Volume 62 No 1 August 1993

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

Nick H. Barton,

Institute of Cell, Animal and Population Biology, University of Edinburgh, West Mains Road, Edinburgh EH9 3JT

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

Tim Helentiaris

Department of Plant Sciences, The University of Arizona, Tuscon, Arizona 85721, USA

William G. Hill.

Institute of Cell, Animal and Population Biology, University of Edinburgh, West Mains Road, Edinburgh EH9 3JT

Bruce W. Holloway,

Department of Genetics. Monash University, Clayton, Victoria, Australia 3168

Philip W. Ingham,

Molecular Embryology Laboratory, ICRF Developmental Biology Unit, University of Oxford, Oxford OX1 3PS

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

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

Single parts £25.00 net (in USA, Canada and Mexico US \$45.00), plus postage. Three parts form a volume. The subscription price of volumes 61 and 62, 1993 (which includes postage) is £71.50 net per volume (in USA, Canada and Mexico US \$129.50).

Copies of the journal for subscribers in the USA, Canada and Mexico 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. POSTMASTER: send address changes in USA, Canada and Mexico to Genetical Research, Cambridge University Press, 110 Midland Avenue, Port Chester, New York, NY 10573–9864.

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, Canada and Mexico, Journals Department, 40 West 20th Street, New York, NY 10011-4211. Japanese prices for institutions

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

Anne McLaren, Wellcome/CRC Institute, Tennis Court Road, Cambridge CB2 1QR

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

Oliver E. Nelson,

University of Wisconsin-Madison, Laboratory of Genetics, 445 Henry Mall, Madison, WI 53706, USA

Rolf Nöthiger,

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

Ralph Riley,

16 Gog Magog Way, Stapleford, Cambridge CB2 5BQ

Paul M. Sharp,

Department of Genetics, University of Dublin, Trinity College, Dublin 2

Neil S. Willetts.

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

© Cambridge University Press 1993

(including ASP delivery) are available from Kinokuniya Company Ltd, P.O. Box 55, Chitose, Tokyo.

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 0016-6723/93 \$5.00 + .00. Organizations authorized by the Copyright Licensing Agency may also copy material subject to the usual conditions.

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.