

---

# Animal Genetics

Edited by **Dr R.L. Spooner**

*A.F.R.C. Animal Breeding Research Organisation, Edinburgh*

*Animal Genetics* provides a forum for reporting research on important genes and their products in agricultural and companion animals, and provides an excellent opportunity to bring such material together in one place. The areas covered by the journal are:

- immunogenetics
- biochemical genetics
- molecular genetics

Contributions of varying character are published, including full length papers, short papers for extra rapid publication, and commissioned and submitted mini-reviews from time to time. Articles on technical advances relevant to the subject also appear.

*Animal Genetics* is the official journal of the International Society for Animal Blood Group Research and was formerly entitled *Animal Blood Groups and Biochemical Genetics*.

## Subscription Information

*Animal Genetics* is published quarterly. Subscription rates for 1987 are £48.00 (UK & overseas), \$82.00 (USA, Canada & Japan) post free.

## Order Form

Please tick the appropriate box and return to **Blackwell Scientific Publications Ltd, P.O. Box 88, Oxford, England.**

- I would like to subscribe to *Animal Genetics*
- I wish to pay by cheque/money order (*delete as necessary*) and enclose the sum of .....
- I wish to pay by Access/Barclaycard/VISA/Mastercard (*delete as necessary*)

Please debit my credit card no.

Expiry date..... with the sum of .....

Signature..... Date .....

- Please send me a specimen copy of *Animal Genetics*

Name.....

Address.....

**Blackwell Scientific Publications**

*P.O. Box 88, Oxford, England*

(i)

## NOTES TO CONTRIBUTORS

**GENETICAL RESEARCH** publishes original work on all aspects of genetics, or in any field of research which has an important bearing on genetics. Reviews of topical interest will also be considered. Papers will be submitted to referees, and will generally be printed in order of acceptance. Short papers (see below) will be given priority in publication.

**CONTRIBUTIONS** are welcomed from scientists of all nationalities, but must be written in English. Papers should be sent to the Executive Editor, Dr E. C. R. Reeve, Institute of Animal Genetics, West Mains Road, Edinburgh EH9 3JN, or to a member of the Editorial Board with a particular interest in that area of genetics. Submission of a paper will be taken to imply that it is unpublished and is not being considered for publication elsewhere. Papers should be as concise as clarity permits, and illustrations should be restricted to the *minimum needed*.

**SHORT PAPERS** This category is designed for concisely written reports of work for which rapid publication is considered desirable. Such papers will normally be published within three months of receipt in acceptable form. They should not exceed 4 pages of print in length, and should include a summary.

**TYPESCRIPTS** A top copy and two other copies should be submitted. The top copy should be typed with double-spacing on one side of good quality paper, leaving margins of about 1½ inches at the left-hand side and at the top and bottom of each sheet. Each copy should include a complete set of illustrations. The title should ordinarily identify the organism. The address of the laboratory at which the work was carried out will be printed with the authors' names at the head of the paper, and changes of address may be added in footnotes. A footnote to the title page should also give the name and address to whom reprint requests may be made. Sources of financial support should be included with other acknowledgements at the end of the text. The title page of the typescript should include a short title for running headlines (limited to 50 letters and spaces), and the name and address of the author (or his proxy) to whom the proofs are to be sent, under the heading: *Proofs to be sent to...* Main headings should be typed in capitals and (except summary and references) numbered consecutively. Subheadings should be typed in lower case, and underlined except for those words and symbols which would be italicized in the text. Subheadings should be numbered (i), (ii), etc., within each main heading. **Numeral 1 and letter e: if your typewriter uses one symbol for both, please make clear to the Printer which is intended in formulae, gene symbols, etc.**

**SUMMARY** The summary will be printed at the beginning of the paper. It should give a concise abstract of the significant content and conclusions of the paper, in a form suitable for abstracting journals to use, and should not exceed 250 words.

**ILLUSTRATIONS** The separate category of Plates no longer applies in the new format. All illustrations, including photographs, diagrams, graphs etc. are to be labelled consecutively Figure 1, 2... according to their relative positions in the text. Each figure should have a legend to be printed underneath it. Photographs should be supplied as unmounted glossy prints, with a sketch or separate set to show the arrangement required when several photographs are to form one figure. The names of the authors and the

orientation of the figure should be indicated on the back of each photograph. *Diagrams* should be about twice the size of the printed figure, but not larger than 12 × 8 inches, unless exceptionally complicated, and the thickness of lines and size of points should be determined accordingly. They may be submitted as glossy photographic prints or be drawn in indian ink on white Bristol-board, tracing linen or graph paper ruled in pale blue (but not other colours). The lettering on drawings should be lightly inserted *in soft pencil only*, so that the printer can put in the finished lettering. Legends to illustrations must be given on a separate sheet of paper. Each illustration must have the name of the author and figure number pencilled on the back.

**TABLES** Each table should be typed on a separate sheet of paper and its approximate position in the text indicated on the typescript. Each should be numbered and carry an appropriate title. The table should be designed, whenever possible, to be printed in the normal orientation of the text. The data should be grouped so as to make the use of rules unnecessary. Vertical rules, in particular, are expensive to print, and will only be included at the Editor's discretion. Table footnotes should ordinarily employ the symbols \*, †, ‡, §, ||, ¶, \*\*, etc., in that order.

**SYMBOLS** Gene and mathematical symbols should generally be printed in italics. Please underline those to be italicized when they appear in the text and tables. Bold letters add to printing costs and should only be used where they are necessary to avoid confusion. The author must assume responsibility for the accurate printing of complex mathematical formulae submitted in typewritten form, by differentiating between letters and numbers which are open to misinterpretation, and identifying all Greek, Hebrew and script letters by means of marginal notes at their first appearance. Note that Greek symbols cannot be italicized and that '+' as the symbol for a wild-type allele should not be italicized.

**NOMENCLATURE** Wherever possible, standardized nomenclature should be employed. The author should refer to the following publications for guidance: Novick *et al.* (*Bacteriological Reviews* **40**, 168–189) for plasmids; O'Brien (Ed.), *Genetic Maps* **3**, Cold Spring Harbor 1984, for recent information on most species and recent gene lists.

**REFERENCES** should follow the normal usage in the journal. In the list of references at the end of the paper, *both titles of articles and names of periodicals* should be written out in full.

**PROOFS** Two sets of single-sided page proofs, together with the typescript of each paper will be sent to the author. The printers' marked proof should be returned after correction to the Executive Editor, together with the typescript. Excessive alterations, other than corrections of printers' errors, may be disallowed or charged to the author. Correction should be made using the symbols in British Standard 1219: 1958, or its shortened version B.S. 1219C: 1958.

**OFFPRINTS** Fifty offprints of each paper, or short paper, are provided free of charge. Additional offprints may be ordered in the form sent out with proofs, provided this is returned within fourteen days of receipt.

# Genetical Research

## Contents

- 1 LEONARDI, A., DAMERVAL C. *and* DE VIENNE, D. Inheritance of protein amounts: comparison of two-dimensional electrophoresis patterns of leaf sheaths of two maize lines (*Zea mays* L.) and their hybrids
- 7 VIVI HUNNICKE NIELSEN, B. *and* ANDERSEN, SØREN. Selection for growth on normal and reduced protein diets in mice. I. Direct and correlated responses for growth
- 17 JOHN, HUWA. *and* PURDOM, IAN F. Heterogeneity of human haptoglobin  $\alpha$  chains detected by two-dimensional gel electrophoresis
- 23 ZAKIAN, S. M., KULBAKINA, N. A., MEYER, M. N., SEMENOVA, L. A., BOCHKAREV, M. N., RADJABLI, S. I. *and* SEROV, O. L. Non-random inactivation of the X-chromosome in interspecific hybrid voles
- 29 LYON, MARY F. *and* ZENTHON, JOANNA. Differences in or near the responder region of complete and partial mouse *t*-haplotypes
- 35 BARTON, N. H. The probability of establishment of an advantageous mutant in a subdivided population
- 41 STEPHAN, WOLFGANG. Quantitative variation and chromosomal location of satellite DNAs
- 53 SLATKIN, MONTGOMERY. Heritable variation and heterozygosity under a balance between mutations and stabilizing selection
- 63 WRIGHT, A. J. Additive variance and average effect with partial selfing
- 69 NISHIOKA, YUTAKA. Y-chromosomal DNA polymorphism in mouse inbred strains
- 73 SIMMONS, GAIL, M. Short Paper. Sterility-mutability correlation. On the correlation between sterility and mutability during P-M hybrid dysgenesis in *Drosophila melanogaster*
- 77 ERRATUM
- 79 BOOK REVIEWS
- 85 BOOKS RECEIVED

© Cambridge University Press 1987

## Cambridge University Press

The Pitt Building, Trumpington Street, Cambridge CB2 1RP  
32 East 57th Street, New York, NY 10022, USA  
10 Stamford Road, Oakleigh, Melbourne 3166, Australia

Printed in Great Britain by the University Press, Cambridge