VOLUME 9, NO. 3

JUNE 1967

GENETICAL RESEARCH

EDITORIAL BOARD

C. H. WADDINGTON (Chairman)
CHARLOTTE AUERBACH D. LEWIS
H. GRÜNEBERG G. PONTECORVO
W. HAYES A. ROBERTSON

E. C. R. REEVE

J. O. BISHOP



PUBLISHED BY

CAMBRIDGE UNIVERSITY PRESS

Bentley House, 200 Euston Road, London, N.W. 1 American Branch: 32 East 57th Street, New York, N.Y. 10022

SUBSCRIPTION £5 net (U.S.A. \$18.50) per volume

SINGLE PARTS 45s. net (U.S.A. \$7.50)

sitorg/10.1017/50016672300010545 Published online by Cambridge University Press

GENETICAL RESEARCH

GENETICAL RESEARCH publishes original work on all aspects of genetics, or in any field of research which has an important bearing on genetics. Papers will be submitted to referees before acceptance. They will generally be printed in order of acceptance. In addition, Short Papers (see below) may be included if received 3 months before publication date.

Two Volumes are published per year each consisting of three parts plus an index.

SUBSCRIPTIONS may be sent to any bookseller or to the Cambridge University Press, 200 Euston Road, London, N.W. 1. Subscriptions in the U.S.A. should be sent to the American Branch of the Press, 32 East 57th Street, New York, N.Y. 10022. The subscription price is £5 net (including postage) for a volume of three parts (\$18.50 in the U.S.A.), payable in advance; Separate parts 45s. or \$7.50 each (plus postage).

NOTES FOR CONTRIBUTORS

CONTRIBUTIONS will be welcomed from scientists of all nationalities, but must be written in English, with an English summary. An additional summary in French, German, Russian or Italian will be accepted. Papers should be sent to the Executive Editor, Dr. E. C. R. Reeve, Institute of Animal Genetics, West Mains Road, Edinburgh 9.

GENERAL. Submission of a paper will be taken to imply that it is unpublished and is not being considered for publication elsewhere. Papers published in *Genetical Research* may not be reprinted or published in translation without permission from the Editorial Board. Papers should be as concise as clarity permits, and illustrations kept as few as possible.

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 6 pages of print in length.

Typescripts. A top copy and one carbon copy should be submitted. They should be typed with double-spacing, on one side of the paper, leaving margins of about 1½ inches at the left-hand side and head of each sheet. Quarto is preferred to foolscap paper. Heavily corrected typescripts may have to be returned to the author for retyping. Papers should state the name and address of the author (or his proxy) to whom proofs are to be sent. 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 and sources of financial support may be added in footnotes.

A short title should be supplied for running headlines; this must not exceed 50 characters, counting each letter and space as one character.

(continued inside back of cover)

JOURNAL OF REPRODUCTION AND FERTILITY

The Journal publishes original papers, abstracts of Proceedings, and occasionally reviews and bibliographies, dealing with the morphology, physiology, biochemistry and pathology of reproduction in man and animals, and with the biological, medical and veterinary problems of fertility and lactation. Numbers are issued bimonthly to give two volumes a year.

Papers to appear during 1967:

- M. YAMAUCHI, T. NAKAHARA, Y. KANEDA and S. INUI. Effects of uterine distension on the oestrous cycle of the cow
- T. J. McClure. Infertility in mice caused by fasting at about the time of mating-2. Pathological changes
- L. J. Grota, V. H. Denenberg and M. X. Zarrow. Maternal behaviour in the rat: some parameters affecting the acceptance of young delivered by caesarian section
- R. L. Brinster. Protein content of the mouse embryo during the first five days of development
- R. E. STAPLES. Behavioural induction of ovulation in the oestrous rabbit
- A. C. MENGE. Induced infertility in cattle by iso-immunization with semen and testis.
- S. Pickworth and G. E. Lamming. Observations on pregnancy in intact rabbits and in ovariectomized rabbits treated with 17 α-hydroxyprogesterone caproate
- M. W. Orsini and A. McLaren. Loss of the zona pellucida in mice, and the effect of tubal ligation and ovariectomy
- S. A. BARNETT and K. A. BORLAND. An effect of cold exposure at birth on the reproduction of mice
- K. Yoshinaga and C. E. Adams. Luteotrophic activity of the young conceptus in the rat L. E. A. Rowson and R. M. Moor. The influence of embryonic tissue homogenate
- infused into the uterus, on the life-span of the corpus luteum in the sheep R. B. Heap, J. S. Perry and I. W. Rowlands. Corpus lutem function in the guinea-pig; arterial and luteal progesterone levels, and the effects of hysterectomy and hypophysectomy
- R. P. RATHMACHER, L. L. ANDERSON, K. KAWATA, and R. M. MELAMPY. Intra-uterine foreign body and pregnancy in pigs
- R. B. L. GWATKIN. Passage of mengovirus through the zona pellucida of the mouse morula
- R. A. McFeely. Chromosome abnormalities in early embryos of the pig

Editorial correspondence should be sent to the Executive Editor, Journal of Reproduction and Fertility, 8 Jesus Lane, Cambridge, England, and business correspondence to the publishers.

The subscription rate for 1967 is £6 per volume or £12 per year (two volumes). U.S.A. and Canada \$20.00 per volume or \$40.00 per year.

BLACKWELL SCIENTIFIC PUBLICATIONS
5 ALFRED STREET, OXFORD

JOURNAL OF MOLECULAR BIOLOGY Editor-in-Chief J. C. Kendrew

Published fortnightly, 600 pp., per volume, 140s. 1966, Volumes 23-30 inclusive £56.0.0.

The Journal of Molecular Biology is concerned with the nature, production and replication of biological structure at the molecular level, and its relation to function. The Journal will have a wide appeal among scientists working on the following subjects: subcellular organization, molecular genetics, structure and replication of viruses; molecular structure of muscle, nerve and other tissues; structure of proteins, nucleic acids, carbohydrates, lipids, etc., and their synthetic analogues as investigated by X-rays, light absorption and other methods; problems of inter- and intra-molecular energy transfer.

Advertisement rates available on request



ACADEMIC PRESS LONDON/NEW YORK

Berkeley Square House, Berkeley Square, London, W.1 111 Fifth Avenue, New York 10003

COMMONWEALTH BUREAU OF PLANT BREEDING AND GENETICS

SCHOOL OF AGRICULTURE, CAMBRIDGE, ENGLAND

Information on all topics concerned with the improvement of economic plants and microorganisms, in particular the methods and achievements of crop breeding, field trials, new varieties and strains, genetics and cytology, is given regularly in the journal

PLANT BREEDING ABSTRACTS

COMPILED FROM WORLD LITERATURE

Each volume contains over seven thousand abstracts from articles and reports in thirty to forty different languages, also reviews of new books and notices of new journals

ANNUAL SUBSCRIPTION:

Rate to subscribers in Non-Contributing Countries 210s. (\$31.50)
Rate to subscribers in Contributing Countries 110s. per volume (including indexes)

Order through booksellers or to

COMMONWEALTH AGRICULTURAL BUREAUX
CENTRAL SALES BRANCH, FARNHAM ROYAL, SLOUGH, ENGLAND

FULL PARTICULARS OF THE

JOURNALS

PUBLISHED BY THE

CAMBRIDGE UNIVERSITY PRESS

MAY BE HAD FROM

THE MANAGER

CAMBRIDGE UNIVERSITY PRESS

Bentley House

200 Euston Road, London, N.W.1

Genetic and Environmental **Factors in Human Ability**

The proceedings of a symposium held by the **Eugenics Society**

Edited by J. E. MEADE and A. S. PARKES 57s. 6d.

Chromosomes Today

Proceedings of the 1964 Oxford Chromosome Conference

Edited by C. D. DARLINGTON and K. R. LEWIS

Chromosome Manipulations and **Plant Genetics**

Edited by R, RILEY and K. R. LEWIS 42s.

Protein Biosynthesis and Problems of Heredity. Development and Ageing

Z. A. MEDVEDEV Translated by ANN SYNGE £5 10s.

Oliver & Boyd

THE JOURNAL OF General Microbiology

Editors B. C. J. G. KNIGHT and A. F. B. STANDFAST Volume 47, Number 1, April 1967

- A. H. REISNER & H. MACINDOE. Incorporation of amino acid into protein by utilizing a cell-free system from paramecium.
- parametrum.

 M. HUTCHINSON, K. I. JOHNSTONE & D. WHITE. Taxonomy of anaerobic thiobacilli.

 M. FELTON, JR., J. J. COONEY & W. G. MOORE. A quantitative study of the bacteria of a temporary pond.

 B. JARVIS. Resistance to nisin and production of nisin-inactivating enzymes by several of the genus Bacillus species.
- J. D. ANDERSON & G. T. CROUCH, A new principle for the determination of total bacterial numbers in populations recovered from aerosols.
- P. N. Hobson & R. Summers. The continuous culture of anaerobic bacteria.
- S. G. WILKINSON. The sensitivity of pseudomonads to ethylene diaminetetra-acetic acid.
- P. WEGLENSKI. The mechanism of action of proline suppressors in Aspergillus nidulans.
- W. J. Brammer, P. H. CLARKE & A. J. SKINNER. Biochemical and genetic studies with regulator mutants of the *Pseudomonas aeruginosa* 8602 amidase system.

 A. AFSHAR. The growth of *Mycoplasma bovigenitalium* in cell cultures.
- A. B. HARRIS. Inhibition of growth and nucleic acid synthesis in iron-deficient Mycobacterium smegmatis. W. A. HAMILTON & J. M. STUBBS. Comparison of the germination and outgrowth of spores of Bacillus cereus and Bacillus polymyxa.
- J. T. SMITH. Production of thymineless mutants in gram-negative bacteria (Aerobactor Protens).
 H. U. JOSHI, A. J. H. CARR & D. G. JONES. Effect of clover phyllody virus on nodulation of white clover (Trifolum repens) by Rhizobium trifolii.
- H. WILLIAMS SMITH & S. HALLS. The transmissible nature of the genetic factor in Escherichia coli that controls haemolysin production.

The subscription rate is £5 net per volume of 3 parts. Single parts 45s. each, plus postage.
Four volumes will be issued each year. Orders should be sent to:

CAMBRIDGE UNIVERSITY PRESS BENTLEY HOUSE, 200 EUSTON ROAD, LONDON, N.W.1

GENETICA AGRARIA

A Journal of "Genetics applied to Agriculture" edited by the Istituto di Zoologia of the University of Pavia.

The Journal is issued four times a year. Price per volume of about 400 pages: from Vol. IX°, Lit. 5,000 or \$8.5; from Vol. XV°, Lit. 6.500 or \$10.5.

Miscellaneous papers, proceedings of special meetings and the Proceedings of the Annual Meeting of the Società Italiana di Genetica Agraria (SIGA) are published:

Vol. XVI°; 1963, n. 1-4: Proceedings of the VIII° Meeting of the SIGA (continued) and miscellaneous contributions.

Vol. XVII°; 1963, n. 1-4: Proceedings of the FAO Meeting on: "Plant exploration and introduction", Rome 1961, edited by R. O. Whyte and G. Julén.

Vol. XVIII°; 1964, n. 1–2; 3: Proceedings of the IX° Meeting of the SIGA (Palermo 1963) n. 4: miscellaneous papers.

Vol. XIX°; 1965: Proceedings of the X° Meeting of the SIGA (Rieti 1964) and miscellaneous

Vol. XX°; 1966: Proceedings of the XI° Meeting of the SIGA (Perugia 1966).

Orders may be sent to the Managing Editor or placed through booksellers. Managing Editor: The Director, Istituto di Zoologia, P. Botta, PAVIA (Italy).

SYMPOSIA GENETICA et **BIOLOGICA ITALICA**

A Journal of genetics and general biology mainly devoted to the scientific contributions of the "Istituto di Zoologia Lazzaro Spallanzani" of the University of Pavia.

Some volumes are devoted to the "Proceedings" of international meetings organized by the Istituto L. Spallanzani.

Vol. 1 (1950), Vol. 2 (1951), Vol. 3 (1952), Vol. 4 (1956), Vol. 5 (1957), Vol. 6 (1958-59), Vol. 7 (1960-61), Vol. 8 (1961), Vol. 9 (1962), Vol. 10 (1963), Vols. 11, 12 (1963), Vol. 13 (1966).

Vol. 8 and Vol. 9: PROCEEDINGS OF THE INTERNATIONAL SYMPOSIUM OF EXPERIMENTAL BIOLOGY IN MEMORY OF SPALLANZANI.

EXPERIMENTAL BIOLOGY IN MEMORY OF SPALLANZANI.

Vols. 10, 11, 12: PROCEEDINGS OF THE IV CONGRESS UIEIS (UNION INTERNATIONALE ETUDE INSECTES SOCIAUX), Pavia, 1962-63.

Vol. 10: Symp. 1°: Endocrinology; Symp. 2°: Cast differentiation; Symp. 4°: Gregarism and subsociality.

Vol. 11: Sect. 4°: Applications; Sect. 1°: Termites.

Vol. 12: Sect. 2°: Ants; Sect. 3°: Bees and wasps; Symp. 3°: Symbiosis.

Vol. 13: Carlo Jucci Memorial Volume.

Orders may be sent to the Managing Editor or placed through booksellers. Managing Editor: The Director, Istituto di Zoologia, P. Botta, PAVIA (Italy).

Single vol. L. it. 6500 or \$10.5