

643 This Week in *Science*

## Editorial

645 The Underside of Overhead

## Letters

661 Health Care Rationing: P. R. WOLPE; W. HIGGINS; W. G. GUNTHEROTH;  
R. CRAWSHAW; H. AARON AND W. B. SCHWARTZ ■ Competition Exclusion  
Principle: J. MOORE

## News & Comment

672 Struggling to Do Science for Society  
674 Learning to Drink from a Fire Hose  
676 Dingell: AIDS Researcher in Conflict  
U.S. Math Still in Poor Health  
677 British Museum in Turmoil  
678 Billion-Dollar Orphans: Prescription for Trouble  
680 *Briefings*: Population Is Environmental ■ Einstein Collection Available ■ Faculty  
Salaries Flat ■ Alaska OK's Oil Cleanup Chemical ■ Physics Panel Sets Priorities  
for 1990s ■ Rat Fluoride Study "Equivocal" ■ NIH: New Rumor List ■ View of a  
"Clumpy" Universe ■ Superconductivity: Japan Versus U.S.

## Research News

682 Mycoplasmas in the AIDS Spotlight  
684 Sunspot-Weather Link Is Down But Not Out  
685 "Superantigens" May Shed Light on Immune Puzzle

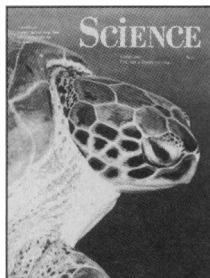
## Articles

697 Numerical Transforms: R. N. BRACEWELL  
705 The Staphylococcal Enterotoxins and Their Relatives: P. MARRACK AND  
J. KAPPLER

## Research Article

712 Crystal Structures of an Antibody to a Peptide and Its Complex with Peptide  
Antigen at 2.8 Å: R. L. STANFIELD, T. M. FIESER, R. A. LERNER, I. A. WILSON

- **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): \$75. Domestic institutional subscription (51 issues): \$120. 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** The hypothesis that endangered green turtles (*Chelonia mydas*) return to their natal beach to nest is supported by restriction fragment analysis of mitochondrial DNA. Thirty or more years may elapse before these high-seas travelers make their first return migration. Reproductive colonies are likely to be demographically independent and consequently must be managed on a colony-specific basis. See page 724. [Photograph by Anne B. Meylan]

## Reports

- 720 Mars: Change in Axial Tilt Due to Climate?: D. P. RUBINCAM
- 721 Spatial Variation of Ozone Depletion Rates in the Springtime Antarctic Polar Vortex: Y. L. YUNG, M. ALLEN, D. CRISP, R. W. ZUREK, S. P. SANDER
- 724 A Genetic Test of the Natal Homing Versus Social Facilitation Models for Green Turtle Migration: A. B. MEYLAN, B. W. BOWEN, J. C. AVISE
- 727 Cloning of a 67-kD Neutrophil Oxidase Factor with Similarity to a Noncatalytic Region of p60<sup>c-src</sup>: T. L. LETO, K. J. LOMAX, B. D. VOLPP, H. NUNOI, J. M. G. SECHLER, W. M. NAUSEEF, R. A. CLARK, J. I. GALLIN, H. L. MALECH
- 730 Induction of *Salmonella* Stress Proteins upon Infection of Macrophages: N. A. BUCHMEIER AND F. HEFFRON
- 732 Organization of the Human and Mouse Low-Affinity FcγR Genes: Duplication and Recombination: W. Q. QIU, D. DE BRUIN, B. H. BROWNSTEIN, R. PEARSE, J. V. RAVETCH
- 736 Peptide Immunogen Mimicry of a Protein-Specific Structural Epitope on Human Choriogonadotropin: J.-M. BIDART, F. TROALEN, P. GHILLANI, N. ROUAS, A. RAZAFINDRATSITA, C. BOHUON, D. BELLET
- 739 Regulation of Alloreactivity in Vivo by a Soluble Form of the Interleukin-1 Receptor: W. C. FANSLAW, J. E. SIMS, H. SASSENFELD, P. J. MORRISSEY, S. GILLIS, S. K. DOWER, M. B. WIDMER
- 742 Phosphorylation of the Polymeric Immunoglobulin Receptor Required for Its Efficient Transcytosis: J. E. CASAÑOVA, P. P. BREITFELD, S. A. ROSS, K. E. MOSTOV
- 745 Protease Nexin-II (Amyloid β-Protein Precursor): A Platelet α-Granule Protein: W. E. VAN NOSTRAND, A. H. SCHMAIER, J. S. FARROW, D. D. CUNNINGHAM

## Book Reviews

- 750 Soviet Science on the Edge of Reform, reviewed by D. HOLLOWAY ■ Alternative Life-History Styles of Animals, H. M. WILBUR ■ Some Other Books of Interest ■ Books Received

## Products & Materials

- 754 Instant Dry Sterilizer ■ Spectrometer ■ Reversed-Phase Column for Peptide Mapping ■ Acid Mixture Protects Skin ■ Soluble Copolymer for Gel Electrophoresis ■ Literature

### 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  
Beatrix 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  
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 (4956)

*Science* **248** (4956), 643-754.

ARTICLE TOOLS <http://science.sciencemag.org/content/248/4956>

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.