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## Foreword

We had a busy autumn with visits from senior government officials and UK experts in a wide range of areas including the biennial Japan-UK Joint Committee for Science and technology cooperation, dementia, autonomous vehicles for arctic exploration, big data and antimicrobial resistance).

Next year, Japan will launch a new Basic Plan for Care and a new Agency for Medical R&D (AMED).

We have launched a call for future project proposals: what are your ideas for activities to build UK-Japan S&I collaboration? We will also run a year long campaign to promote UK-Japan innovation partnership. We would love to hear your examples!

Finally, thank you to all our UK partners for your continued support this year and look forward to working with you in 2015.

*Elizabeth Hogben, Head of Science & Innovation, British Embassy Tokyo*

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For more on our activities, follow us on Twitter [@UKScienceJapan](#).

Join our [LinkedIn group 'Choshu 500'](#) for UK researchers in Japan

Visit our website: <http://bit.ly/SINJapan>

## S&I News from Japan

### New Japanese Medical R&D Agency

Structures to support health and medical science are changing. The new Japanese agency for medical research and development (AMED) will be launched on 1 April 2015 with a 143Bn JPY (£800M) budget. This has been a personal priority for Abe: conceived as 'the Japanese NIH', the final model has been influenced by UK approaches to coordinating health R&D. Once established, the new agency structure should provide a single point of contact for developing health and medical research and innovation collaboration with Japan.

### Japan's future science and technology strategy

Japan's strategy for science and technology is set out in a five year 'Basic Plan'. A 5th Basic Plan is currently under development, due to be published next year to cover 2016 to 2020. The Ministry for Education, Culture, Sport, Science and Technology (MEXT) have established a 20 person committee to develop the plan, chaired by Dr Noyori of RIKEN.

In a recent meeting (20<sup>th</sup> November) the committee agreed on core issues for the next Basic Plan:

1. Improving Japan's employment system – including employment practices and career pathways for researchers – to improve recruitment and retention of talent.
2. Strengthening the fundamentals for innovation, including links to basic and academic research, establishment of bases for government/industry/academia collaboration, and capacity building.
3. Promoting an R&D backbone or "core technologies" as a foundation of sustainable development and security.
4. Adapting to rapid change toward a digital society, including in service provision, big data and open science
5. Increasing public trust in science and technology.
6. Strengthening university and R&D institutions' contribution to science, technology and innovation.
7. Developing a national investment strategy to channel funding for science, technology and innovation.

More information: <http://www8.cao.go.jp/cstp/gaiyo/yusikisha/20141120/2-01.pdf> (Japanese only)

### Japanese corporate R&D international collaboration

A recent study shows UK is a top partner for Japanese corporate R&D (which makes up over 70% of Japan's R&D base) but Japanese companies are increasingly looking to China for partners. Japan's National Institute

of Science and Technology Policy (NISTEP) released a study of papers co-authored by Japanese company researchers in 2003-2009: "International Collaborative Research with Foreign Universities by Japanese Firms - a Bibliometric Analysis."

Twenty percent of Japanese company researchers' papers in this period had an international co-author. The most popular fields of international co-authored research were engineering (34%), physics and astronomy (23%), material science (20%), and molecular biology/genetics (15%).

The largest proportion of international co-authors with Japanese company researchers in 2003-2009 were from the US (38%); with the UK in third place (9%), behind China (11%) and ahead of Germany, India, Korea (6%). Toward the end of this period, however, there was a marked shift, with the US and UK losing ground to China by several percentage points each. Cambridge was the 7<sup>th</sup> most popular university of origin for international co-authors, one of only three universities outside of the US in the top 10 (the others were Tsinghua, 3rd, and Toronto, 5th).

The full report is at: <http://www.nistep.go.jp/wp/wp-content/uploads/NISTEP-DI-109-FullJ1.pdf> (Japanese only)

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## SIN Japan Activities

### Japan-UK Joint Committee on Cooperation in Science and Technology

Sir Mark Walport, Government Chief Scientific Adviser (GCSA), led the UK delegation for the ninth Japan-UK Joint Committee on Cooperation in Science and Technology on 4 November. The packed agenda and wide range of topics showed that the relationship is already broad and deep. Strategic research collaboration is well established on neuroscience, systems biology, advanced materials and nuclear safety, with emerging collaboration on regenerative medicine, glycans and cybersecurity. Over 8,000 researchers are exchanged between Japan and the UK each year, with further collaboration on international projects at large science facilities. The UK and Japan both want to boost support for STEM education and career development, particularly for women. Background information is available [here](#), plus a [full meeting statement](#) set out the scope of collaboration and priorities for the future.

### Japanese young experts discuss dementia collaboration

SIN Tokyo organised a 'Young Leaders Discussion for Innovative Ideas to Address Dementia' on 5<sup>th</sup> November 2014. This was timed to run alongside the Japanese government's "Global Action Against Dementia" Legacy Event, hosted by the Japanese Ministry of Health to raise awareness of the UK G7 Dementia Summit and to support the ongoing work of the World Dementia Council.

This youth event was one of a series coordinated by UK SIN posts internationally, with the aim of creating a sustainable global network of young leaders to address the challenges posed by dementia. The communiqué produced by Japanese young experts recognised the importance of countering the stigma attached to dementia, and the need for cross-generation collaboration and education to deliver dementia friendly society.

In parallel, the Japanese Minister of Health met with the UK Chief Scientific Adviser and Department of Health officials, and identified dementia as a key topic for future UK-Japan collaboration.

*For more information please email [Sachiko Yoshida, SIN Tokyo](#)*

#### **Japanese Big Data scientists visit the UK, agree to deepen research collaboration**

Following a successful workshop on big data in Japan earlier this year, SIN Japan officials supported a visit to the UK of senior Japanese experts, including representatives from the University of Tokyo, Osaka University, the National Institute of Informatics, the Institutes of Statistical Mathematics and the communications company NTT.

The delegation visited UCL, Imperial and Cambridge, as well as The Open Data Institute, Digital Catapult Centre and BBC. TechUK organized [an open public event](#) at BIS Conference Centre to exchange information with UK industries. (For a further flavour of discussions, UCL published a summary of their meeting [here](#).)

As a result of these meetings NTT Communication Science Laboratories agreed to start collaboration on machine learning research with University of Cambridge. Agreement on further research collaboration between the National Institute of Informatics and UK universities is anticipated in 2015.

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#### **UK-Japan Workshop on autonomous investigation of Arctic climate change**

SIN Tokyo hosted a UK-Japan workshop on 18-19 November, titled, "Autonomous investigations of the Arctic's response to changing climate". It was the first ever UK-Japan bilateral event focusing on polar research and technological development. The aim was to identify how the UK and Japan could work together to provide baseline data and measure the Arctic's response to climate change, through sharing the latest



*Big data researchers at TechUK event.*



*Arctic researchers at the Embassy in Tokyo*

activities on Arctic climate change research, and discussing technological challenges and joint experimental design.

The UK and Japan are both non-polar countries but both governments recognize polar research as priority area in view of its environmental, scientific and commercial values and opportunities. The workshop was co-organized by the University of Southampton, Japanese Ministry of Education, Culture, Sports, Science and Technology, Japan Agency for Marine-Earth Science and Technology and National Institute of Polar Research. The UK delegation included researchers and engineers from the University of Southampton, National Oceanography Center, British Antarctic Survey and engineering companies called ASV Ltd. and SeeByte.

The participants explored various ideas for enhancing monitoring capabilities in the Arctic region and agreed to seek funding support from the governments and funding agencies to set out joint experimental projects.

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#### **Japan-UK collaboration on antimicrobial resistance – workshop held at British Embassy**



*Big Data researchers at the J-UK event.*

Antimicrobial resistance (AMR) in bacteria is becoming a challenge to public health throughout the world. Recently, the Chief Medical Officer in England and Wales, Professor Dame Sally Davies, ranked antimicrobial resistance, along with terrorism, as a threat to the UK.

A workshop was recently held at the British Embassy, Tokyo, bringing together expert scientists, clinicians, academics and veterinarians from UK and Japan to discuss this threat and to explore ways of mutually tackling antimicrobial resistance in a joint collaborative manner. Changing demographics including an ageing population, improved healthcare and social factors can lead to a constantly evolving dynamic with antimicrobial resistance, which needs to be carefully monitored and suitable interventions sought.

Topics discussed at the workshop included identification and diagnostics of resistant bacteria; clinical incidence of AMR in UK and Japan; antimicrobial stewardship; mechanisms of resistance; and antibiotic drug discovery.

An Open Public Lecture allowed Japanese attendees from a wide stakeholder base to learn about current policy on how the UK is tackling this important medical problem, through the joined-up work of several UK science and government agencies, in a multi-agency approach, as well as the work of the UK National Institute of Health Research (<http://www.themedcalls.nihr.ac.uk/amr>).

## Funding Opportunities

### Inviting ideas for building UK-Japan research and innovation collaboration

We are starting to develop project ideas for 2015-16 and would love to hear your suggestions. As this [recent Nature article](#) (13 November doi:10.1038/515S73a) highlights, Japan has research and technology strengths across a wide range of areas, a growing R&D expenditure and strong government ambition to develop new international collaborations and attract foreign researchers.

Are there areas where your research could benefit from tapping into Japanese expertise? Let us know if we can help support a visit or developing your network of contacts in Japan. If you already have links established, perhaps our [funding brochure](#) can help point to sources of support?

Worth noting that:

- If your idea has a focus on energy or low carbon technologies, there is a [dedicated fund](#) available.
- We are especially interested in proposals that support UK [priority areas](#) (such as the eight great technologies or major global challenges),
- All projects should engage a wide range of UK universities and institutes, and involve strong participation from Japanese researchers and research funding bodies.
- Projects should have a UK coordinator who can lead on engaging participation from top UK experts in the field. SIN Japan can help find contacts in Japan, arranging, hosting and promoting events or visits, and supporting travel and accommodation costs.

Please contact the SIN Japan team to discuss your ideas for collaboration with counterparts in Japan.

Deadline: initial ideas by end of December.

### Guide to Funding for UK-Japan Science and Innovation Collaboration

Earlier in the autumn we launched a revamped version of our [brochure on funding opportunities](#). Now with more funding opportunities than ever before, and a handy new quick-reference grid to help you find the funding that's right for your career phase or institution's needs. Please do have a look, share with colleagues on your department intranet, and send us feedback for future versions. <http://bit.ly/1oywpYg>

## Vulcanus in Japan Training Programme

Year-long Japanese training and industrial placements in Japan for fourth year EU engineering or science students – closing date for applications, 20 January 2015.

<http://www.eu-japan.eu/vulcanus-japan-0>

## Forward Look

15-17 December 2014: Workshop/Lecture at Japanese Embassy in London, “Epigenetics and transcription in the brain”

14 January 2015: “Regulating Cell Therapy” workshop in Kyoto: contact [Patrick Bannister](#) for more details.

23-27 February 2015: [The Duke of Cambridge visits Japan](#) during a week of activities promoting ‘Innovation is GREAT Britain’

For even more events on technology in Japan, see the *Export to Japan* website:

<http://www.exporttojapan.co.uk/events>

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