

Volume 54 No 3 December 1989

---

# Genetical Research

Cambridge University Press

---

# Genetical Research

## EDITORIAL OFFICES

UNITED KINGDOM  
Institute of Animal Genetics  
West Mains Road  
Edinburgh EH9 3JN  
Scotland

EXECUTIVE EDITORS  
Eric C. R. Reeve  
David J. Finnegan

UNITED STATES  
North Carolina State University  
Department of Genetics  
Raleigh, N.C. 27695-7614

EXECUTIVE EDITOR  
Trudy F. C. Mackay

---

## EDITORIAL BOARD

**Arthur Chovnick,**  
Department of Molecular and Cell Biology,  
University of Connecticut,  
Box U-131, Storrs,  
Connecticut 06268, USA

**Elizabeth Dennis,**  
Division of Plant Industry,  
CSIRO, GPO Box 1600,  
Canberra, ACT,  
Australia 2601

**William G. Hill,**  
Institute of Animal Genetics,  
West Mains Road,  
Edinburgh EH9 3JN

**Bruce W. Holloway,**  
Department of Genetics,  
Monash University,  
Clayton, Victoria,  
Australia 3168

**David Ish-Horowicz,**  
Department of Zoology,  
University of Oxford,  
South Parks Road,  
Oxford OX1 3PS

**Alec J. Jeffreys,**  
Department of Genetics,  
University of Leicester,  
Leicester LE1 7RH

**Mary F. Lyon,**  
MRC Radiobiology Unit,  
Harwell, Didcot, Oxon OX11 0RD

**Anne McLaren,**  
MRC Mammalian Development Unit,  
University College London,  
4 Stephenson Way,  
London NW1 2HE

**Mark van Montagu,**  
Laboratorium voor Histologie en Genetika,  
Rijksuniversiteit Gent,  
Ledeganckstraat 35, B-9000 Gent,  
Belgium

**Rolf Nöthiger,**  
Zoologisches Institut der Universität  
Zürich,  
Winterthurestrasse 190,  
CH-8057 Zürich, Switzerland

**Peter A. Peterson,**  
Department of Agronomy,  
Iowa State University,  
Ames, Iowa 50011, USA

**Ralph Riley,**  
16 Gog Magog Way,  
Stapleford,  
Cambridge CB2 5BQ

**Neil S. Willetts,**  
Biotechnology Australia Pty. Ltd.,  
PO Box 20,  
Roseville,  
N.S.W. 2069, Australia

**Allan C. Wilson,**  
Department of Biochemistry,  
University of California,  
Berkeley, CA 94720, USA

GENETICAL RESEARCH (ISSN 0016-6723) is published once every two months.

Single parts £20.00 net (in USA and Canada US \$39.00), plus postage. Three parts form a volume. The subscription price of volumes 53 and 54, 1989 (which includes postage) is £47.50 net per volume, £52.00 elsewhere (in USA and Canada US \$99.50).

Copies of the journal for subscribers in the USA and Canada are sent by air to New York to arrive with minimum delay. Second class postage paid at New York, NY, and at additional mailing offices.

Orders, which must be accompanied by payment, should be sent to a bookseller or to the publishers, Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU and, in the USA and Canada, Journals Department, 40 West 20th Street, New York, NY 10011.

POSTMASTER: send address changes in USA and Canada to *Genetical Research*, Cambridge University Press, 110 Midland Avenue, Port Chester, New York, NY 10573.

Claims for missing issues can only be considered if made immediately after receipt of the subsequent issue.

### Copying

This journal is registered with the Copyright Clearance Center, 27 Congress St., Salem, Mass. 01970. Organizations in the USA who are also registered with the C.C.C. may therefore copy material (beyond the limits permitted by sections 107 and 108 of US copyright law) subject to payment to C.C.C. of the per-copy fee of \$5.00. This consent does not extend to multiple copying for promotional or commercial purposes. Code 0016-6723/89 \$5.00 + .00.

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

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