

## India Partnering Awards

### **BBSRC's support for facilitating international collaboration with India**

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 and capitalising on international links, both at policy and scientific levels.

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

The first annual call for the India Partnering Awards scheme was announced by BBSRC in 2006. Awards of up to £30,000, covering a four-year period, have typically been awarded. Since 2010, BBSRC has funded 24 India Partnering Awards, providing a financial contribution of approximately £600K.

Funding from India 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 India 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.

A list of proposals that have been awarded by BBSRC since 2006 is shown below.

### **Contacts**

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

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**PREVIOUS AWARDS 2006 - 2021****2021 Call**

There were no India Partnering Award applications awarded this year.

**2020 Call**

**Evaluation of *M. bovis* antigens in cattle in India for diagnostic and vaccine potential**

£26,000

|                 |  |
|-----------------|--|
| UK lead partner | Professor Ian Jones, University of Reading             |
| India partner   | Bappaditya Dey, National Inst of Animal Biotech (NIAB) |

**2019 Call**

**India Link: Selective interactions between G protein-coupled receptors and conformationally selective arrestin variants**

£15,400

|                 |  |
|-----------------|--|
| UK lead partner | Professor Graeme Milligan, University of Glasgow   |
| India partner   | Arun Shukla, Indian Institute of Technology Kanpur |

**2018 Call**

**India Partnering Award: ICRISAT-Rothamsted Partnership for Enabling Gene Editing in Pulses**

£24,100

|                 |   |
|-----------------|---|
| UK lead partner | Dr Vladimir Nekrasov, Department of Plant Sciences, Rothamsted Research       |
| India partner   | Dr Pooja Bhatnagar-Mathur, Department of Grain legumes (RP-GL), ICRISAT India |

**India Partnering Award: Exploiting the microbial diversity of the Sundarbans mangrove delta to tackle infectious disease**

£19,600

|                 |   |
|-----------------|---|
| UK lead partner | Dr Apoorva Bhatt, School of Biosciences, University of Birmingham                   |
| India partner   | Professor Maitree Bhattacharyya, Department of Biochemistry, University of Calcutta |

**2017 Call**

**India: Plant science for food security and nutrition**

£30,000

|                 |  |
|-----------------|--|
| UK lead partner | Professor Alison Baker, Institute of Molecular & Cellular Biology, University of Leeds |
| Indian partner  | Dr Rajeev Varshney, Department of Biotechnology (GT-BT), ICRISAT India                 |

### **2016 Call**

#### **Understanding the emergence of variant infectious bronchitis virus in chickens in UK and India: shared control strategies**

£34,650

|                 |  |
|-----------------|--|
| UK lead partner | Professor Matthew Baylis, Institute of Infection and Global Health, University of Liverpool  |
| Indian partner  | Dr Gowthaman Vasudevan, Tamil Nadu Veterinary and Animal Sci University<br>Dr Madhuri Subbiah, Department of Biotechnology, National Institute of Animal Biotechnology |

#### **India partnering award: Sustainable data archiving and dissemination strategy to support data driven biology**

£29,953

|                 |  |
|-----------------|--|
| UK lead partner | Dr Sameer Velankar, Protein Data Bank Europe, EMBL - European Bioinformatics Institute   |
| Indian partner  | Professor Manju Bansal, Molecular Biophysics Unit, Indian Institute of Science<br>Dr Debasis Mohanty, National Institute of Immunology India |

#### **Partnership to develop compartmentalisation technology**

£30,000

|                 |  |
|-----------------|--|
| UK lead partner | Professor Martin Warren, School of Biosciences, University of Kent |
| Indian partner  | Professor Annama Anil Odaneth, Institute of Chemical Technology    |

#### **Studying circuit function and behaviour in Drosophila following disruptions in developmental remodeling**

£19,825

|                 |   |
|-----------------|---|
| UK lead partner | Dr Darren Williams, Department of Developmental Neurobiology, King's College London |
| Indian partner  | Dr Sanjay Sane, TIFR, National Centre for Biological Sciences                       |

### **2015 Call**

No India Partnering Awards were funded during the 2015 International Partnering Awards call.

### **2014 Call**

#### **India Partnering Award: Health and welfare consequences of maladaptation of high-producing cross-bred dairy cattle to environmental stressors in India**

## BBSRC INDIA PARTNERING AWARDS 2006 - 2021

£29,300

|                 |   |
|-----------------|---|
| UK lead partner | John Tarlton, Department of Clinical Veterinary Science, University of Bristol                        |
| Indian partner  | Dr T Sethumadhavan, Directorate of Entrepreneurship, Kerala Veterinary and Animal Sciences University |

### **2013 Call**

#### **Post-transcriptional control of adult stem cell pluripotency**

£17,750

|                 |  |
|-----------------|--|
| UK lead partner | Dr Aziz Aboobaker, Department of Zoology, University of Oxford         |
| Indian partner  | Dr Dasaradhi Palakodeti, TAS, inStem (Institute for Stem Cell Biology) |

#### **India Partnering Award: Collaboration on Diagnosis of Emerging Viruses (CoDEV)**

£27,079

|                   |  |
|-------------------|--|
| UK lead partner   | Dr Janet Daly, School of Veterinary Medicine and Science, University of Nottingham   |
| <b>UK partner</b> | Dr Nigel Temperton, Medway School of Pharmacy, University of Kent  |
| Indian partner    | Dr K. Kumanan, Tamil Nadu Veterinary and Animal Sciences University<br>Dr Madhuri Subbiah, National Institute Animal Biotechnology |

#### **TRansnational Industial Biotechnology: UTilization of Extremophiles through academic-industry Partnership (TRIBUTE)**

£29,600

|                 |   |
|-----------------|---|
| UK lead partner | Dr Joseph Gallagher, IBERS, Aberystwyth University  |
| Indian partner  | Dr Anil Puniya, Dairy Microbiology Division, National Dairy Research Institute<br>Dr Kumar Bijender, University of Jammu<br>Mr Venkata Chintalapudi, Gayatri BioOrganics Limited<br>Dr GSN Reddy, Department of Microbiology, Centre for Cellular and Molecular Biology |

#### **India Partnering Award: Development and application of lactic acid bacteria as designer probiotics**

£25,000

|                 |   |
|-----------------|---|
| UK lead partner | Dr Arjan Narbad, Department of Gut Health and Food Safety, Institute of Food Research   |
| Indian partner  | Dr Ramachandra Gadre, Biochemical Engineering Group, CSIR - National Chemical Laboratory<br>Dr Rajagopal Kammara, Protein Chemistry and Technology (PCT), CSIR – Central Food Technological Research<br>Dr Sudhir Tomar, Indian Council of Agri Research (ICAR) |

#### **Improving wheat as a source of essential micronutrients**

£30,000

|                 |   |
|-----------------|---|
| UK lead partner | Professor Peter Shewry, Department of Plant Biology & Crop Science, Rothamsted Research |
| Indian partner  | Dr Anju Singh, Division of Genetics, Indian Agricultural Research Institute             |

#### **India Partnership to Apply Advanced Genetic Tools to Combat Disease Resistance**

£30,000

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|------------------|---|
| UK lead partner: | Professor Christopher Whitelaw, The Roslin Institute, University of Edinburgh |
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## BBSRC INDIA PARTNERING AWARDS 2006 - 2021

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|----------------------|--|
| Indian lead partner: | Dr Satish Kumar, Centre for Cellular & Molecular Biology |
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### 2012 Call

#### **India- United Kingdom Bioinformatics Network**

£25,000

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|-----------------|---|
| UK lead partner | Dr Jan Kim, Department of Bioinformatics, The Pirbright Institute       |
| Indian partner  | Dr Rajendra Joshi, Centre for Development of Advanced Computing, Mumbai |

#### **Assessing the impact of foot-and-mouth vaccination programs**

£24,000

|                 |  |
|-----------------|--|
| UK lead partner | Dr Richard Reeve, College of Medical, Veterinary & Life Sciences, University of Glasgow  |
| UK partner      | Professor Satya Parida, Department of Livestock Viral Diseases, The Pirbright Institute  |
| Indian partner  | Gunaseelan Lakshmanasami, Madras Veterinary College, Tamil Nadu<br>Veterinary and Animal Science University<br>Mr John Friar, Wise Monkey Foundation |

### 2011 Call

#### **India - Transfer of regulatory genes from Arabidopsis to Indian mustard for drought tolerance and yield increase**

£23,508

|                 |   |
|-----------------|---|
| UK lead partner | Professor Philip Mullineaux, Department of Biological Sciences, University of Essex |
| Indian partner  | Professor Neera Sarin, Jawaharlal Nehru University                                  |

#### **India-UK Development of Metabolic Models to Support Systems Biology Approaches to Bioenergy Research**

£24,575

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|----------------------|--|
| UK lead partner:     | Professor David Fell, Faculty of Health and Life Sciences, Oxford Brookes University   |
| Indian lead partner: | Dr Syed Yazdani, International Centre for Genetic Engineering and Biotechnology (New Delhi)<br>Professor K Mukherjee, School of Biotechnology, Jawaharlal Nehru University |

#### **Towards process development of bacterial strains able to convert renewables into biofuels and other useful chemical commodities**

£27,000

|                 |  |
|-----------------|--|
| UK lead partner | Professor Nigel Minton, School of Molecular Medical Sciences, University of Nottingham |
| Indian partner  | Dr Kirstin Eley, Research & Development Department, TMO Renewables Ltd                 |

#### **UK-India Partnership for the control of FMD and PPR**

£25,000

|                 |  |
|-----------------|--|
| UK lead partner | Professor Satya Parida, Department of Livestock Infectious Diseases, The Pirbright Institute |
| Indian partner  | Dr B Pattnaik, Project Directorate, FMD, Indian Council of Agricultural                      |

## BBSRC INDIA PARTNERING AWARDS 2006 - 2021

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|--|--|
|  | Research<br>Dr Muthu Chelvan, Department of Virology, Indian Veterinary Research Institute<br>Dr R.K. Singh, Joint Director of VTCC at Hisar |
|--|--|

### India Partnership: Studying diverse growth dynamics in leaves

£18,000

|                 |  |
|-----------------|--|
| UK lead partner | Professor Enrico Coen, Department of Cell and Development Biology, John Innes Centre   |
| Indian partner  | R Utpal Nath, Department of Microbiology and Cell Biology, Indian Institute of Science |

## 2010 Call

### Strategic Partnership in Skeletal Muscle Biology

£24,970

|                 |   |
|-----------------|---|
| UK lead partner | Dr Robert Knight, MRC Centre for Developmental Neurobiology, Randall Division of Cell and Molecular Biophysics, King's College London |
| Indian partner  | Dr Jyotsna Dhawan, Stem Cell Department (inStem), National Centre for Biological Sciences   |

## 2009 Call

### Developing a UK-Indian strategic alliance to target a UK-Indian problem: *Salmonella* infection

£24,100

|                 |  |
|-----------------|--|
| UK lead partner | Dr Gary Rowley, School of Biological Sciences, University of East Anglia   |
| Indian partner  | Dr Dipshikha Chakravorty, Centre for Infectious Diseases Research (CIDR), Department of Microbiology and Cell Biology (MCB), Indian Institute of Science |

### Integrating experimental and modelling approaches to understand and predict greenhouse gas emissions

£23,920

|                  |   |
|------------------|---|
| UK lead partner: | Professor Elizabeth Baggs, Institute of Biological and Environmental Sciences, University of Aberdeen |
| Indian partner   | Professor Tapan Adhya, Director, Central Rice Research Institute (CRRI)                               |

### India link project for molecular epidemiology studies and orbivirus reference collection

£25,000

|                 |   |
|-----------------|---|
| UK lead partner | Professor Peter Mertens, Vector Borne Disease Programme, The Pirbright Institute  |
| Indian partner  | Dr Gaya Prasad, Department of Animal Biotechnology, CCS Haryana Agricultural University<br>B. Mondal, Indian Veterinary Research Institute (IVRI),<br>D Sreenivasulu, Department of Microbiology, College of Veterinary Science |

**Food-Related Health Inequalities in Indian Populations in the UK and India**

£23,500

|                 |  |
|-----------------|--|
| UK lead partner | Clare Mills, Department of Food Structure and Health, Institute of Food Research     |
| Indian partner  | Darshan Punia, Department of Food and Nutrition, CCS Haryana Agricultural University |

**2008 Call**

**A molecular epidemiological approach to combat footrot, an endemic disease of sheep, host and pathogen perspectives from India and GB**

£16,400

|                 |  |
|-----------------|--|
| UK lead partner | Laura Green, Biological Sciences, University of Warwick  |
| Indian partner  | Shakil Ahmad Wani, Division of Veterinary Microbiology & Immunity, University of Agricultural Sciences & Technology, Jammu and Kashmir |

**To establish a strategic alliance with India to combat emerging viral diseases of global importance**

£24,840

|                 |  |
|-----------------|--|
| UK lead partner | Kin-Chow Chang, Division of Veterinary medicine, School of Veterinary Medicine and Science, University of Nottingham   |
| Indian partner  | D. Sreenivasulu, Department of Microbiology, College of Veterinary Science, Andhra Pradesh<br>N. Dorarirajan, Department of Veterinary Microbiology, Veterinary College and Research Institute, Tamil Nadu<br>S.V. Kuchipudi, Assistant professor, Department of Veterinary Microbiology, S.V. Veterinary University, Andhra Pradesh |

**Predictive modeling of the rice (*Oryza sativa*) metabolic network**

£25,000

|                 |   |
|-----------------|---|
| UK lead partner | David Andrew Fell, School of Life Sciences, Oxford Brookes University   |
| Indian partners | Sudip Kundu, Department of Biophysics, Molecular Biology and Bioinformatics, University of Calcutta, West Bengal<br>Swapan K Datta, Department of Botany, University of Calcutta, West Bengal<br>Rash Behari Ghosh, Department of Botany, University of Calcutta, West Bengal |

**UK-India partnership on Marek's disease and RNA interference to control avian viral diseases**

£24,400

|                 |   |
|-----------------|---|
| UK lead partner | Professor Venugopal Nair, Department of Microbiology, The Pirbright Institute |
| Indian partner  | Dr K. Kumanan, Department of Animal Biotechnology, Madras Veterinary College  |

**2007 Call**

**Development of specific microbial consortia for the improvement of renewable bioenergy products**

£25,000

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|-----------------|--|
| UK lead partner | Dr Phil Hobbs, Institute of Grassland and Environmental Research (IGER), North Wyke, Devon   |
| Indian partners | S. Shivaji, Centre for Cellular and Molecular Biology, Hyderabad<br>R. S. Prakasam, Indian Institute of Chemical Technology, Hyderabad |

**Control of coccidiosis: *Eimeria brunetti*, a neglected but important pathogen of chickens**  
£25,000

|                 |  |
|-----------------|--|
| UK lead partner | Professor Fiona Tomley, The Pirbright Institute  |
| Indian partner  | M. Raman, Madras Veterinary College, Tamil Nadu Veterinary and Animal Sciences University, Chennai<br>Dhinakar Raj, Madras Veterinary College, Tamil Nadu Veterinary and Animal Sciences University, Chennai |

**A systems biology approach to the annotation of *Mycobacterium* and *Salmonella* genomes**  
£24,760

|                 |  |
|-----------------|--|
| UK lead partner | Dr Michael Watson, The Pirbright Institute                                       |
| Indian partner  | Dr Rajendra Joshi, Centre for Development of Advanced Computing, Pune University |

**2006 Call**

**Basic and strategic partnerships enhancing UK and Indian plant and crop science**  
£23,916

|                 |  |
|-----------------|--|
| UK lead partner | Professor Brendan Davies, Centre for Plant Sciences, University of Leeds |
| Indian partner  | Various, in Delhi, Bangalore and Hyderabad                               |

**Anglo-Indian Immunoinformatics: Delivering *in silico* Vaccinology**  
£24,200

|                 |  |
|-----------------|--|
| UK lead partner | Darren Flower, Nuffield Department of Medicine, University of Oxford |
| Indian partner  | G P S Raghava, Institute of Microbial Technology, Chandigarh         |

**Capacity Building in the Life Sciences: a Manchester- Bangalore Strategic Partnership**  
£23,740

|                 |  |
|-----------------|--|
| UK lead partner | Stephen High, Faculty of Life Sciences, The University of Manchester |
| Indian partner  | The Indian Institute of Science, Bangalore                           |

**Enhancing Brassica Oilseed Crop Improvement through Genomic Approaches**  
£23,675

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|----------------------|--|
| UK lead partner:     | Graham King, Crop Performance and Improvement, Rothamsted Research |
| Indian lead partner: | Deepak Pental, Vice Chancellor, University of Delhi                |

**Developing novel inhibitors of *Mycobacteria tuberculosis* DNA topoisomerases**  
£14,600

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|----------------------|---|
| UK lead partner:     | Tony Maxwell, Department of Biological Chemistry, John Innes Centre, Norwich                  |
| Indian lead partner: | V. Nagaraja, Microbiology and Cell Biology Department, Indian Institute of Science, Bangalore |

**CCP4 Workshop on Protein Crystallography - Basic and Advanced Methods**  
£22,000



|                      |   |
|----------------------|---|
| UK lead partner:     | Colin Nave, Synchrotron Radiation Department, CCLRC Daresbury               |
| Indian lead partner: | B. Gopal, Molecular Biophysics Unit, Indian Institute of Science, Bangalore |

**Integration of calcium and phosphoinositide signals in animal cells**

£17,750

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|----------------------|---|
| UK lead partner:     | Raghu Padinjat, Inositide Laboratory, Babraham Institute        |
| Indian lead partner: | Gaiti Hasan, National Centre for Biological Sciences, Bangalore |

**Organisation of the circadian clock in *Drosophila*: correlated responses to selection**

£24,000

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|----------------------|---|
| UK lead partner:     | Ezio Rosato, Department of Genetics, University of Leicester  |
| Indian lead partner: | Vijay Kumar, Evolutionary and Organismal Biology Unit, Jawaharal Nehru Centre for Advanced Scientific Research, Bangalore |