



## Daiwa Adrian Prizes 2013

Daiwa Adrian Prizes are awarded by The Daiwa Anglo-Japanese Foundation on a triennial basis in recognition of significant scientific collaboration between British and Japanese research teams.

They were established in 1992 and subsequently renamed to commemorate the late Lord Adrian, a founding Trustee of the Foundation, at whose initiative the Prizes were established.

Since their launch, £405,000 in Prizes has been awarded to 68 teams representing 63 different institutions, including 31 from the UK and 30 from Japan – indicating the breadth and diversity of scientific achievement by scientists in the two countries.

The deadline for applications for the next Daiwa Adrian Prizes will be announced towards the end of 2012.

The Foundation wishes to express its gratitude to the Fellows of The Royal Society for their assistance in the selection process.

For further information and the application form, please visit [www.dajf.org.uk/dap](http://www.dajf.org.uk/dap)

The Daiwa Anglo-Japanese Foundation is a UK charity, established in 1988 with a generous benefaction from Daiwa Securities Co Ltd. The Foundation's purpose is to support closer links between Britain and Japan.

It does this by:

- making grants available to individuals, institutions and organisations to promote links between the UK and Japan in all fields of activity
- enabling British and Japanese students and academics to further their education through exchanges and other bilateral initiatives
- awarding of Daiwa Scholarships for British graduates to study and undertake work placements in Japan
- organising a year-round programme of events to increase understanding of Japan in the UK

Daiwa Foundation Japan House, the London-based headquarters, acts as a centre for UK-Japan relations in Britain by offering a wide programme of seminars, exhibitions and book launches as well as meeting rooms for Japan-related activities and facilities for visiting academics.

The Foundation is represented in Japan by its Tokyo Office, which provides local assistance to Daiwa Scholars and administers grant applications from Japan. It also handles general enquiries, and forms part of the network of organisations supporting links between the UK and Japan.

# Past recipients

## DAIWA ADRIAN PRIZES 2010

**The evolutionary and spatial dynamics of human viral pathogens. Investigation of the spread of human viruses, particularly HIV and Hepatitis C, why outbreaks begin at certain times and in certain locations, and why virus strains follow particular routes when they disseminate internationally.** £10,000

*University of Oxford*

Dr Oliver Pybus (Team Leader)

Mr Samir Bhatt

Mr Peter Markov

Mr Joe Parker

Dr Aris Katzourakis

*National Institute of Infectious Diseases*

Dr Yutaka Takebe (Team Leader)

Ms Yue Li

Dr Shigeru Kusagawa

Dr Kok Keng Tee

Ms Takayo Tsuchiura

**Photonic quantum information science and technology. Development of new technologies based on harnessing quantum mechanics – the fundamental physics theory governing behaviour at the microscopic scale.** £10,000

*University of Bristol*

Professor Jeremy O'Brien (Team Leader)

*Hokkaido University*

*Osaka University*

Professor Shigeki Takeuchi (Team Leader)

**Non-linear cosmological perturbations. Providing theoretical predictions from the very early universe physics for the statistical properties of primordial curvature perturbations.** £10,000

*University of Portsmouth*

Professor David Wands (Team Leader)

Dr Marco Bruni

Dr Robert Crittenden

Dr Kazuya Koyama

Professor Roy Maartens

Dr Cyril Pitrou

*Kyoto University*

Professor Misao Sasaki (Team Leader)

Professor Tetsuya Shiromizu

Professor Jiro Soda

Professor Takahiro Tanaka

**Nonlinear dynamics of cortical neurons and gamma oscillations - from cell to network models. Advancement of knowledge of the basic operation of brain networks, contributing to understanding of disorders such as schizophrenia, Alzheimer's disease and epilepsy.** £10,000

*University of Cambridge*

*Harvard University*

*Karolinska Institutet*

Dr Hugh Robinson (Team Leader)

Mr Nathan Gouwens

Mr Hugo Zeberg

Ms Rita Kalra

*University of Tokyo*

*Osaka University*

Professor Kazuyuki Aihara (Team Leader)

Dr Kenji Morita

Dr Kunichika Tsumoto

Dr Takashi Tateno

Dr Kantaro Fujiwara

**Use of genomics to understand plant-pathogen interactions. Understanding plant pathogen interactions to enhance knowledge on plant disease control.** £10,000

*The Sainsbury Laboratory*

Professor Sophien Kamoun (Team Leader)

Dr Joe Win

Ms Liliana M. Cano

Ms Angela Chaparro-Garcia

Dr Tolga O. Bozkurt

Dr Sebastian Schornack

*Inate Biotechnology Research Center*

Dr Ryohei Terauchi (Team Leader)

Dr Kentaro Yoshida

Dr Hiromasa Saitoh

Dr Koki Fujisaki

Dr Ayako Miya

Dr Mulunch Tamiru

**Phase space analysis of partial differential equations. Analysis of a range of properties exhibited by solutions to evolution partial differential equations which are of major importance in many different sciences.** £10,000

*Imperial College London*

Professor Michael Ruzhansky (Team Leader)

Dr Jens Wirth

Dr Claudia Garetto

Dr Ilia Kamotski

*Nagoya University*

*Tokai University*

*Yamaguchi University*

*Osaka University*

Professor Mitsuru Sugimoto (Team Leader)

Professor Tokio Matsuyama

Dr Fumihiko Hirose

Dr Naohito Tomita

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## DAIWA ADRIAN PRIZES 2007

<b>High energy density science: new frontiers in plasma physics</b>	£15,000
<i>STFC Rutherford Appleton Laboratory</i> <i>Imperial College London</i> <i>University of Oxford</i> <i>University of York</i> <i>Queen's University Belfast</i> Professor Peter Norreys (Team Leader) Professor Mike Dunne Dr Kathryn Lancaster Professor Steven Rose Professor Justin Wark Dr Gianluca Gregori Dr Nigel Woolsey Dr Matthäus Zepf	<i>Osaka University</i> Professor Ryosuke Kodama (Team Leader) Professor Kunioki Mima Professor Kazuo Tanaka Professor Hiroshi Azechi Associate Professor Keisuke Shigemori Associate Professor Youichi Sakawa Associate Professor Norimasa Ozaki Assistant Professor Hideaki Habara
<b>Understanding predatory <i>Bdellovibrio</i> bacteria as living antibiotics and the roles of surface ultra structures on the bacterial surface in prey penetration and killing and in motility</b>	£15,000
<i>University of Nottingham</i> Professor Liz Sockett (Team Leader) Dr Richard Woods Dr Laura Hobley Dr Carey Lambert Dr Chien-Yi Chang	<i>Prefectural University of Hiroshima</i> <i>CREST Soft-Nanomachine Project</i> Professor Shin-Ichi Aizawa (Team Leader) Dr Noriko Takahashi Dr Machi Kanna
<b>Analysis of the Mechanism and Structural Dynamics of the Bacterial Flagellar Motor</b>	£15,000
<i>University of Oxford</i> Dr Richard Berry (Team Leader) Dr Yoshiyuki Sowa Dr Chien-Jung Lo Dr Teuta Pilizota Dr Mark Leake Mr Richard Branch	<i>Nagoya University</i> <i>Tohoku University</i> Professor Michio Homma (Team Leader) Dr Seiji Kojima Professor Akihiko Ishijima Dr Yuichi Inoue Dr Hajime Fukuoka
<b>Understanding the function of intestinal intraepithelial T lymphocytes during challenge with the coccidial pathogen <i>Eimeria</i> spp</b>	£10,000
<i>Institute for Animal Health</i> Dr Adrian Smith (Team Leader) Members of the Enteric Immunology Group	<i>University of Miyazaki</i> <i>University of the Ryukyus</i> Dr Kyoko Inagaki-Ohara (Team Leader) Professor Goro Matsuzaki
<b>The Importance of Epigenetics in Cartilage Development and Disease</b>	£10,000
<i>University of Southampton</i> Dr Helmut I Roach (Team Leader) Professor Richard O C Oreffo	<i>Tohoku University</i> Professor Shoichi Kokubun (Team Leader) Professor Eiji Itoi Assistant Professor Toshimi Aizawa Assistant Professor Norikazu Yamada Assistant Professor Koshi Kishimoto Mr Ko Hashimoto

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## DAIWA ADRIAN PRIZES 2004

<b>Novel quantum order in ruthenate and cuprate metals</b>	£15,000
<i>University of St Andrews</i> <i>University of Cambridge</i> Professor Andrew Mackenzie (Team Leader) Dr Santiago Grigera Dr Robin Perry Dr Rodolfo Borzi Dr Naoki Kikugawa Professor Stephen Julian Dr Christoph Bergemann	<i>Kyoto University</i> <i>Hiroshima University</i> <i>Nanoelectronics Research Institute, AIST</i> Professor Yoshiteru Maeno (Team Leader) Professor Kenji Ishida Dr Satoru Nakatsuji Dr Fumihiko Nakamura Dr Shinichi Ikeda
<b>Corneal cell and matrix biology, and new approaches to the restoration of corneal transparency and vision after injury or disease</b>	£10,000
<i>Cardiff University</i>	<i>Kyoto Prefectural University of Medicine</i>

<i>Lancaster University</i> Dr Andrew Quantock (Team Leader) Dr Nigel Fullwood	<i>Doshisha University</i> Professor Shigeru Kinoshita (Team Leader) Dr Noriko Koizumi	
<b>The ASTRO-F all-sky far-infrared survey</b> <i>Imperial College London</i> <i>University of Kent</i> <i>University of Sussex</i> Professor Michael Rowan-Robinson (Team Leader) Professor Glenn White Dr Stephen Serjeant Dr Toshinobu Takagi Dr Seb Oliver Dr Richard Savage	<i>Japan Aerospace Exploration Agency</i> <i>Nagoya University</i> Professor Toshio Matsumoto (Team Leader) Professor Takao Nakagawa Dr Issei Yamamura Dr Chris Pearson Professor Hiroshi Shibai	£10,000
<b>Nanocarbon materials science</b> <i>University of Sussex</i> <i>University of Cambridge</i> Professor Kosmas Prassides (Team Leader) Dr Ioannis Arvanitidis Dr Serena Margadonna	<i>Tohoku University</i> Professor Yoshihiro Iwasa (Team Leader) Dr Taishi Takenobu	£10,000
<b>Application of new spectroscopic methods to studies of atmospherically relevant chemical reactions</b> <i>University of Bristol</i> <i>University of Oxford</i> <i>University of Birmingham</i> Professor Michael Ashfold (Team Leader) Professor Andrew Orr-Ewing Dr Dudley Shallcross Dr Jeremy Harvey Dr Jonathan Reid Professor Gus Hancock	<i>Kyoto University</i> <i>Nagoya University</i> <i>Hokkaido University</i> <i>Hiroshima City University</i> <i>Tokyo Science University</i> Professor Masahiro Kawasaki (Team Leader) Professor Yutaka Matsumi Dr Kenshi Takahashi Dr Hiroto Tachikawa Professor Takashi Ishiwata Professor Koichi Tsukiyama	£10,000
<b>Knowledge mining from biology texts</b> <i>University of Salford</i> <i>University of Manchester</i> Dr Sophia Ananiadou (Team Leader) Dr Goran Nenadic Dr Benjamin Stapley Dr Irena Spasic	<i>University of Tokyo</i> Professor Jun-ichi Tsujii (Team Leader) Professor Toshihisa Takagi Dr Hideki Mima Mr Yusuke Miyao	£10,000

## **DAIWA ADRIAN PRIZES 2001**

<b>The Formation &amp; Evolution of Galaxies</b> <i>University of Durham</i> Professor R L Davies (Team Leader) Dr Richard G Bower Dr Ian Smail Mr David G Gilbank	<i>University of Tokyo</i> Professor Sadanori Okamura (Team Leader) Professor Nobuo Arimoto Dr Tadayuki Kodama Dr Takashi Okamoto	£15,000
<b>Roles and Functions of the three Mannan-Binding Lectin-Associated Serine Proteases within the Innate Immune Response</b> <i>University of Leicester</i> Dr Wilhelm Schwaeble (Team Leader) Dr Cordula Stover Dr Nicholas Lynch	<i>Fukushima Medical University</i> Dr Teizo Fujita (Team Leader) Dr Yuichi Endo Dr Misao Matsushita Dr Minoru Takahashi	£15,000
<b>Identification of the Genes Responsible for Asthma in the British and Japanese Populations</b> <i>University of Wales, Swansea</i> Professor Julian M Hopkin	<i>University of Tokyo</i> Professor Taro Shirakawa	£15,000
<b>Development of Satellite-Based Thermal Methods for Monitoring Active Volcanic Lava Domes</b> <i>King's College London</i> <i>Open University</i> Dr Martin Wooster (Team Leader) Dr David Rothery	<i>University of Tokyo</i> Dr Takayuki Kaneko (Team Leader) Professor Setsuya Nakada	£10,000
<b>Elucidation of the Mechanisms how Carotenoids Pursue the Light-Harvesting &amp; Photo-Protective Functions</b> <i>University of Glasgow</i>	<i>Kansai Gakuin University</i>	£10,000

**DAIWA ADRIAN PRIZES 1998**

<b>Integrable Quantum Field Research</b>		<b>£12,500</b>
<i>University of Durham</i>	<i>Kyoto University</i>	
<i>University of Edinburgh</i>	<i>Chuo University</i>	
Professor E Corrigan (Team Leader)	<i>Hiroshima Institute of Technology</i>	
Professor David B Fairlie	Dr Ryu Sasaki (Team Leader)	
Dr Patrick E Dorey	Professor Takeo Inami	
Dr Harry W Braden	Dr Takashi Suzuki	
	Dr Kanehisa Takasaki	
	Dr Tatsuya Ueno	
<b>Organic Magnets, Metals and Superconductors</b>		<b>£12,500</b>
<i>Royal Institution of Great Britain</i>	<i>Meiji Gakuin University</i>	
<i>University of Oxford</i>	Professor T Sugano	
Professor Peter Day (Team Leader)		
Dr S J Blundell		
Dr W Hayes		
Dr J Singleton		
<b>Structural, functional and biochemical effect of Alzheimer's Disease and its treatment using magnetic resonance imaging</b>		<b>£12,500</b>
<i>King's College London</i>	<i>Nagoya University</i>	
Professor S H D Jackson (Team Leader)	Professor A Iguchi (Team Leader)	
Dr J Suckling	Dr Y Suzuki	
Dr S C R Williams	Dr K Ito	
Dr C A Bryant	Dr T Kato	
Professor C G Swift	Dr H Endo	
<b>Star and Planetary Formation</b>		<b>£12,500</b>
<i>University of Hertfordshire</i>	<i>Nagoya University</i>	
Professor James Hough (Team Leader)	<i>National Astronomical Observatory</i>	
Dr A Chrysostomou	<i>University of Tokyo</i>	
Dr T Gledhill	Dr M Tamura (Team Leader)	
Dr A McCall	Dr T Hirao	
Dr J Yates	Dr T Hasegawa	
	Dr M Hayashi	
	Professor N Kaifu	
	Dr H Kataza	
	Dr K Sunuda	
	Dr T Nagata	
	Professor S Sato	
	Dr K Tatematsu	

**DAIWA AWARDS 1996**

<b>Structure of Zeolites</b>		<b>£12,500</b>
<i>UMIST</i>	<i>Tohoku University</i>	
Dr M W Anderson (Team Leader)	Dr Osamu Terasaki (Team Leader)	
Dr Viveka Alfredsson	Dr Tetsu Osuna	
Ms Noreen Pervaiz		
<b>Modelling on Multinuclear Metallobiosites</b>		<b>£12,500</b>
<i>University of Sheffield</i>	<i>Kyushu University</i>	
Professor D E Fenton (Team Leader)	Professor Hisashi Okawa (Team Leader)	
Dr Qing-yu He	Dr Naohide Matsumoto	
Miss Sara Ryan	Dr Hiroshi Sakiyama	
<b>The physical processes at the ocean/atmosphere boundary</b>		<b>£12,500</b>
<i>University of Leicester</i>	<i>Iwate University</i>	
Professor D Llewellyn-Jones (Team Leader)	Professor Ryuzo Yokoyama (Team Leader)	
Dr Craig Donlon	Dr Sumio Tanba	
Dr Tim Nightingale	Mr Takashi Souma	
Dr Isabelle Parkes	Dr Yoshikazu Ikura	
<b>The effect of habitat disturbance on the macaqui (Japanese monkey) on Yakushima island</b>		<b>£12,500</b>
<i>University of Edinburgh</i>	<i>Kyoto University</i>	
Dr M Rogers (Team Leader)	Professor H Osawa (Team Leader)	

Dr D A Hill  
Ms A J Biggs  
Mr S Vadher

Dr J Yamagiwa  
Dr N Agestsuma  
Mr S Suzuki

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## DAIWA AWARDS 1994

### Polymer Non-Linear Optics

*University of Sheffield*

Dr Donal Bradley (Team Leader)  
Dr Olaf Gelsen  
Mr Neil Greenham  
Mr Simon Martin

*Kyushu University*

Professor Tetsuo Tsutsui (Team Leader)  
Dr Masanao Era  
Mr Noriyuki Takada  
Mr Eiichiro Aminaka

£15,000

### Pico-Second Laser Spectroscopy

*Southampton University*

Dr Jeremy G Frey (Team Leader)  
Dr Stephen R Meech  
Dr Andrew J Bell

*Institute for Molecular Science*

Professor Keitaro Yoshihara (Team Leader)  
Mr Keisuke Tominaga  
Mr Shigeichi Kumazaki

£15,000

### Epithelial Cell Physiology

*University of Manchester*

Professor Maynard Case (Team Leader)  
Dr Martin C Steward  
Dr Peter Brown  
Dr Jacky McDouall  
Dr Jeong Taeg Seo  
Dr Stephen Wimperis

*Osaka University*

Professor Hiroshi Watari (Team Leader)  
Professor Masataka Murakami  
Mr Yoshiteru Seo  
Mr Toru Ishikawa  
Mr Takashi Makahari

£10,000

### X-ray Lasers

*Rutherford Appleton Laboratory*

Professor M H Key (Team Leader)  
Professor R Burge  
Professor C L S Lewis  
Professor G J Pert  
Professor S A Ramsden  
Dr Domhnail O'Neill  
Dr David Neely  
Mr Andrew G MacPhee  
Dr Greg Tallents  
Dr Gary Slark  
Dr Philip Holden  
Dr Peter Norreys

*Osaka University*

Professor Yoshiaki Kato (Team Leader)  
Professor Sadao Nakai  
Professor Masanobu Yamanaka  
Dr Hiroyuki Daido  
Dr Ryosuke Kodama  
Dr Kensuke Murai  
Mr Gang Yuan  
Dr Hirozumi Azuma  
Dr Hiroyuki Shiraga  
Dr Takahisa Jitsuno  
Dr Tadashi Kanabe  
Dr Masaru Takagi

£10,000