab, I received an offer for a group leader position from Prof. Baumeister. While the position is not yet that of a fully independent researcher, I was guaranteed to perform my own research with support the whole team. Since there was a limit to my research funding, I applied (with success) to an MSCA Career Integration Grant which helped a lot to launch my research.

- How did you obtain the grant? Were there specific hurdles that you managed to overcome in order to secure the position/the funding?

It was the first time for me to write a grant application in English. I have been funded by several fellowships and awards previously, but they were all from Japanese funding sources (JSPS, Uehara and Naito). To be honest, I regret that I didn’t apply European fellowships (e.g. Marie-curie, EMBO, HFSP…. ) sooner, during my postdoc period. That could have been a great training to write a grant application which will be required anyhow during the rest of my research career.

More information about the MSCA CIG here

The Marie Curie Action Career Integration Grants (CIG) are open to experienced researchers of any nationality with at least four years of full-time research experience or a Ph.D. The aim is to support researchers in the first steps of their European research career. This action should also allow the transfer of knowledge that the researchers have acquired prior to the CIG, as well as the development of lasting co-operation with the scientific and/or industrial environment of the country from which they have moved. This action has a particular emphasis on countering European ‘brain drain’ to other third countries.

http://ec.europa.eu/euraxess
- Now that the grant is running, what would you say was its impact on your career?

The grant started right after I started my group. Although I have an access to many instruments in the department, I needed to buy several instruments (e.g. HPLC, centrifuge, electrophoresis system) and consumables to set up my lab and the MSCA grant was a great help for that. In addition, I took a half-year maternity break during the funding period. The MSCA grant allows that, and staff was quite supportive, so I was able to suspend the grant during my maternity leave. After coming back to the lab, I was able to publish some papers as a senior author and am now preparing several other papers. This is an important step to find my next position since my current one is not tenured.

- How would you say research environment compare between the different countries you visited and Japan?

I have been conducting research in three countries, Japan, Germany and USA. Each country has pros and cons and it is difficult to say which one is the best. I found that the working environment abroad allows diverse working styles and makes it easier for us to mix career and personal life. I also want to mention that Japan is still a man-dominated society. Gender equality in Japan is improving but it is still worse than in many Western countries. For example, in our institute in Germany, three out of seven directors are female. Japanese universities do increase the numbers of female staff scientists but the number of female PIs or Professors is still low. I believe the Japanese society itself has to change to let women work confidently and comfortably. I would like to encourage young people, especially female students, to gain experience by studying abroad.

- What are the challenges of doing research in Europe as a Japanese national?

Language! You have to speak to people and write papers. That is the only way to improve it. It is also important to network. Once you have children, another challenge starts, since each country has different health care and school systems. Understanding those things requires a different energy than research. Luckily, our institute has an international office which supports international employees. [see sidenote]

- What does this mobility experience to Europe bring to you, in terms of skill or career development?

In Europe and the USA, I saw many talented students who were able to completely change their fields of study. I believe that those kind of people are prone to make breakthroughs. To work in different labs and communicate with scientists from different countries enriches your scientific knowledge and
provides novel insights. It also improves your communication skills. Since the Japanese scientific system is very hierarchical and many scientists still stay in a same and unique lab through their whole scientific career, I believe it interferes with the dynamics of science. In my case, I am in the middle of my career path but these mobility experiences brought me wide knowledge in various scientific topics. European programmes such as the MSCA are very good in supporting such people, who are internationally mobile to pursue their research goals.

- From your perspective, how can/should researchers mobility flows between Europe and Japan (both ways) be improved? Also, what would be the barriers for research cooperation?

Before coming to Europe, I knew very little about European fellowships and I focused on JSPS which I was familiar with. First, we (Japan) should establish an accessible information source to encourage Japanese students to go abroad. Seminars featuring fellowship holders presenting how to get a fellowship might be interesting. [see sidenote]

My feeling is that in Japan, not many people go abroad and/or not many PIs encourage their students to go abroad. I also understood that people who stay outside of Japan too long (most of people go back to Japan within 2 years) have difficulties to find a position in Japan. That makes the mobility of Japanese scientists lower because they are afraid not to find a job if they leave Japan too long. I think Japanese PIs or employers should open door for those people; and also for foreigners.

- A final, more personal question: how do you envisage your career and where?

I would like to stay in academia but I am in the situation of many colleagues, who struggle with ‘dual-career’ problems and juggle between parenthood and work. My husband is working in the same field and we need to find two positions in in the same location at the same time in near future. That will be challenging for us. It is difficult to envision our lives in a specific country, as many other researchers of our generation; and we have to be rather flexible for coming offers.

Eri, thank you very much for your time, all our wishes for your career!
Selection of relevant events

In Europe: 9th European Conference on Gender Equality in Higher Education and Research

The European Conferences on Gender Equality in Higher Education and Research provide since 1998 an international forum to discuss and exchange information and experiences and share research results on the changes and challenges related to gender in academia, gender equality promotion and interventions in higher education and research institutions.

France is hosting this event for the first time. Gender research, including research on women in academia in particular, is well developed in France and has grown considerably in the past ten years. France is also the project coordinator for the GENDER-NET ERA-NET, which will be holding its final conference as part of this 9th Conference.

Date: 12-14 September 2017
Venue: Paris, France
Further information and registration: https://9eucogender.sciencesconf.org/

In Japan: Gender Summit 10

The Gender Summit is an international movement to discuss science and gender, started on an initiative of the European Commission.

It is well known that Japan has lagged behind in attaining a Gender Equal Society. Incorporating the dimension of gender into every aspect of education, academic research and innovation is essential.

The Gender Summit 10, being the first Gender Summit in Japan, aims at addressing these issues. Its main theme is “Better Science and Innovation through Gender, Diversity and Inclusive Engagement”.

Date: 25-26 May 2017
Venue: Hitotsubashi Memorial Hall, Tokyo
Further information and registration: http://www.gender-summit10.jp