

# EPIDEMIOLOGY & **INFECTION**

[journals.cambridge.org/hyg](http://journals.cambridge.org/hyg)



Submit your paper online  
<http://mc.manuscriptcentral.com/hyg>

**CAMBRIDGE**  
UNIVERSITY PRESS

# Epidemiology and Infection

## SENIOR EDITOR/MANAGING EDITOR

Professor Norman Noah  
*London School of Hygiene and Tropical Medicine, Keppel Street,  
London WC1E 7HT, UK*

## EDITORIAL ASSISTANT

Veronika Aurens  
*London School of Hygiene and Tropical Medicine, Keppel Street,  
London WC1E 7HT, UK*

## EDITORS

Dr Timothy Brewer  
*McGill University, Montreal, Canada*

Professor Anthony R. Fooks  
*Animal Health and Veterinary Laboratories Agency (AHVLA), Surrey, UK*

Dr Susan Hahné  
*National Institute for Public Health and the Environment, Bilthoven,  
The Netherlands*

Dr Michael Lynch  
*US Centers for Disease Control and Prevention, Atlanta, Georgia, USA*

Professor Eduardo Massad  
*School of Medicine, Sao Paulo, Brazil*

Dr Jodie McVernon  
*MCRI & School of Population Health, University of Melbourne, Australia*

Dr Tyrone L. Pitt  
*NHS Blood & Transplant, London, UK*

Professor Katharina Staerk  
*Royal Veterinary College, North Mymms, UK*

Dr Tim Wreghitt  
*Cambridge, UK*

Dr Mark Zuckerman  
*Kings College Hospital NHS Trust, London, UK*

## EDITORIAL POLICY

*Epidemiology and Infection* publishes reports of research and original findings in subjects related to infectious diseases. Particular emphasis is given to the epidemiology, prevention and control of such diseases, but the field covered is broad and includes microbiological, virological, immunological, clinical and social aspects of infectious diseases of man and animals.

## SUBSCRIPTIONS

*Epidemiology and Infection* (ISSN 0950-2688) is published monthly, 12 parts forming a volume, by Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, UK/Cambridge University Press, 32 Avenue of the Americas, New York, NY 10013-2473, USA. The subscription price (excluding VAT) including electronic access of Volume 140 (2012) is £930 net (US \$1715 in the USA, Canada and Mexico). The electronic-only price available to institutional subscribers is £750 (US \$1370 in USA, Canada and Mexico). Single parts are £75 (US \$140 in the USA, Canada and Mexico) plus postage. The print-only price available to institutional subscribers is £825 (US \$1515 in the USA, Canada and Mexico). Back volumes are also available.

Orders, which must be accompanied by payment, may be sent to a bookseller, subscription agent or direct to the publisher: Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, UK; or in the USA, Canada and Mexico: Cambridge University Press, Journals Fulfillment Department, 100 Brook Hill Drive, West Nyack, New York 10994-2133. EU subscribers (outside the UK) who are not registered for VAT should add VAT at their country's rate. VAT registered subscribers should provide their VAT registration number. Japanese prices for institutions are available from Kinokuniya Company Ltd, PO Box 55, Chitose, Tokyo 156, Japan. Prices include delivery by air.

Periodicals postage paid at New York, NY, and at additional mailing offices.

© Cambridge University Press 2012

## EDITORIAL BOARD

- P. Aavitsland, *Norwegian Institute of Public Health, Norway*  
R. M. Anderson, *Imperial College of Science, Technology and Medicine, UK*  
C. S. Block, *Hadassah University Hospital, Jerusalem, Israel*  
J. Clement, *University Hospitals Leuven and Rega Institute for Medical Research, Belgium*  
M. Evans, *HPA Centre for Infections Welsh Unit, Cardiff, UK*  
C. Fairley, *University of Melbourne, Australia*  
D. M. Fleming, *RCGP Research Unit, Birmingham, UK*  
S. Harper, *University of Guelph, Canada*  
C. W. Hedberg, *School of Public Health, University of Minnesota, Minneapolis, USA*  
D. Heymann, *HPA, London, UK*  
Y. Hutin, *World Health Organisation, China*  
C. R. MacIntyre, *University of Sydney, Australia*  
T. J. Marrie, *Dalhousie University, Canada*  
E. Miller, *HPA Centre for Infections, London, UK*  
P. Monk, *HPA, Leicester, UK*  
P. P. Mortimer, *Northamptonshire, UK*  
K. Murray, *Baylor College of Medicine, Houston, USA*  
G. Balakrish Nair, *National Institute of Cholera and Enteric Diseases, Kolkata, India*  
S. O'Brien, *University of Manchester, UK*  
P. Okhuysen, *University of Texas Medical School, USA*  
R. L. Salmon, *National Public Health Service for Wales, Cardiff, UK*  
J. Stuart, *University of Bristol, UK*  
R. Tauxe, *Centers for Disease Control and Prevention, Atlanta, USA*  
E. J. Threlfall, *HPA, London, UK*  
A. P. Zavascki, *Universidade Federal do Rio Grande do Sul, Brazil*

## EDITORIAL BOARD STATISTICIANS

- D. De Angelis, *Medical Research Council Biostatistics Unit, Cambridge, UK*  
C. P. Farrington, *The Open University, Milton Keynes, UK*  
Z. Mulla, *Texas Tech University, El Paso, USA*

POSTMASTER: send address changes in the USA, Canada and Mexico to: *Epidemiology and Infection*, Cambridge University Press, 100 Brook Hill Drive, West Nyack, New York 10994-2133. Claims for missing issues should be made immediately on receipt of the subsequent issue.

## COPYING

This journal is registered with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, USA ([www.copyright.com](http://www.copyright.com)). Organizations in the USA who are also registered with CCC may therefore copy material (beyond the limits permitted by sections 107 and 108 of US copyright law) subject to payment to CCC. This consent does not extend to multiple copying for promotional or commercial purposes.

*ISI Tear Sheet Service*, 3501 Market Street, Philadelphia, PA 19104, USA, is authorized to supply single copies of separate articles for private use only.

Organizations authorized by the Copyright Licensing Agency may also copy material subject to the usual conditions.

For all other use, permission should be sought from Cambridge or the American Branch of Cambridge University Press.

## Internet Access

This journal is included in the Cambridge Journals Online service which can be found at [journals.cambridge.org](http://journals.cambridge.org). For further information on other Press titles access [cambridge.org](http://cambridge.org)

This journal issue has been printed on FSC-certified paper and cover board. FSC is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world's forests. Please see [www.fsc.org](http://www.fsc.org) for information.

**Cover images:** Water pollution in refugee camps © Claudia Dewald / iStockphoto; *Burkholderia pseudomallei* colonies on blood agar from a blood culture © Colin Block; Peaceful afternoon grazing near Prasat Bei, Angkor Wat compound, Cambodia © Katharina Staerk.

Printed in the United Kingdom by the University Press, Cambridge.