

GENETICAL RESEARCH

EDITORIAL BOARD

C. H. WADDINGTON (*Chairman*)

CHARLOTTE AUERBACH J. R. S. FINCHAM

W. HAYES MARY F. LYON

R. RILEY A. ROBERTSON

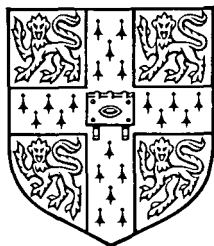
EXECUTIVE EDITOR

E. C. R. REEVE

ASSISTANT EXECUTIVE EDITOR

J. O. BISHOP

Volume 17. 1971



CAMBRIDGE
AT THE UNIVERSITY PRESS

1971

PUBLISHED BY
THE SYNDICS OF THE CAMBRIDGE UNIVERSITY PRESS
Bentley House, 200 Euston Road, London NW1 2DB
American Branch: 32 East 57th Street, New York, N.Y. 10022

Printed in Great Britain at the University Printing House, Cambridge

CONTENTS

No. 1 (February 1971)

YOSHIKAWA, MASANOSUKE. Drug sensitivity and mutability to drug resistance associated with the presence of an R factor	page 1
YOSHIKAWA, MASANOSUKE. Selective enrichment of R ⁻ segregants as the main mechanism of 'curing' of the R factor by acridine dyes	9
MAJISU, B. N. and JONES, J. K. <i>Aegilops</i> × <i>Secale</i> hybrids: the production and cytology of diploid hybrids	17
DAVIES, D. ROY and PLASKITT, A. General and structural analyses of cell-wall formation in <i>Chlamydomonas reinhardtii</i>	33
GUTZ, HERBERT. Gene conversion: remarks on the quantitative implications of hybrid DNA models	45
CARLSON, PETER S. A genetic analysis of the <i>rudimentary</i> locus of <i>Drosophila melanogaster</i>	53
TSUJI, SHIGEKATSU and MEIER, HANS. Evidence for allelism of leaner and tottering in the mouse	83
GRINDLEY, N. D. F., ANDERSON, E. S., SMITH, H. R. and GRINDLEY, JUNE N. The effects of <i>Salmonella typhimurium</i> on de-repressed mutants of F-like factors	89

No. 2 (April 1971)

SCOWCROFT, W. R. and LATTER, B. D. H. Decanalization of scutellar bristle number in <i>Drosophila</i>	95
YTTERBORN, KARL H. Influence of the population genetic background on the persistency of a recessive lethal in <i>Drosophila melanogaster</i>	103
BURNET, BARRIE and HARTMANN-GOLDSTEIN, INGEBORG. Environmental influences on puffing in the salivary gland chromosomes of <i>Drosophila melanogaster</i>	113
PUTRAMENT, ALEXANDRA, ROZBICKA, TERESA and WOJCIECHOWSKA, KATARZYNA. The highly polarized recombination pattern within the <i>methA</i> gene of <i>Aspergillus nidulans</i>	125
ARMSTRONG, F. B. and SPRAGUE, GEORGE F., JR. <i>Salmonella</i> hybrids containing genic material of multiple origins	133

BALLANTYNE, G. H. and CHOVNICK, ARTHUR. Gene conversion in higher organisms: Non-reciprocal recombination events at the rosy cistron in <i>Drosophila melanogaster</i>	page 139
COOPER, PEARL. Interaction of a colicinogenic factor with a resistance factor and with the fertility factor F in <i>Escherichia coli</i> K-12	151
DONCH, J. J., GREEN, M. H. L. and GREENBERG, J. Conditional induction of λ prophage in <i>exrA</i> mutants of <i>Escherichia coli</i>	161
SHAW, DAVID S. and KHAKI, IKRAM A. Genetical evidence for diploidy in <i>Phytophthora</i>	165
STANISICH, VILMA A. and HOLLOWAY, B. W. Chromosome transfer in <i>Pseudomonas aeruginosa</i> mediated by R factors	169

No. 3 (June 1971)

METCALFE, JUDITH A. Development and complementation of lethal mutations at the dumpy locus of <i>Drosophila melanogaster</i>	173
DONCH, JOHN J., SUP CHUNG, YOUNG, GREEN, MICHAEL H. L., GREENBERG, JOSEPH and WARREN, GUYLYN. Genetic analysis of <i>sul</i> mutants of <i>Escherichia coli</i> B	185
HUNT, DAVID M. The physiological control of gene action in the <i>eyeless</i> and <i>eyegone</i> mutants of <i>Drosophila melanogaster</i>	195
BENNETT, M. D. and FINCH R. A. Duration of meiosis in barley	209
FALCONER, D. S. Improvement of litter size in a strain of mice at a selection limit	215
HOUGHTON, J. A. Biochemical investigation of the slow-growing non-perithecial (<i>sgp</i>) mutants of <i>Aspergillus nidulans</i>	237
GALE, M. D. and REES, H. The production and assay of segmental substitution lines in barley	245
MCLAREN, ANNE. The microscopic appearance of waved-2 mouse hairs	257
ACHTMAN, MARK. A semi-automatic technique for conducting many bacterial matings concurrently	261
GRINDLEY, JUNE N. and ANDERSON, E. S. I-like resistance factors with the <i>fi</i> ⁺ character	267
ARST, HERBERT H., JR. Mutants of <i>Aspergillus nidulans</i> unable to use choline-0-sulphate	273
KAPLAN, PHILIPPA and WALLS, D. A technique for replica plating <i>Coprinus lagopus</i> , a filamentous fungus	279

GENETICAL RESEARCH

VOLUME 17, NUMBER 3, JUNE 1971

CONTENTS

METCALF, JUDITH A. Development and complementation of lethal mutations at the dumpy locus of <i>Drosophila melanogaster</i>	page 173
DONCH, JOHN J., SUP CHUNG, YOUNG, GREEN, MICHAEL H. L., GREENBERG, JOSEPH and WARREN, GUYLYN. Genetic analysis of <i>sul</i> mutants of <i>Escherichia coli</i> B	185
HUNT, DAVID M. The physiological control of gene action in the <i>eyeless</i> and <i>eyegone</i> mutants of <i>Drosophila melanogaster</i>	195
BENNETT, M. D. and FINCH, R. A. Duration of meiosis in barley	209
FALCONER, D. S. Improvement of litter size in a strain of mice at a selection limit	215
HOUGHTON, J. A. Biochemical investigation of the slow-growing non-perithecial (<i>sgp</i>) mutants of <i>Aspergillus nidulans</i>	237
GALE, M. D. and REES, H. The production and assay of segmental substitution lines in barley	245
MCLAREN, ANNE. The microscopic appearance of waved-2 mouse hairs	257
ACHTMAN, MARK. A semi-automatic technique for conducting many bacterial matings concurrently	261
GRINDLEY, JUNEN. and ANDERSON, E. S. I-like resistance factors with the <i>fi</i> ⁺ character	267
ARST, HERBERT N., JR. Mutants of <i>Aspergillus nidulans</i> unable to use choline-0-sulphate	273
KAPLAN, PHILIPPA and WALLS, D. A technique for replica plating <i>Coprinus lagopus</i> , a filamentous fungus	279

CAMBRIDGE UNIVERSITY PRESS

Bentley House, 200 Euston Road, London NW1 2DB

American Branch: 32 East 57th Street, New York, N.Y. 10022

SUBSCRIPTION £5 net (U.S.A. \$16.50) per volume

SINGLE PARTS £2.30 net (U.S.A. \$7.00)