

Editorial Board

Neuroscience and cognition

Dr Brian Billups
Professor Colin Blakemore
Professor Graham Collingridge
Professor Tecumseh Fitch
Professor Vittorio Gallese
Dr Andrew Glennerster
Professor Bill Harris
Professor Christian Keysers
Professor Hanspeter Mallot
Professor Tetsuro Matsuzawa
Professor Andrew Whiten
Dr Xu Zhang

Cell and developmental biology

Dr Buzz Baum
Professor Martin Buck
Dr Louise Cramer
Dr Anne Donaldson
Dr Marie-Anne Félix
Dr Jeremy Green
Professor Laurence Hurst
Professor Jack Kaplan
Professor Ottoline Leyser
Professor Peter Rigby
Professor Dale Sanders
Dr Krishnaswamy VijayRaghavan

Organismal, environmental and evolutionary biology

Professor Spencer Barrett
Professor Nick Barton
Dr Will Cresswell
Professor Sandra Diaz
Professor Luc-Alain Giraldeau
Professor Patrick Keeling
Professor Elena Kramer
Professor Georgina Mace
Professor Yadvinder Malhi
Professor Peter Mumby
Professor Karl Sigmund
Professor Gabriele Sorci
Professor Marcel Visser
Professor Andrew Watkinson

Health and disease

Dr Thomas Curran
Professor Mark Enright
Professor George Gao
Professor Christopher Goodnow
Dr Julius Hafalla
Professor Edward Holmes
Professor Dennis Lo
Professor Mike Malim
Professor Angela McLean
Dr Mario Recker
Professor Nicholas Wald
Professor Joanne Webster

Commissioning Editor: Helen Eaton

(tel: +44 (0)20 7451 2214; fax: +44 (0)20 7451 2602;
philtransb@royalsociety.org)

Editorial Coordinator: Ruth Milne

(tel: +44 (0)20 7451 2633; philtransb@royalsociety.org)

Production Editor: Tom Lowen

6–9 Carlton House Terrace, London SW1Y 5AG, UK
rstb.royalsocietypublishing.org

AIMS AND SCOPE

Each issue of *Phil. Trans. R. Soc. B* is devoted to a specific area of the biological sciences. This area will define a research frontier that is advancing rapidly, often bridging traditional disciplines. *Phil. Trans. R. Soc. B* is essential reading for scientists working across the biological sciences. In particular, the journal is focused on the following four cluster areas: **neuroscience and cognition; organismal and evolutionary biology; cell and developmental biology; and health and disease.** As well as theme issues, the journal publishes papers from the Royal Society's biological discussion meetings. For information on submitting a proposal for a theme issue, consult the journal's website at rstb.royalsocietypublishing.org.

ISBN: 978-0-85403-997-5

Copyright © 2013 The Royal Society

Except as otherwise permitted under the Copyright, Designs and Patents Act, 1988, this publication may only be reproduced, stored or transmitted, in any form or by any other means, with the prior permission in writing of the publisher, or in the case of reprographic reproduction, in accordance with the terms of a licence issued by the Copyright Licensing Agency. In particular, the Society permits the making of a single photocopy of an article from this issue (under Sections 29 and 38 of this Act) for an individual for the purposes of research or private study.

SUBSCRIPTIONS

In 2013 *Phil. Trans. R. Soc. B* (ISSN 0962-8436) will be published twice a month. Full details of subscriptions and single issue sales may be obtained either by contacting our journal fulfilment agent, Portland Customer Services, Commerce Way, Colchester CO2 8HP; tel: +44 (0)1206 796351; fax: +44 (0)1206 799331; email: sales@portland-services.com or by visiting our website at <http://royalsocietypublishing.org/info/subscriptions>. The Royal Society is a Registered Charity No. 207043.

Subscription prices 2013 calendar year	UK, Europe and RoW	Europe	USA, Canada and RoW
Electronic access only	£2456	€3192	US\$4646
Printed version plus electronic access	£3438	€4468	US\$6504

Typeset in India by Techset Composition Limited, Salisbury, UK. Printed by Latimer Trend, Plymouth.

This paper meets the requirements of ISO 9706:1994(E) and ANSI/NISO Z39.48-1992 (Permanence of Paper) effective with volume 335, issue 1273, 1992. *Philosophical Transactions of the Royal Society B* (ISSN: 0962-8436) is published twice a month for US\$6504 per year by the Royal Society, and is distributed in the USA by Agent named Air Business, C/O Worldnet Shipping USA Inc., 149-35 177th Street, Jamaica, New York, NY11434, USA. US Postmaster: Send address changes to Philosophical Transactions of the Royal Society B, C/O Air Business Ltd, C/O Worldnet Shipping USA Inc, 149-35 177th Street Jamaica, New York, NY11414.