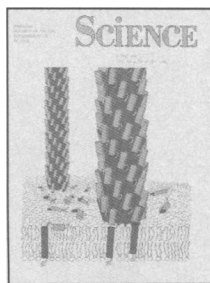


1227 This Week in *Science*

Editorial	1229 The Best of Times, The Worst of Times
Letters	1231 AIDS Biosafety: R. C. DESROSIERS AND E. HUNTER ■ Monsanto Dioxin Studies: J. H. SENGER ■ Dendrimer Research: D. A. TOMALIA ■ Cost of Corrosion: R. E. RICKER ■ RNA World: S. A. BENNER AND A. D. ELLINGTON
Policy Forum	1233 Adjusting the 1990 Census: D. A. FREEDMAN
ScienceScope	1241 Tau particle controversy at CERN; fissioning a fusion reactor design; etc.
News & Comment	1242 Healy Gets Off to a Fast Start ■ Political Savvy With Connections 1244 MRI—Safety Issues Stimulate Concern 1245 Chernobyl's Cloud: A Lighter Shade of Gray 1246 NRC Panel: Abolish Mandatory Retirement 1247 Environmentalists: Ban the (Population) Bomb 1248 Britain Picks Wrong Way To Beat the Japanese 1249 <i>Briefings</i> : Berg to Head NIH Genome Committee ■ Astro Redux ■ The Graying of Physics ■ Jekyll and Hyde GAO?
Research News	1250 How Parents Make Their Mark on Genes 1252 The Incredible Shrinking Tunneling Microscope 1253 Cell Cycle Research: Down to the Nitty Gritty 1254 The Stately Cycles of Ancient Climate 1255 Finding DNA Sequencing Errors 1256 Rhino Biology: Keeping Tabs on an Endangered Species: Bursting Bottlenecks ■ Isotopic IDs for Rhino Horn ■ Rhino Rumbles
Articles	1260 The Potential for Ozone Depletion in the Arctic Polar Stratosphere: W. H. BRUNE, J. G. ANDERSON, D. W. TOOHEY, D. W. FAHEY, S. R. KAWA, R. L. JONES, D. S. MCKENNA, L. R. POOLE 1266 The Response of Electrons to Structural Changes: K. B. WIBERG, C. M. HADAD, C. M. BRENEMAN, K. E. LAIDIG, M. A. MURCKO, T. J. LEPAGE 1273 Electronic Data Publishing and GenBank: M. J. CINKOSKY, J. W. FICKETT, P. GILNA, C. BURKS
Research Article	1278 Atomic Structure of Adenosine Deaminase Complexed with a Transition-State Analog: Understanding Catalysis and Immunodeficiency Mutations: D. K. WILSON, F. B. RUDOLPH, F. A. QUIOCHO

■ SCIENCE (ISSN 0036-8075) is published weekly on Friday, except the last week in December, by the American Association for the Advancement of Science, 1333 H Street, NW, Washington, DC 20005. Second-class postage (publication No. 484460) paid at Washington, DC, and additional mailing offices. Copyright © 1991 by the American Association for the Advancement of Science. The title SCIENCE is a registered trademark of the AAAS. Domestic individual membership and subscription (51 issues): \$82 (\$50 allocated to subscription). Domestic institutional subscription (51 issues): \$150. Foreign postage extra: Canada \$46, other (surface mail) \$46, air freight \$90. First class, airmail, school-year, and student rates on request. Change of address: allow 6 weeks, giving old and new addresses and 11-digit account number. Postmaster: Send change of address to *Science*, P.O. Box 1723, Riverton, NJ 08077. Single copy sales: \$6.00 per issue prepaid includes surface postage; Guide to Biotechnology Products and Instruments, \$20. Bulk rates on request. Authorization to photocopy material for internal or personal use under circumstances not falling within the fair use provisions of the Copyright Act is granted by AAAS to libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the base fee of \$1 per copy plus \$0.10 per page is paid directly to CCC, 27 Congress Street, Salem, Massachusetts 01970. The identification code for *Science* is 0036-8075/83 \$1 + .10. *Science* is indexed in the *Reader's Guide to Periodical Literature* and in several specialized indexes.

■ The American Association for the Advancement of Science was founded in 1848 and incorporated in 1874. Its objectives are to further the work of scientists, to facilitate cooperation among them, to foster scientific freedom and responsibility, to improve the effectiveness of science in the promotion of human welfare, to advance education in science, and to increase public understanding and appreciation of the importance and promise of the methods of science in human progress.



COVER A drawing of viral particle assembly at a membrane surface. Assembly of the filamentous bacteriophage Pfl takes place by the addition of coat protein subunits to the growing virus cylinder as the DNA extrudes through the host cell membrane without incorporating lipids. The coat protein undergoes a structural transition during his translocation process in which its secondary structure remains essentially unchanged while its tertiary structure changes substantially. See pages 1303 and 1305. [Drawing by L. Makowski]

Reports

- 1285 Protein Electron Transfer Rates Set by the Bridging Secondary and Tertiary Structure: D. N. BERATAN, J. N. BETTS, J. N. ONUCHIC
- 1288 Compressibility of Solid C₆₀: J. E. FISCHER, P. A. HEINEY, A. R. MCGHIE, W. J. ROMANOW, A. M. DENENSTEIN, J. P. MCCAULEY, JR., A. B. SMITH III
- 1290 A Neuron-Silicon Junction: A Retzius Cell of the Leech on an Insulated-Gate Field-Effect Transistor: P. FROMHERZ, A. OFFENHÄUSSER, T. VETTER, J. WEIS
- 1293 Spectroscopic Observations of Bright and Dark Emission Features on the Night Side of Venus: J. F. BELL III, D. CRISP, P. G. LUCEY, T. A. OZOROSKI, W. M. SINTON, S. C. WILLIS, B. A. CAMPBELL
- 1296 Identification of the DNA Binding Site for NGFI-B by Genetic Selection in Yeast: T. E. WILSON, T. J. FAHRNER, M. JOHNSTON, J. MILBRANDT
- 1300 Proximate Constraints on the Evolution of Egg Size, Number, and Total Clutch Mass in Lizards: B. SINERVO AND P. LICHT
- 1303 NMR Studies of the Structure and Dynamics of Membrane-Bound Bacteriophage Pfl Coat Protein: K.-J. SHON, Y. KIM, L. A. COLNAGO, S. J. OPELLA
- 1305 Membrane-Mediated Assembly of Filamentous Bacteriophage Pfl Coat Protein: R. NAMBU DRIPAD, W. STARK, S. J. OPELLA, L. MAKOWSKI
- 1308 Separation of IL-4 Production from Th Cell Proliferation by an Altered T Cell Receptor Ligand: B. D. EVAVOLD AND P. M. ALLEN
- 1310 Induction of *Plasmodium falciparum* Transmission-Blocking Antibodies by Recombinant Vaccinia Virus: D. C. KASLOW, S. N. ISAACS, I. A. QUAKYI, R. W. GWADZ, B. MOSS, D. B. KEISTER
- 1313 Two- Rather Than Three-Dimensional Representation of Saccades in Monkey Superior Colliculus: A. J. VAN OPSTAL, K. HEPP, B. J. M. HESS, D. STRAUMANN, V. HENN
- 1315 Neuronal Activity in Narcolepsy: Identification of Cataplexy-Related Cells in the Medial Medulla: J. M. SIEGEL, R. NIENHUIS, H. M. FAHRINGER, R. PAUL, P. SHIROMANI, W. C. DEMENT, E. MIGNOT, C. CHIU
- 1318 Cloning, Expression, and Gene Structure of a G Protein-Coupled Glutamate Receptor from Rat Brain: K. M. HOUAMED, J. L. KUIJPER, T. L. GILBERT, B. A. HALDEMAN, P. J. O'HARA, E. R. MULVIHILL, W. ALMERS, F. S. HAGEN

Technical Comments

- 1321 CD14 and Immune Response to Lipopolysaccharide: C. R. MALISZEWSKI; S. D. WRIGHT ■ Receptor-Mediated Activation of Immunodeficiency Viruses in Viral Fusion: J. S. ALLEN; J. P. MOORE, J. A. MCKEATING, R. A. WEISS, P. A. CLAPHAM, Q. J. SATTENTAU

Book Reviews

- 1324 Learning Together, reviewed by S. SCHWAGER ■ Heavy Ion Reactions, R. SATCHLER ■ The Physics of Ultracold Neutrons, W. A. LANFORD ■ Insects at Low Temperature, J. R. HAZEL ■ Books Received

Board of Directors

Donald N. Langenberg
Retiring President,
Chairman

Leon M. Lederman
President

F. Sherwood Rowland
President-elect

Mary Ellen Avery
Francisco J. Ayala
Eugene H. Cota-Robles
Robert A. Frosch
Joseph G. Gavin, Jr.
Florence P. Haseltine
Jean'ne M. Shreeve
Warren M. Washington

William T. Golden
Treasurer

Richard S. Nicholson
Executive Officer

Editorial Board

Charles J. Arntzen
Elizabeth E. Bailey
David Baltimore
William F. Brinkman
E. Margaret Burbidge
Pierre-Gilles de Gennes
Joseph L. Goldstein
Mary L. Good
Harry B. Gray
John J. Hopfield
F. Clark Howell
Paul A. Marks
Yasutomi Nishizuka
Helen M. Flannery
Robert M. Sokow
Edward C. Stone
James D. Watson

Board of Reviewing Editors

John Abelson
Frederick W. Alt
Don L. Anderson
Stephen J. Benkovic
Floyd E. Bloom
Henry R. Bourne
James J. Bull
Kathryn Calame
Charles R. Cantor
Ralph J. Cicerone
John M. Coffin
Robert Dorfman
Bruce F. Eldridge
Paul T. Englund
Fredric S. Fay

Douglas T. Fearon
Harry A. Fozzard
Theodore H. Geballe
Roger I. M. Glass
Stephen P. Goff
Corey S. Goodman
Stephen J. Gould
Eric F. Johnson
Stephen M. Kosslyn
Konrad B. Krauskopf
Charles S. Levings III
Richard Losick
Anthony R. Means
Mortimer Mishkin
Roger A. Nicoll
William H. Orme-Johnson III
Yeshayau Pocker

Dennis A. Powers
Erkki Ruoslahti
Thomas W. Schoener
Ronald H. Schwartz
Terrence J. Sejnowski
Thomas A. Steitz
Robert T. N. Tjian
Emil R. Unanue
Geerat J. Vermeij
Bert Vogelstein
Harold Weintraub
Zena Werb
George M. Whitesides
Owen N. Witte
William B. Wood
Keith Yamamoto

Science

252 (5010)

Science **252** (5010), 1227-1327.

ARTICLE TOOLS

<http://science.sciencemag.org/content/252/5010>

PERMISSIONS

<http://www.sciencemag.org/help/reprints-and-permissions>

Use of this article is subject to the [Terms of Service](#)

Science (print ISSN 0036-8075; online ISSN 1095-9203) is published by the American Association for the Advancement of Science, 1200 New York Avenue NW, Washington, DC 20005. The title *Science* is a registered trademark of AAAS.

Copyright © 1991 The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works.