

**1580, 1645,
1647 & 1654**
Arabidopsis, the plant
geneticists' favorite

NEWS & COMMENT

- Pediatric AIDS Vaccine Trials Set** 1568
NIH Panel Ok's Vaccine Test—in a New Form
- Scripps Signs a Deal With Sandoz** 1570
- French Officials Panic Over Rare Brain Disease Outbreak** 1571
- Roche Gets Tough on Illicit Sales of PCR Reagent** 1572
- NIH Takes New Tack on Gene Mapping** 1573

RESEARCH NEWS

- Having It Both Ways in the Mantle** 1576
- Quake Heightens Concern, Uncertainty** 1578
- Surprising New Target Found for Anti-Ulcer Drugs** 1579
- Gene Research Flowers in *Arabidopsis*** 1580

PERSPECTIVE

- Paleoseismology: A Search for Ancient Earthquakes in Puget Sound** 1592
J. Adams

ARTICLE

- Himalayan Tectonics, Weathering Processes, and the Strontium Isotope Record in Marine Limestones** 1594
J. M. Edmond

RESEARCH ARTICLES

- Roles of SWI1, SWI2, and SWI3 Proteins for Transcriptional Enhancement by Steroid Receptors** 1598
S. K. Yoshinaga, C. L. Peterson, I. Herskowitz, K. R. Yamamoto
- Phthalate Dioxygenase Reductase: A Modular Structure for Electron Transfer from Pyridine Nucleotides to [2Fe-2S]** 1604
C. C. Correll, C. J. Batie, D. P. Ballou, M. L. Ludwig

REPORTS

ANCIENT EARTHQUAKE

- Abrupt Uplift Within the Past 1700 Years at Southern Puget Sound, Washington** 1611
R. C. Bucknam, E. Hemphill-Haley, E. B. Leopold
- A Tsunami About 1000 Years Ago in Puget Sound, Washington** 1614
B. F. Atwater and A. L. Moore
- Paleoearthquakes in the Puget Sound Region Recorded in Sediments from Lake Washington, U.S.A.** 1617
R. E. Karlin and S. E. B. Abella
- Prehistoric Rock Avalanches in the Olympic Mountains, Washington** 1620
R. L. Schuster, R. L. Logan, P. T. Pringle
- Tree Ring Correlation Between Prehistoric Landslides and Abrupt Tectonic Events in Seattle, Washington** 1621
G. C. Jacoby, P. L. Williams, B. M. Buckley

DEPARTMENTS

THIS WEEK IN SCIENCE	1557	RANDOM SAMPLES	1574
EDITORIAL	1559	BOOK REVIEWS	1671
Superconductivity Revisited		<i>The Computational Brain</i> , reviewed by M. A. Arbib • <i>High Temperature Superconductivity</i> , D. Welch • <i>Sourcebook of Bacterial Protein Toxins</i> , M. Jackson	
LETTERS	1561	PRODUCTS & MATERIALS	1677
SCIENCESCOPE	1567		

AAAS Board of Directors

Leon M. Lederman
*Retiring President,
Chairman*
F. Sherwood Rowland
President
Eloise E. Clark
President-elect
Mary Ellen Avery
Francisco J. Ayala
Robert A. Froesch

Florence P. Haseltine
Alan Schriesheim
Jean'ne M. Shreeve
Chang-Lin Tien
Warren M. Washington

William T. Golden
Treasurer
Richard S. Nicholson
Executive Officer

John Abelson
Frederick W. Alt
Don L. Anderson
Stephen J. Benkovic
David E. Bloom
Floyd E. Bloom
Henry R. Bourne
James J. Bull
Kathryn Calame
C. Thomas Caskey
Dennis W. Choi

John M. Coffin
Bruce F. Eldridge
Paul T. Englund
Richard G. Fairbanks
Douglas T. Fearon
Harry A. Fozzard
Victor R. Fuchs
Theodore H. Geballe
Margaret J. Geller
John C. Gerhart
Roger I. M. Glass

Stephen P. Goff
Corey S. Goodman
Stephen J. Gould
Ira Herskowitz
Eric F. Johnson
Stephen M. Kosslyn
Michael LaBarbera
Charles S. Levings III
Harvey F. Lodish
Richard Losick
Anthony R. Means

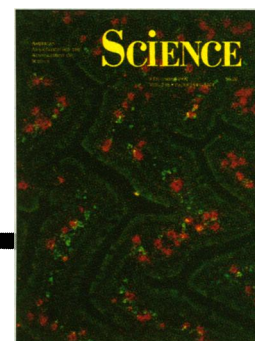
Mortimer Mishkin
Roger A. Nicoll
William H. Orme-Johnson III
Stuart L. Pimm
Yeshayau Pocker
Dennis A. Powers
Ralph S. Quatrano
V. Ramanathan
Douglas C. Rees
Erkki Ruoslahti
Ronald H. Schwartz

Terrence J. Sejnowski
Thomas A. Steitz
Richard F. Thompson
Robert T. N. Tjian
Emil R. Unanue
Geerat J. Vermeij
Bert Vogelstein
Harold Weintraub
Zena Werb
George M. Whitesides
Owen N. Witte
Keith Yamamoto

COVER

The lamina propria of the rat duodenum, showing immune cells that unexpectedly express targets for anti-ulcer drugs. Plasmacytes that produce immunoglobulin G are shown in green, and cells that express M1 acetylcholine receptors are red; scattered immunoglob-

ulin G-producing cells that also express M1 acetylcholine receptors are shown in yellow. See page 1662 and the News report on page 1579. [Photo: Ricardo Dreyfuss]



Terrestrial Carbon and Nitrogen Isotopic Ratios from Cretaceous-Tertiary Boundary Nanodiamonds 1624

I. Gilmour, S. S. Russell, J. W. Arden, M. R. Lee, I. A. Franchi, C. T. Pillinger

A High-Resolution Record of Holocene Climate Change in Speleothem Calcite from Cold Water Cave, Northeast Iowa 1626

J. A. Dorale, L. A. González, M. K. Reagan, D. A. Pickett, M. T. Murrell, R. G. Baker

Direct Detection of C₄H₂ Photochemical Products: Possible Routes to Complex Hydrocarbons in Planetary Atmospheres 1630

R. E. Bandy, C. Lakshminarayan, R. K. Frost, T. S. Zwier

Production and Initial Characterization of Bionites: Materials Formed on a Bacterial Backbone 1633

N. H. Mendelson

Electrical Resistivity and Stoichiometry of Ca_xC₆₀ and Sr_xC₆₀ Films 1636

R. C. Haddon, G. P. Kochanski, A. F. Hebard, A. T. Fiory, R. C. Morris

Charge Donation by Calcium into the t_{1g} Band of C₆₀ 1638

G. K. Wertheim, D. N. E. Buchanan, J. E. Rowe

Electronic, Magnetic, and Geometric Structure of Metallo-Carbohedrenes 1640

B. V. Reddy, S. N. Khanna, P. Jena

Temperature and Size Variabilities of the Western Pacific Warm Pool 1643

X.-H. Yan, C.-R. Ho, Q. Zheng, V. Klemas

EMF, an Arabidopsis Gene Required for Vegetative Shoot Development 1645

Z. R. Sung, A. Belachew, B. Shunong, R. Bertrand-Garcia

A Homoeotic Mutant of Arabidopsis thaliana with Leafy Cotyledons 1647

D. W. Meinke

Overexpression of a Transporter Gene in a Multidrug-Resistant Human Lung Cancer Cell Line 1650

S. P. C. Cole, G. Bhardwaj, J. H. Gerlach, J. E. Mackie, C. E. Grant, K. C. Almquist, A. J. Stewart, E. U. Kurz, A. M. V. Duncan, R. G. Deeley

Expression of an Inward-Rectifying Potassium Channel by the Arabidopsis KAT1 cDNA 1654

D. P. Schachtman, J. I. Schroeder, W. J. Lucas, J. A. Anderson, R. F. Gaber

Thermal Stability Comparison of Purified Empty and Peptide-Filled Forms of a Class I MHC Molecule 1658

M. L. Fahnestock, I. Tamir, L. Narhi, P. J. Bjorkman

Localization of Targets for Anti-Ulcer Drugs in Cells of the Immune System 1662

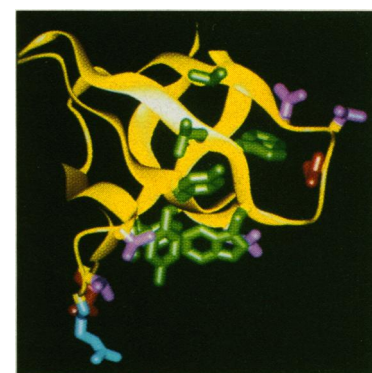
E. Mezey and M. Palkovits

Solution Structure of the SH3 Domain of Src and Identification of Its Ligand-Binding Site 1665

H. Yu, M. K. Rosen, T. B. Shin, C. Seidel-Dugan, J. S. Brugge, S. L. Schreiber

Behavioral Lifetime of Human Auditory Sensory Memory Predicted by Physiological Measures 1668

Z.-L. Lu, S. J. Williamson, L. Kaufman



1665
Structure of Src homology 3 (SH3) domain



1592 & 1611-1623
Signs of a large paleoearthquake near Puget Sound

■ Indicates accompanying feature

■ 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 © 1992 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): \$87 (\$47 allocated to subscription). Domestic institutional subscription (51 issues): \$195. Foreign postage extra: Mexico, Caribbean (surface mail) \$50; other countries (air assist delivery) \$95. First class, airmail, student and emeritus rates on request. Canadian rates with GST available upon request, GST #1254 88122. 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 2033, Marion, OH 43305-2033. 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, MA 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.

Science

258 (5088)

Science **258** (5088), 1557-1677.

ARTICLE TOOLS

<http://science.sciencemag.org/content/258/5088>

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 © 1992 The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works.