

1591 This Week in *Science*

## Editorial

1593 The Funding Crisis

## Letters

1594 U.S.–China Collaboration: T. C. CAMPBELL; J. A. STORY AND C. M. WEAVER;  
M. J. STEINBACH; EDITORS ■ Support for Systematics: R. T. O'GRADY AND  
R. MOOI ■ EPA and Asbestos Removal: J. BERRY ■ British Radiation Study:  
S. D. PHINNEY ■ Usefulness of the Human Genome Project: J. H. WEIS

## News & Comment

1596 AIDS Meeting: Unexpected Progress  
1598 A Question of "Fitness"  
1599 Fraudbusters Back at NIH  
1600 Tough Times Ahead for the Genome Project  
Hubble Trouble  
1601 Women Left Out at NIH  
1602 Breast Cancer Therapies Weighed

## Research News

1603 The Tide of Memory, Turning ■ Swimming for Dear Memory  
1606 A Prism for Electrons ■ Circuit Boards: Heal Yourselves  
1607 Solar Neutrino Deficit Confirmed?  
Glasnost, Greenhouses, and Ice Ages  
1608 Big Number Breakdown  
1609 Closing the Gap Between Proteins and DNA  
1610 *Briefings*: Extension Service for Industry? ■ Catch Some Rays ■ "Turing Test"  
Prize ■ British Study Endorses Chiropractic ■ NASA Scrubs Martian Instrument  
Package

## Article

1612 Experiments with Separated Oscillatory Fields and Hydrogen Masers:  
N. F. RAMSEY

## Research Articles

1619 Comparison of Two Forms of Long-Term Potentiation in Single Hippocampal  
Neurons: R. A. ZALUTSKY AND R. A. NICOLL  
1625 Functional Domains and Upstream Activation Properties of Cloned Human  
TATA Binding Protein: M. G. PETERSON, N. TANESE, B. F. PUGH, R. TJIAN

■ **SCIENCE** is published weekly on Friday, except the last week in December, and with a supplement in March by the American Association for the Advancement of Science, 1333 H Street, NW, Washington, DC 20005. Second-class Non-profit postage (publication No. 484460) paid at Washington, DC, and at an additional entry. Copyright © 1990 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): \$80. Domestic institutional subscription (51 issues): \$150. Foreign postage extra: Canada \$46, other (surface mail) \$46, air mail via Amsterdam \$85. First class, airmail, school-year, and student rates on request. **Single copy sales:** Current issue, \$3.50; back issues, \$5.00; Biotechnology issue, \$6.00 (for postage and handling, add per copy \$0.50 U.S., \$1.00 all foreign); Guide to Biotechnology Products and Instruments, \$20 (for postage and handling add per copy \$1.00 U.S., \$1.50 Canada, \$2.00 other foreign). 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. **Change of address:** allow 6 weeks, giving old and new addresses and 11-digit account number. **Postmaster:** Send Form 3579 to *Science*, P.O. Box 1723, Riverton, NJ 08077. *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 view of the localized phytoalexin response of a single epidermal cell of *Sorghum bicolor* to the phytopathogen *Colletotrichum graminicola*. The response is characterized by the accumulation of phytoalexins in cytoplasmic inclusions that enlarge as they move toward the fungal infection structure, releasing their contents and restricting the growth of the pathogen. See page 1637. [Photograph by Ralph L. Nicholson]

## Reports

- 1631 Influence of Environmental Quality on Pollen Competitive Ability in Wild Radish: H. J. YOUNG AND M. L. STANTON
- 1633 Light-Evoked Changes in the Interphotoreceptor Matrix: F. UEHARA, M. T. MATTHES, D. YASUMURA, M. M. LAVAIL
- 1637 Synthesis of Phytoalexins in Sorghum as a Site-Specific Response to Fungal Ingress: B. A. SNYDER AND R. L. NICHOLSON
- 1639 Human CD4 Binds Immunoglobulins: P. LENERT, D. KROON, H. SPIEGELBERG, E. S. GOLUB, M. ZANETTI
- 1643 Induction of Neonatal Tolerance to Mls<sup>a</sup> Antigens by CD8<sup>+</sup> T Cells: S. R. WEBB AND J. SPRENT
- 1646 Cloning of a Transcriptionally Active Human TATA Binding Factor: C. C. KAO, P. M. LIEBERMAN, M. C. SCHMIDT, Q. ZHOU, R. PEI, A. J. BERK
- 1650 A cDNA for a Protein That Interacts with the Human Immunodeficiency Virus Tat Transactivator: P. NELBOCK, P. J. DILLON, A. PERKINS, C. A. ROSEN
- 1653 Intracellular Calcium Release Mediated by Sphingosine Derivatives Generated in Cells: T. K. GHOSH, J. BIAN, D. L. GILL
- 1656 Mediation of Wound-Related Rous Sarcoma Virus Tumorigenesis by TGF- $\beta$ : M. H. SIEWEKE, N. L. THOMPSON, M. B. SPORN, M. J. BISSELL
- 1660 PDGF-Induced Activation of Phospholipase C Is Not Required for Induction of DNA Synthesis: T. D. HILL, N. M. DEAN, L. J. MORDAN, A. F. LAU, M. Y. KANEMITSU, A. L. BOYNTON
- 1663 Endothelin Stimulation of Cytosolic Calcium and Gonadotropin Secretion in Anterior Pituitary Cells: S. S. STOJILKOVIĆ, F. MERELLI, T. IIDA, L. Z. KRSMANOVIĆ, K. J. CATT

## Book Reviews

- 1667 Scale and Scope, reviewed by R. M. ABRAMS ■ Vision and the Emergence of Meaning, K. NELSON ■ Some Other Books of Interest ■ Books Received

*Author Index to volume 248 is found on pages I-X*  
*Information for Contributors is found on pages XI-XII*

### Board of Directors

Richard C. Atkinson  
*Retiring President,*  
*Chairman*

Donald N. Langenberg  
*President*

Leon M. Lederman  
*President-elect*

Mary Ellen Avery  
Francisco J. Ayala  
Eugene H. Cota-Robles  
Robert A. Frosch  
Joseph G. Gavin, Jr.  
John H. Gibbons  
Beatrice A. Hamburg  
Florence P. Haseltine

William T. Golden  
*Treasurer*

Richard S. Nicholson  
*Executive Officer*

### Editorial Board

Elizabeth E. Bailey  
David Baltimore  
William F. Brinkman  
E. Margaret Burbidge  
Pierre-Gilles de Gennes  
Joseph L. Goldstein  
Mary L. Good  
F. Clark Howell  
James D. Idol, Jr.  
Leon Knopoff  
Oliver E. Nelson  
Yasutomi Nishizuka  
Helen M. Ranney  
David M. Raup  
Howard A. Schneiderman  
Larry L. Smarr  
Robert M. Solow  
James D. Watson

### Board of Reviewing Editors

John Abelson  
Don L. Anderson  
Stephen J. Benkovic  
Gunter K-J Blobel  
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  
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  
Joseph B. Martin  
John C. McGiff  
Anthony R. Means  
Mortimer Mishkin  
Roger A. Nicoll  
William H. Orme-Johnson III  
Carl O. Pabo  
Yeshayau Pocker

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

# Science

**248 (4963)**

*Science* **248** (4963), 198-1670.

ARTICLE TOOLS

<http://science.sciencemag.org/content/248/4963>

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 © 1990 The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works.