

SCIENCE

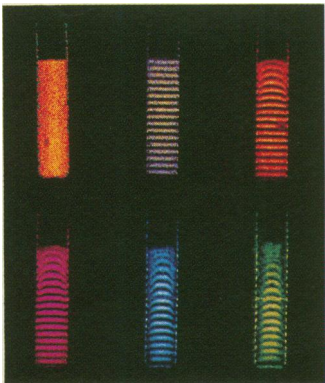


1591

Playing for high stakes

1632

Good vibrations



NEWS & COMMENT

- NSF Hands Over the Internet ... **1584**
... Weighs Future of Computer Centers **1585**
Japanese Panel OKs IVF Screening **1586**
Gingrich Sees Tax Cuts, Reform as Spur for Industry **1587**
Varmus Orders Up a Review of the Science of Gene Therapy **1588**
Pace of NASA Change Worries Advisers **1589**
French Biomedicine: A \$51 Million Incentive to Cooperate **1589**
Walker Tells Universities to Look for Help From Industry **1590**

RESEARCH NEWS

- Putting Game Theory to the Test **1591**
Making Light Work of Brownian Motion **1593**
Playing Chicken With an Epidemic **1594**
Is a Warmer Climate Wilting the Forests of the North? **1595**

Getting a Grip on G Protein Function in *C. elegans* **1596**

Shock Test Squeezes Core Temperature **1597**

Keeping Alive the Spirit of Einstein **1598**

VIEWPOINT: THE FUTURE



Through the Glass Lightly **1609**
H. Weintraub; M. Ashburner; P. N. Goodfellow; H. F. Lodish; C. J. Arntzen; P. W. Anderson; T. M. Rice; T. H. Geballe; A. R. Means; H. M. Ranney; T. R. Cech; R. R. Colwell; H. R. Bourne; B. Richter; I. M. Singer; P. Marrack; D. T. Fearon; A. Penzias; A. J. Bard; W. F. Brinkman; P. A. Marks; B. Vogelstein and K. W. Kinzler; J. M. Bishop; R. N. Zare; G. Schatz; S. J. Benkovic; H. B. Gray; J. S. Valentine; P. J. Crutzen; D. W. Choi; S. Nakanishi; S. M. Kosslyn; J. I. Brauman; D. C. Rees; W. J. Brill; J. Schell; R. Lührmann and C. L. Will; W. Wulf; G. J. Vermeij; K. J. Arrow; N. J. Smelser; D. L. Anderson; P. H. Abelson

PERSPECTIVES

Navigating the Folding Routes **1619**
P. G. Wolynes, J. N. Onuchic, D. Thirumalai

DEPARTMENTS

- THIS WEEK IN SCIENCE** **1573**
EDITORIAL **1575**
The Crystal Ball and the Trumpet Call
LETTERS **1577**
Malaria Vaccine: W. Trager • Detecting Alzheimer's Disease: J. L. Marx, S. R. Kumar, A. B. Thach, T. Kiat-Winarko, D. A. Frambach; A. Treloar, M. Assin, A. Macdonald; B. Katz; N. Pomara and N. Sitaram; L. F. M. Scinto, K. R. Daffner, D. Dressler, B. I. Ransil, D. Rentz, S.

- Weintraub, M. Mesulam, H. Potter
SCENCESCOPE **1583**
RANDOM SAMPLES **1599**
BOOK REVIEWS **1668**
Lizard Ecology, reviewed by J. W. Lang • *Insect Conservation Biology*, S. B. Malcolm • Other Books of Interest • Vignettes • Books Received
PRODUCTS & MATERIALS **1677**

Board of Reviewing Editors

Frederick W. Alt
Don L. Anderson
Michael Ashburner
Stephen J. Benkovic
David E. Bloom
Floyd E. Bloom
Piet Borst
Henry R. Bourne
Michael S. Brown
James J. Bull

Kathryn Calame
C. Thomas Caskey
Dennis W. Choi
John M. Coffin
F. Fleming Crim
Paul J. Crutzen
James E. Dahlberg
Robert Desimone
Bruce F. Eldridge
Paul T. England

Richard G. Fairbanks
Douglas T. Fearon
Harry A. Fozzard
Klaus Friedrich
Theodore H. Geballe
John C. Gerhart
Roger I. M. Glass
Stephen P. Goff
Peter N. Goodfellow
Corey S. Goodman

Ira Herskowitz
Eric F. Johnson
Stephen M. Kosslyn
Michael LaBarbera
Nicole Le Douarin
Charles S. LeVings III
Alexander Levitzki
Harvey F. Lodish
Richard Losick
Reinhard Lührmann

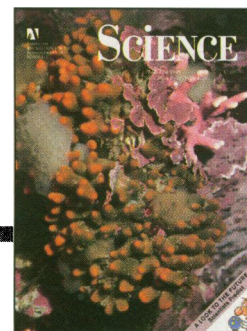
Diane Mathis
Anthony R. Means
Shigetada Nakanishi
Roger A. Nicoll
Stuart L. Pimm
Yeshayau Pocker
Dennis A. Powers
Ralph S. Quatrano
V. Ramanathan
Douglas C. Rees

T. M. Rice
David C. Rubie
Erkki Ruoslahti
Gottfried Schatz
Jozef Schell
Ronald H. Schwartz
Terrence J. Sejnowski
Ellen Solomon
Thomas A. Steitz
Michael P. Stryker

Robert T. N. Tjian
Emil R. Unanue
Geerat J. Vermeij
Bert Vogelstein
Harold Weintraub
Arthur Weiss
Zena Werb
George M. Whitesides
Owen N. Witte
William A. Wulf

Bryozoans are a major component of rocky bottom subtidal marine communities. Pictured here is an orange and brown cyclostome bryozoan colony of *Heteropora pacifica* along with articulated, more delicate crisiid bryozoans, the pink branched hydrocoral *Allopora californica*, coralline and fleshy red algae, sponges, and

compound ascidian tunicates. The phylogeny of the lophophorates (bryozoans, brachiopods, and phoronid worms) is discussed on page 1641. [Photo: James G. Morin at the "Pinnacles" off Seventeen Mile Drive, near Monterey, California, at a depth of 25 meters]



The New Path to Preventing Ulcers ■ 1621
L. S. Tompkins and S. Falkow

REPORTS

Seeing Through the Dust: Martian Crustal Heterogeneity and Links to the SNC Meteorites 1623
J. F. Mustard and J. M. Sunshine

Direct Observations of Excess Solar Absorption by Clouds 1626
P. Pilewskie and F. P. J. Valero

Self-Assembled Metal Colloid Monolayers: An Approach to SERS Substrates 1629
R. G. Freeman, K. C. Grabar, K. J. Allison, R. M. Bright, J. A. Davis, A. P. Guthrie, M. B. Hommer, M. A. Jackson, P. C. Smith, D. G. Walter, M. J. Natan

Granular Convection Observed by Magnetic Resonance Imaging 1632
E. E. Ehrichs, H. M. Jaeger, G. S. Karczmar, J. B. Knight, V. Yu. Kuperman, S. R. Nagel

Lipid Tubule Self-Assembly: Length Dependence on Cooling Rate Through a First-Order Phase Transition 1635
B. N. Thomas, C. R. Safinya, R. J. Plano, N. A. Clark

Crystal Structure and Function of the Isoniazid Target of *Mycobacterium tuberculosis* 1638
A. Dessen, A. Quémar, J. S. Blanchard, W. R. Jacobs Jr., J. C. Sacchettini

Evidence from 18S Ribosomal DNA That the Lophophorates Are Protostome Animals 1641
K. M. Halanych, J. D. Bacheller, A. A. Aguinaldo, S. M. Liva, D. M. Hillis, J. A. Lake

Sodefrin: A Female-Attracting Peptide Pheromone in Newt Cloacal Glands 1643
S. Kikuyama, F. Toyoda, Y. Ohmiya, K. Matsuda, S. Tanaka, H. Hayashi

Epithelial Antibiotics Induced at Sites of Inflammation 1645
B. S. Schonwetter, E. D. Stolzenberg, M. A. Zaslouff

Modulation of Serotonin-Controlled Behaviors by G_o in *Caenorhabditis elegans* 1648
L. Ségalat, D. A. Elkes, J. M. Kaplan

Participation of the Protein G_o in Multiple Aspects of Behavior in *C. elegans* 1652
J. E. Mendel, H. C. Korswagen, K. S. Liu, Y. M. Hajdu-Cronin, M. I. Simon, R. H. A. Plasterk, P. W. Sternberg

Development of a Mouse Model of *Helicobacter pylori* Infection That Mimics Human Disease 1655
M. Marchetti, B. Aricò, D. Burrone, N. Figura, R. Rappuoli, P. Ghiara

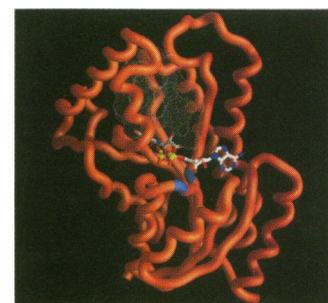
Long-Lasting Neurotrophin-Induced Enhancement of Synaptic Transmission in the Adult Hippocampus 1658
H. Kang and E. M. Schuman

Inhibition of Ocular Dominance Column Formation by Infusion of NT-4/5 or BDNF 1662
R. J. Cabelli, A. Hohn, C. J. Shatz

TECHNICAL COMMENTS

The Body Temperature of *Tyrannosaurus rex* 1666
A. R. Millard; R. E. Barrick, W. J. Showers, S. Brande, M. J. Neilson, M. Turner

1638
TB drug target



AAAS Board of Directors

Francisco J. Ayala
Retiring President,
Chairman
Rita R. Colwell
President
Jane Lubchenco
President-elect

William A. Lester Jr.
Simon A. Levin
Michael J. Novacek

Anna C. Roosevelt
Alan Schriesheim
Jean E. Taylor
Chang-Lin Tien
Nancy S. Wexler

William T. Golden
Treasurer
Richard S. Nicholson
Executive Officer

■ **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 © 1995 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): \$97 (\$50 allocated to subscription). Domestic institutional subscription (51 issues): \$228. Foreign postage extra: Mexico, Caribbean (surface mail) \$53; other countries (air assist delivery) \$93. First class, airmail, student and emeritus rates on request. Canadian rates with GST available upon request, GST #1254 88122. Printed in the U.S.A.

Indicates accompanying feature

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:** \$7.00 per issue prepaid includes surface postage; 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.

Science

267 (5204)

Science **267** (5204), 1573-1677.

ARTICLE TOOLS

<http://science.sciencemag.org/content/267/5204>

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 © 1995 The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works.