

JOURNAL OF MOLECULAR BIOLOGY

215
1-334
SEPT.
1990

570.5
JOM
v.215
no.1-2
1990

Volume 215

Number 1

5 September 1990

Journal of
**MOLECULAR
BIOLOGY**

HEALTH SCIENCES

UNIVERSITY OF MICHIGAN

SEP 26 1990

LIBRARY

PERIODICAL ROOM
SEP 27 1990
HEALTH SCIENCES LIBRARY

THE HECKMAN BINDERY, INC. N. MANCHESTER, INDIANA

ACADEMIC PRESS

Harcourt Brace Jovanovich, Publishers

JMOBAK 215 (1) 1-199 ISSN 0022-2836

**DOCKET
ALARM**

Find authenticated court documents without watermarks at docketalarm.com.

Volume 215, Number 1

Contents

Communication

- | | | |
|---|--|-----|
| Crystallization of the Reovirus Type 3 Dearing Core. Crystal Packing is Determined by the $\lambda 2$ Protein | K. M. Coombs, B. N. Fields and S. C. Harrison | 1-5 |
|---|--|-----|

Articles

- | | | |
|--|---|---------|
| Genetic and Molecular Analysis of Eight tRNA ^{Trp} Amber Suppressors in <i>Caenorhabditis elegans</i> | K. Kondo, B. Makovec, R. H. Waterston and J. Hodgkin | 7-19 |
| Discrimination Between Bacteriophage T3 and T7 Promoters by the T3 and T7 RNA Polymerases Depends Primarily upon a Three Base-pair Region Located 10 to 12 Base-pairs Upstream from the Start Site | J. F. Klement, M. B. Moorefield, E. Jorgensen, J. E. Brown, S. Risman and W. T. McAllister | 21-29 |
| Identification of a Region of the Bacteriophage T3 and T7 RNA Polymerases that Determines Promoter Specificity | K. E. Joho, L. B. Gross, N. J. McGraw, C. Raskin and W. T. McAllister | 31-39 |
| Both Genes for EF-Tu in <i>Salmonella typhimurium</i> are Individually Dispensable for Growth | D. Hughes | 41-51 |
| T-antigen is Not Bound to the Replication Origin of the Simian Virus 40 Late Transcription Complex | K. G. Hadlock and L. C. Lutter | 53-65 |
| DNA Replication in <i>Escherichia coli</i> is Initiated by Membrane Detachment of <i>oriC</i> . A Model | V. Norris | 67-71 |
| Sixteen Discrete RNA Components in the Cytoplasmic Ribosome of <i>Euglena gracilis</i> | M. N. Schnare and M. W. Gray | 73-83 |
| Fourteen Internal Transcribed Spacers in the Circular Ribosomal DNA of <i>Euglena gracilis</i> | M. N. Schnare, J. R. Cook and M. W. Gray | 85-91 |
| Higher Order Structure of Balbiani Ring Premessenger RNP Particles Depends on Certain RNase A Sensitive Sites | T. Wurtz, A. Lönnroth and B. Daneholt | 93-101 |
| Effect of Mutations in Domain 2 on the Structural Organization of Oocyte 5 S rRNA from <i>Xenopus laevis</i> | C. Brunel, P. Romby, E. Westhof, P. J. Romaniuk, B. Ehresmann and C. Ehresmann | 103-111 |
| Crystallographic Analysis of Ribulose 1,5-Bisphosphate Carboxylase from Spinach at 2.4 Å Resolution. Subunit Interactions and Active Site | S. Knight, I. Andersson and C.-I. Brändén | 113-160 |
| High-resolution Spot-scan Electron Microscopy of Microcrystals of an α -Helical Coiled-coil Protein | P. A. Bullough and P. A. Tulloch | 161-173 |
| Framework Residue 71 is a Major Determinant of the Position and Conformation of the Second Hypervariable Region in the V _H Domains of Immunoglobulins | A. Tramontano, C. Chothia and A. M. Lesk | 175-182 |

Cover Illustration: Bacteriophage T4, Tobacco mosaic virus and Turnip Yellow mosaic virus, three of the viruses often featured in the *Journal of Molecular Biology*. Micrographs courtesy of Dr John Finch, MRC Laboratory of Molecular Biology, Cambridge.

*Origination by BPCC Whitefriars Ltd, Tunbridge Wells,
and printed and bound in Great Britain by BPCC Wheatons Ltd, Exeter
This journal is printed on acid-free paper*

DEIZED EX 1051

Journal of Molecular Biology

Editor-in-Chief

P. Wright
Department of Molecular Biology, Research Institute of Scripps Clinic
10666 N. Torrey Pines Road, La Jolla, CA 92037, U.S.A.

Assistant Editor

J. Karn
MRC Laboratory of Molecular Biology
Hills Road, Cambridge CB2 2QH, U.K.

Founding Editor

Sir John Kendrew

Consulting Editor

Sydney Brenner

Editors

- P. Chambon*, Laboratoire de Génétique Moléculaire des Eucaryotes du CNRS, Institut de Chimie Biologique, Faculté de Médecine, 11 Rue Humann, 67085 Strasbourg Cedex, France.
A. R. Fersht, University Chemical Laboratory, Cambridge University, Lensfield Road, Cambridge CB2 1EW, U.K.
M. Gottesman, Institute of Cancer Research, College of Physicians & Surgeons of Columbia University, 701 W. 168th Street, New York, NY 10032, U.S.A.
P. von Hippel, Institute of Molecular Biology, University of Oregon, Eugene, OR 97403-1229, U.S.A.
R. Huber, Max-Planck-Institut für Biochemie, 8033 Martinsried bei München, Germany.
A. Klug, MRC Laboratory of Molecular Biology, Hills Road, Cambridge CB2 2QH, U.K.

Associate Editors

- C. R. Cantor*, Human Genome Center, Donner Laboratory, Lawrence Berkeley Laboratory, University of California, Berkeley, CA 94720, U.S.A.
N.-H. Chua, The Rockefeller University, 1230 York Avenue, New York, NY 10021, U.S.A.
F. E. Cohen, Department of Pharmaceutical Chemistry, School of Pharmacy, University of California, San Francisco, CA 94143-0446, U.S.A.
D. J. DeRosier, Rosenstiel Basic Medical Sciences Research Center, Brandeis University, Waltham, MA 02254, U.S.A.
W. A. Hendrickson, Department of Biochemistry & Molecular Biophysics, College of Physicians & Surgeons of Columbia University, 630 West 168th Street, New York, NY 10032, U.S.A.
I.B. Holland, Institute de Genetique et Microbiologie, Bâtiment 409, Université de Paris XI, 91405 Orsay Cedex 05, France.
B. Honig, Department of Biochemistry & Molecular Biophysics, College of Physicians & Surgeons of Columbia University, 630 West 168th Street, New York, NY 10032, U.S.A.
V. Luzzati, Centre de Génétique Moléculaire, Centre National de la Recherche Scientifique, 91 Gif-sur-Yvette, France.
J. L. Mandel, Laboratoire de Génétique Moléculaire des Eucaryotes du CNRS, Institut de Chimie Biologique, Faculté de Médecine, 11 Rue Humann, 67085 Strasbourg Cedex, France.
B. Matthews, Institute of Molecular Biology, University of Oregon, Eugene, OR 97403-1229, U.S.A.
J. H. Miller, Department of Microbiology, University of California, 405 Hilgard Avenue, Los Angeles, CA 90024, U.S.A.
M. F. Moody, School of Pharmacy, University of London, 29/39 Brunswick Square, London WC1N 1AX, U.K.
T. Richmond, Institut für Molekularbiologie und Biophysik, Eidgenössische Technische Hochschule, Hönggerberg, CH 8093 Zurich, Switzerland.
R. Schleif, Biology Department, Johns Hopkins University, Charles & 34th Streets, Baltimore, MD 21218, U.S.A.
N. L. Sternberg, Central Research & Development Department, E. I. du Pont Nemours & Company, Wilmington, DE 19898, U.S.A.
K. R. Yamamoto, Department of Biochemistry and Biophysics, School of Medicine, University of California, San Francisco, CA 94143-0448, U.S.A.
M. Yanagida, Department of Biophysics, Faculty of Science, Kyoto University, Sakyo-Ku, Kyoto 606, Japan.

Editorial Office

G. Harris, Journal of Molecular Biology, 10d St Edwards Passage, Cambridge CB2 3PJ, U.K.

JOURNAL OF MOLECULAR BIOLOGY: ISSN 0022-2836. Volumes 211-216, 1990, published twice a month on the 5th and 20th by Academic Press at 24-28 Oval Road, London NW1 7DX, England. Annual subscription price including postage: £768 U.K. and U.S.\$1464 overseas. Personal subscription rate: £233 U.K. and U.S. \$350 overseas. Subscription orders should be sent to Academic Press Limited, Fooks Cray, Sidecup, Kent DA14 5HP, U.K. (Tel: 081-300 3322). Send notices of changes of address to the publisher at least 6-8 weeks in advance, including both old and new addresses.

Second class postage rate paid at Jamaica, NY 11431, U.S.A.

Air freight and mailing in the U.S.A. by Publications Expediting Inc., 200 Meacham Avenue, Elmont, NY 11003, U.S.A.

U.S.A. POSTMASTERS: send change of addresses to JOURNAL OF MOLECULAR BIOLOGY, c/o Publications Expediting, Inc., 200 Meacham Avenue, Elmont, NY 11003, U.S.A.

Printed in U.K.

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.