

## Japan Partnering Awards

### BBSRC's support for facilitating international collaboration with Japan

BBSRC's International Relations Unit (IRU) seeks to enhance BBSRC's influence and involvement at the forefront of international science, through taking advantage of international funding opportunities in the interests of BBSRC's scientific community and capitalising on international links, both at policy and scientific levels.

The Japan Partnering Awards have been established by BBSRC to specifically support UK-Japan collaborative activity. Japan Partnering Awards provide resources to leading BBSRC-funded researchers and groups, so that they are able to establish long-term relationships with Japanese scientists in areas of research that are of direct relevance to BBSRC's current scientific strategy.

The first annual call for the Japan Partnering Awards scheme was announced by BBSRC in 2000. Awards of up to £50,000, covering a four-year period, have typically been awarded. Since 2010, BBSRC has funded 32 Japan Partnering Awards, providing a financial contribution of approximately £1M.

Funding from Japan Partnering Awards can be used to support exchanges of personnel and to access facilities and workshops, although no prescribed mechanisms have been set concerning how the award should be used. However, priority is given to proposals that aim to provide exchange opportunities to early career researchers and access facilities and expertise not currently available in the UK.

The expectation is that Japan Partnering Awards will enable researchers to establish collaborations that will lead to the submission of joint research proposals, either through UKRI or other funding organisations in the future.

Japan Partnering Awards that have been awarded by BBSRC are listed below.

### Contacts

Any queries regarding the Japan Partnering Awards scheme should be addressed to:

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**PREVIOUS AWARDS 2000 – 2022****2022 Call****A UK-Japan partnership for synergising synthetic biology with systems biology.**

£50,000

UK lead partner	Professor Yizhi Cai, University of Manchester
Japanese partner	Masato Kanemaki, National Institute of Genetics (Japan)

**A holistic approach to reaction initiation at XFEL and synchrotron facilities**

£38,550

UK lead partner	Professor Jonathan Worrall, University of Essex
Japanese partner	Hisroshi Sugimoto, SPring 8

**Deep learning integration of interactome data for protein-protein interaction prediction within steroid hormone receptor complexes**

£11,218

UK lead partner	Dr Andrew Holding, University of York
Japanese partner	Yasubumi Sakakibara, Keio University

**How G-protein coupled receptors regulate TORC1 pathway: Does receptor trafficking signal cell growth?**

£22,270

UK lead partner	Dr Riko Hatakeyama, University of St Aberdeen
Japanese partner	Katsuya Gomi, Tohoku University

**2021 Call****Motor control in the Drosophila larva**

£47,400

UK lead partner	Dr Maarten Zwart, University of St Andrews
Japanese partner	Akinao Nose, University of Tokyo

**Exploring multidisciplinary approaches from Stem Cell Biology and Microengineering to biomanufacture perfused organoids**

£44,500

UK lead partner	Professor Reinhold Medina, Queen's University of Belfast
Japanese partner	Ryuji Yokokawa, Kyoto University

**2020 Call****There were no Japan Partnering Award applications received in 2020.**

**2019 Call**

**Japan Partnering Award:** A scoping exercise and methods exchange in relation to differential muscle loss with disuse

£18,125

UK lead partner	Dr Bethan Phillips, University of Nottingham
Japanese partner	Satoshi Fujita, Ritsumeikan University

**2018 Call**

**Japan Partnering Award: Damage free structures of enzymes of denitrification pathway and their complexes using SF-ROX and SFX at SACLA XFEL**

£49,181

UK lead partner	Professor Samar Hasnain, Institute of Integrative Biology, University of Liverpool
Japanese partner	Professor Yoshitsugu Shiro, University of Hyogo

**Japan Partnering Award: Defining the factors that regulate M cell-development in the intestines of livestock species**

£42,125

UK lead partner	Professor Neil Mabbott, The Roslin Institute, University of Edinburgh
Japanese partners	Professor Koji Hase, Keio University; Professor Shin-Ichiro Sawa, University of Hokkaido

**Japan Partnering Award: XFEL and dynamic heme enzymology**

£48,000

UK lead partner	Professor Peter Moody, University of Leicester
Japanese partners	Professor Hiroshi Sugimoto, Spring8; Professor Yoshitsugu Shiro, University of Hyogo

**Japan Partnering Award: The paraventricular nucleus of the hypothalamus; networks and mathematical models.**

£49,740

UK lead partner	Dr Richard Barret-Jolley, Institute of Ageing and Chronic Disease, University of Liverpool
UK partner	Miss Joanne Edwards, Research Support Office, University of Liverpool
Japanese partner	Professor Yoichi Ueta, Department of Physiology, University of Occupational and Environ Health

**2017 Call**

**High hit-rate, high-throughput serial protein crystallography at SACLA using fixed target silicon nitride chips.**

£32,360

UK lead partner	Dr Richard Strange, Department of Biological Sciences, University of Sussex
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**BBSRC JAPAN PARTNERING AWARDS 2000-2022**

Japanese partner	Dr Hiroshi Sugimoto, Japan Sync Radiation Res Institute (JASRI), SPring 8
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**Japan Partnering Award: The Generation of Eye Tissues from Human Induced Pluripotent Stem (iPS) Cells**

£47,000

UK lead partner	Professor Andrew Quantock, Department of Optometry and Vision Sciences, Cardiff University
Japanese partner	Professor Kohji Nishida, Graduate School of Medicine, Osaka University

**2016 Call****Japan Partnering Award -Engineering novel transgenic zebrafish with CRISPR/Cas9 technology**

£42,100

UK lead partner	Professor Charles Tyler, Department of Biosciences, University of Exeter
Japanese partners	Professor Atsuo Kawahara, University of Yamanashi; Dr Shinichi Miyagawa, School of Medicine, Wakayama Medical University; Professor Taisen Iguchi, Department of Biosciences, Yokohama National University

**Integrated approaches to plant sexual reproduction studies to enhance food security**

£40,725

UK lead partner	Dr Jose Gutierrez-Marcos, School of Life Sciences, University of Warwick
Japanese partner	Professor Kenichiro Itami, Bioscience and Biotechnology Center, Nagoya University

**Japan Partnering Award. Text mining and bioinformatics platforms for metabolic pathway modelling.**

£39,000

UK lead partner	Professor Sophia Ananiadou, Department of Computer Science, The University of Manchester
Japanese partners	Professor Junichi Tsujii, Artificial Intelligence Research Center, AIST; Professor Hiroaki Kitano, Sony Computer Science Laboratory, Institute for Systems Biology (Global) Dr Nozomi Nagano, Artificial Intelligence Research Center, AIST

**Japan Partnering Award: UK/Japan joint space biology mission**

£28,350

UK lead partner	Professor Nathaniel Szewczyk, School of Medicine, University of Nottingham
Japanese partners	Dr Akira Higashibata, Human Spaceflight Technology Directorate, Japanese Space Exploration Agency; Professor Atsushi Higashitani, Graduate School of Science, Tohoku University

**Japan Partnering Award: Understanding diversity of avian influenza viruses and improvement of vaccines and diagnostics**

£49,500

UK lead partner	Professor Munir Iqbal, Department of Avian Viral Diseases, The Pirbright
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## BBSRC JAPAN PARTNERING AWARDS 2000-2022

	Institute
Japanese partner	Professor Yoshihiro Kawaoka, Institute of Medical Sciences, University of Tokyo

### **BioSharing and the National Bioscience Database Center - joining forces to better serve the research community worldwide**

£40,000

UK lead partner:	Professor Susanna Sansone, Oxford e-Research Centre, University of Oxford
Japanese partner:	Director Toshihisa Takagi, National Bioscience Database Center, Japan Science and Technology Agency

## **2015 Call**

### **Gene regulatory networks in stem cells and primordial germ cells**

£46,123

UK Lead Partner	Professor Ian Chambers, School of Biological Sciences, University of Edinburgh
Japanese partners	Professor Satoru Takahashi, University of Tsukuba; Professor Masatsugu Ema, Shiga University of Medical Sciences; Professor Shinya Yamanaka, Kyoto University; Professor Kuniya Abe, RIKEN BioResource Center

### **Establishment of an Integrative proteomics bioinformatics platform to enable novel analysis approaches**

£30,000

UK Lead Partner	Mr Henning Hermjakob, Proteomics Services Team, EMBL – European Bioinformatics Institute
Japanese partner	Professor Yasushi Ishihama, Department of Pharmaceutical Sciences, Kyoto University

### **Wnt signaling in Gene Regulatory Networks: How does feedback regulation affect signaling range in embryonic tissues**

£10,480

UK lead partner	Professor Stefan Hoppler, Institute of Medical Sciences, University of Aberdeen
Japanese partner	Professor Masanori Taira, Department of Biological Sciences, University of Tokyo

### **Application of MS-Imaging and Metabolomics in Synthetic Biology Based Strain Improvement of Industrially Important Microbes**

£49,600

UK lead partner	Professor Eriko Takano, Department of Life Sciences, The University of Manchester
Japanese partner	Dr Sastia Prama-Putri, Osaka University

## **2014 Call**

## BBSRC JAPAN PARTNERING AWARDS 2000-2022

### Japan Partnering Award. Regulatory mechanisms of parental behavior by neuropeptides and neurosteroids

£40,940

UK lead partner	Professor Simone Meddle, The Roslin Institute, University of Edinburgh
Japanese partner	Professor Kazuyoshi Tsutsui, Department of Biology, Waseda University

### Integrative structural biology for mechanisms of protein mis-folding and dysregulation: a Japan-UK partnership between Leeds and Osaka

£50,000

UK lead partner	David Westhead, University of Leeds
Japanese partner	Professor Haruki Nakamura, Osaka University

## 2013 Call

### Measuring and understanding auditory salience and distraction

£32,400

UK lead partner	Maria Chait, Ear Institute, University College London
Japanese partner	Makio Kashino, NTT Communication Science Labs, NNT Group (Nippon Teleg Teleph Corp)

### Japan Partnering Award: Development of international stem cell biobanks to protect and promote the genetic diversity of poultry resources

£24,500

UK lead partner	Mike McGrew, The Roslin Institute, University of Edinburgh
Japanese partner	Takahiro Tagami, NARO National Agriculture & Food Research Organisation

### Japan Partnering Award: Neuromodulations and state-dependent neural processing

£38,400

UK lead partner	Shuzo Sakata, Institute of Pharmacy and Biomedical Sciences, University of Strathclyde
Japanese partner	Akihiro Yamanaka, Nagoya University

## 2011 Call

### Japan-Systems Approaches to Addressing Food Security: Novel methodology for pest control using key regulators of insect survival against infection

£40,500

UK lead partner	Shireen Davies, College of Medical, Veterinary & Life Sciences, University of Glasgow
Japanese partner	Shoichiro Kurata, Graduate School of Science, Tohoku University

## 2010 Call

**A complete transcriptional map of the human body: systems biology in toto**

UK lead partner	Geoffrey Faulkner, The Roslin Institute, University of Edinburgh
Japanese partner	Piero Carninci, RIKEN Omics Science Centre, RIKEN Genomic Sciences Research Complex

**Prediction of Factors to Induce Cell Differentiation**

UK lead partner	Julian Gough, Computer Science Department, University of Bristol
Japanese partner	Carsten Daub, RIKEN Omics Science Centre, RIKEN Genomic Sciences Research Complex

**The Systems Biology of Exercise**

UK lead partner	Harry Rossiter, Institute of Membrane & Systems Biology, University of Leeds
Japanese partners	Shunsaku Koga, Nari Kondo, Graduate School of Design Research, Kobe Design University; Yoshiyuki Fukuba, School of Health Sciences, Hiroshima Prefectural University; Takeshi Nishiyasu, University of Tsukuba

**2009 Call**

**Joint call with the Japan Science and Technology Agency, focus on Systems Biology**

**Dynamics and Robustness in Biological Networks**

£32,910

UK lead partner	Judith Armitage, Department of Biochemistry and Oxford Centre for Integrative Systems Biology
Japanese partners	Hisao Moriya, Research Core for Interdisciplinary Sciences, Okayama University; Seiji Kojima, Division of Biological Science, Nagoya University; Tohru Minamino, Protonic NanoMachine Group, Osaka University

**Systems biology of pluripotent stem cells: meta-analysis and simulation of transcriptional circuitries to understand robust-yet-flexible heterogeneity**

£54,764

UK lead partner	Austin Smith, Centre for stem cell research & Department of Biochemistry, University of Cambridge
Japanese partners	Hiroaki Ueda, Laboratory of Systems Biology, RIKEN CDB, Kobe; Hitoshi Niwa, Laboratory of Pluripotent Cell Studies, RIKEN CDB Kobe; Shinichi Nishikawa, Laboratory of Stem Cell Biology, RIKEN CDB, Kobe

**Modelling the transcriptional, proteomic and metabolic redox regulation in *Saccharomyces cerevisiae* and *Candida glabrata***

£50,000

UK lead partner	Ken Haynes, Division of Investigative Science, Imperial College London
Japanese partners	Masaru Tomita, Institute for Advanced Biosciences, Keio University Douglas Murray, Institute for Advanced Biosciences, Keio University

**Dynamic mathematical modelling of diversification of transcriptional regulatory networks underlying the genetic variation of E. coli species**

£22,600

UK lead partner	Dov Stekel, School of Biosciences, University of Nottingham
Japanese partners	Naotake Ogasawara and Shigehiko Kanaya, Nara Institute of Science and Technology; Toru Tobe, Osaka University

**2008 Call**

**Joint call with the Japan Science and Technology Agency, focus on Systems Biology**

**From text to pathways: text mining techniques for reconstructing signalling pathways**

£32,100

UK lead partner	Sophia Ananiadou, Department of Computer Science, University of Manchester
Japanese partners	Hiroaki Kitano, Systems Biology Institute, Tokyo; Jun'ichi Tsujii, Department of Computer Science, University of Tokyo

**Development of a high-throughput quantitative immunofluorescence method and stochastic modelling of signaling networks.**

£48,800

UK lead partner	Michael Stumpf, Division of Molecular Biosciences, Imperial College London
Japanese partner	Shinya Kuroda, Department of Biophysics and Biochemistry, University of Tokyo

**UK-Japan collaboration on microbial systems biology**

£48,760

UK lead partner	Johnjoe McFadden, faculty of Health and Medical Sciences, University of Surrey
Japanese partner	Kazuyuki Shimizu, Kyushu Institute of Technology

**Development and analysis of technologies for measurement of protein interactions in living cells**

£29,250

UK lead partner	Michael White, School of Biological Sciences, University of Liverpool
Japanese partners	Takeaki Ozawa, Department of Chemistry, University of Tokyo; Yoshihiro Ohmiya, School of Medicine, University of Hokkaido

**2007 Call**

**Integrated approaches to the study of plant peroxisome transport processes**

£36,000

UK lead partner	Alison Baker, Centre for Plant Sciences, University of Leeds
Japanese partners	Makoto Hayashi, National Institute for Basic Biology, Okazaki; Motoaki Seki and Minami Matsui, RIKEN Plant Science Centre, Yokohama

**Understanding how the Estrogen (ER) and ErbB receptor pathways influence cell fate**



## BBSRC JAPAN PARTNERING AWARDS 2000-2022

£37,500

UK lead partner	Igor Goryanin, Centre for Systems Biology, University of Edinburgh
Japanese partners	Yoshiyuki Sakaki, RIKEN Genomic Sciences Centre Dr Mariko Hatakeyama, RIKEN Genomic Sciences Centre

### **Proteins in action: real-time biomolecular imaging using rapid-scan atomic force microscopy**

£30,000

UK lead partner	Robert Henderson, Department of Pharmacology, University of Cambridge
Japanese partner	Kunio Takeyasu, Kyoto University

### **TSE diseases: defining the role of the mucosal immune system in disease pathogenesis**

£35,000

UK lead partner	Neil Mabbott, Roslin Institute
Japanese partner	Hiroshi Ohno, Research Centre for Allergy and Immunology, RIKEN, Yokohama

### **Post-genomic analyses on veterinary apicomplexan parasites: genome sequence utilization**

£50,000

UK lead partner	Fiona Tomley, Institute for Animal Health, Compton
Japanese partners	Junichi Watanabe, Institute of medical Science, University of Tokyo; Chihiro Sugimoto, Obihiro University of Agriculture and Veterinary Medicine

## **2006 Call**

### **Cardiac electro-mechanical function: Cell-organ cross-talk revealed via integration of experiments and models**

£49,945

UK lead partner	Peter Kohl, Department of Physiology, Anatomy and Genetics, University of Oxford
Japanese partner	Akinori Noma, Department of Physiology and Biophysics, Kyoto University

### **Interfacing Standards and Ontologies in Systems Biology**

£45,000

UK lead partner	Nicolas Le Novere, Department of Computational Neurobiology, EMBL-EBI
Japanese partners	Hiroaki Kitano, Symbio; Ken Fukuda, Computational Biology Research Centre, AIST

### **Cell free synthesis of proteins for X-ray crystallographic and NMR analysis**

£49,800

UK lead partner	Michael Overduin, Division of Cancer Studies, University of Birmingham
Japanese partner	Motoo Watanabe, Cell Free Sciences Co. Ltd., Yokohama

### **Japan – UK Collaboration in Bionanotechnology**

£35,000

UK lead partner	J. Ryan, Bionanotechnology IRC, University of Oxford
Japanese partner	Masamitsu Futai, Japan Science & Technology Corporation, Tokyo

## **2005 Call**

**Resource management and exploitation in Werner's syndrome**

£48,000

UK lead partner	Richard Faragher, School of Pharmacy and Biomolecular Sciences, University of Brighton
Japanese partner	Makoto Goto, School of Bioengineering, Toin University, Yokohama

**Systems Neuroscience: From cellular mechanisms of neural circuitry to behavior**

£49,800

UK lead partners	Colin Ingram and Professor Anya Hurlbert, Institute of Neuroscience, University of Newcastle upon Tyne
Japanese partner	RIKEN Brain Sciences Institute, Wako

**From waste management to bone replacement: Synthesis and functionally-related UK properties of hydroxyapatite**

£50,000

UK lead partner	Lynne Macaskie, School of Biosciences, University of Birmingham
Japanese partner	Kunio Ishikawa, School of Dentistry, Kyushu University

**Development of new collaborative approaches in Fermentation Technology and Metabolic Network Modelling**

£48,760

UK lead partner	Johnjoe McFadden, Molecular Genetics, School of Biomedical and Molecular Sciences, University of Surrey
Japanese partner	Kazuyuki Shimizu, Metabolic Engineering, Kyushu Institute of Technology

**2004 Call**

**The amphibian pronephric kidney - a model for regeneration and organogenesis in vertebrates**

£30,800

UK lead partner:	Elizabeth Jones, Biological Sciences, University of Warwick
Japanese partner:	Makoto Asashima, Department of Life Sciences, Tokyo University

**Advanced scientific discovery tools for bioinformatics**

£39,750

UK lead partner:	Ross King, Department of Computer Science, University of Wales, Aberystwyth
Japanese partner:	Setsu Arikata, Department of Informatics, Kyushu University

**Structural hierarchies in fibrous polymers**

£30,000

UK lead partner:	Andrew Quantock, School of Optometry and Vision Sciences, Cardiff University
Japanese partner:	Naoto Yagi, Life and Environment Division, Japan Synchrotron Radiation Research Institute, SPRING-8

**Experimental frontiers in bionanoscience.**

£38,000

UK lead partner:	D. Alistair Smith, Institute of Molecular Biophysics, University of Leeds
Japanese partner:	Atsushi Ikai, Graduate School of Bioscience and Biotechnology, Tokyo Institute of Technology, Yokohama

**Exploiting emerging bovine genome information for improving quality in cattle production**

£21,300

UK lead partner:	Alan Archibald, Genomics and Genetics, Roslin Institute
Japanese partner:	Yoshikazu Sugimoto, Shirakawa Institute of Animal Genetics, Odakura

**From gene to function during development**

£45,000

UK lead partner:	Stephen Wilson, Department of Anatomy and Developmental Biology, University College London
Japanese partner:	Hitoshi Okamoto, Neural Growth and Regeneration Research Group, RIKEN Brain Science Institute, Tokyo

**2003 Call**

**Dynein motor proteins: Molecular structures and mechanisms**

£49,000

UK lead partner:	Peter Knight, School of Biomedical Sciences, University of Leeds
Japanese partner:	Ritsu Kamiya, Department of Biological Sciences, University of Tokyo

**Applying gene transfer technologies to study dendritic neuropeptide release mechanisms and functions**

£46,000

UK lead partner:	Mike Ludwig, Department of Biomedical Sciences, University of Edinburgh
Japanese partner:	Yoichi Ueta, Department of Physiology, University of Occupational and Environmental Health, Kitakyushu

**Stem cell engineering: Knowledge, understanding, control**

£25,000

UK lead partner:	Austin Smith, Institute for Stem Cell Research, University of Edinburgh
Japanese partner:	Shin-ichi Nishikawa, RIKEN Centre for Developmental Biology, Kobe

**Biological biomaterials – from concept to clinic**

£50,000

UK lead partner:	Jennifer Southgate, Department of Biology, University of York
Japanese partner:	Junzo Tanaka, Biomaterials Center of the National Institute for Materials Science, Tsukuba

**2002 Call**

**Towards a Predictive Biology of *Escherichia Coli***

## BBSRC JAPAN PARTNERING AWARDS 2000-2022

£47,000

UK lead partner:	Stephen Busby, Department of Biochemistry, University of Birmingham
Japanese partner:	Hirotsada Mori, Research and Education Centre for Genetic Information, Nara Institute of Science and Technology

### **IFR/JIC joint functional genomics programme on plant metabolism, stress response and development**

£49,500

UK lead partner:	Tony Michael, Division of Food Safety Science, Institute of Food Research
Japanese partner:	Kazuo Shinozaki, Laboratory of Plant Molecular Biology, RIKEN Tsukuba Institute

### **UK-Japan Bio-Nanotechnology collaboration**

£50,000

UK lead partner:	John Ryan, Bionanotechnology IRC, Oxford University
Japanese partner:	Toshio Yanagida, Laboratories for Nanobiology, Osaka University

## **2001 Call**

### **Construction of nano-devices based on bacterial light-harvesting complexes**

£48,000

UK lead partner:	Richard Cogdell, IBLS Division of Biochemistry and Molecular Biology, University of Glasgow
Japanese partner:	Hideki Hashimoto, Faculty of Engineering, University of Shizuoka

### **X-ray crystallography and single molecule observation of membrane proteins**

£25,000

UK lead partner:	So Iwata, Department of Biological and Biomedical Sciences, Imperial College London
Japanese partner:	Masasuke Yoshida, Chemical Resources Laboratory, Tokyo Institute of Technology

### **Development and characterisation of heat stable biocatalysts**

£20,000

UK lead partner:	Jennifer Littlechild, Department of Chemistry and Biological Sciences, University of Exeter
Japanese partner:	Tairo Oshima, Department of Molecular Biology, Tokyo University of Pharmacy and Science

## **2000 Call**

### **Protein-protein interactions; neurobiology of circadian rhythms; macromolecular assemblies**

£49,547

UK lead partner:	Caroline Bowsher, School of Biological Sciences, The University of Manchester
Japanese partner:	Toshihara Hase, Institute for Protein Research, University of Osaka

### **Sub-piconewton force spectroscopy at solid and cell surfaces**

## BBSRC JAPAN PARTNERING AWARDS 2000-2022

£30,000

UK lead partner:	Alastair Smith, Department of Physics and Astronomy, University of Leeds
Japanese partner:	Toshio Yanagida, Department of Physiology, University of Osaka

### **Stem cell engineering: Knowledge, understanding, control**

£49,400

UK lead partner:	Austin Smith, Centre for Genome Research, University of Edinburgh
Japanese partner:	Masatoshi Takeichi, RIKEN Centre for Developmental Biology, Kobe

### **Development of technology for solving solution structures of difficult proteins**

£14,940

UK lead partner:	M. Williamson, Department of Molecular Biology and Biotechnology, University of Sheffield
Japanese partner:	RIKEN Genomic Sciences Centre