

989 & 1019

Protein cluster control



1035

Magnetic excitement on Jupiter

POLICY FORUM

Status and Prospects for Success of the Endangered Species Act: A Look at Recovery Plans 976
 T. H. Tear, J. M. Scott, P. H. Hayward, B. Griffith

NEWS & COMMENT

Jitters Jeopardize AIDS Vaccine Trials 980

Popovic Is Cleared on All Charges; Gallo Case in Doubt 981
 ORI Faces High Hurdle in Gallo Case

NSF: Lane's Strategy on Strategic Research 983

Joint Station Leaves Science Up in the Air 984

Medical Ethics: A Tough Line on Genetic Screening 984

Former Soviet Union: Diamond Film Know-How Comes at a Bargain Price 985

RESEARCH NEWS

Two Major Signal Pathways Linked 988
 Making Molecular Matches in the Cell

Filling a Hole in the Ozone Argument 990

Possible Neandertal Ancestor Found 991

Geologists Get Together to Dissect Earth's Thin Skin 992

PERSPECTIVES

Chemistry with Photons 1008
 W. S. Warren

An Expanding Universe of Introns 1009
 M. Belfort

ARTICLE

Multifactorial Nature of Human Immunodeficiency Virus Disease: Implications for Therapy 1011
 A. S. Fauci

RESEARCH ARTICLE

Controlling Signal Transduction with Synthetic Ligands 1019
 D. M. Spencer, T. J. Wandless, S. L. Schreiber, G. R. Crabtree

DEPARTMENTS

THIS WEEK IN SCIENCE 969

EDITORIAL 971
 Minorities in Science

LETTERS 973
 AIDS Activism and the OAR: G. Gonsalves; J. Cohen • Multiregional Evolution: R. B. Eckhardt, M. H. Wolpoff, A. G. Thorne • "Collaboratory" Principles: P. M. Banks • Support for Russian Science: C. W. Frank; T. Graham Jr.; K. W. Ford

SCIENCESCOPE 979

RANDOM SAMPLES 986

BOOK REVIEWS 1079
If I Am to Be Remembered and *Julian Huxley*, reviewed by D. L. Hull • *Toward a Unified Ecology*, P. F. Brussard • *The Biology of Mosquitoes*, J. C. Beier • *Molecular Epidemiology*, K. J. Helzlsouer • Vignettes: Minority Malaise • Books Received

PRODUCTS & MATERIALS 1086

Board of Reviewing Editors

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

Kathryn Calame
 C. Thomas Caskey
 Dennis W. Choi
 John M. Coffin
 Paul J. Crutzen
 Robert Desimone
 Nicole Le Douarin
 Bruce F. Eldridge
 Paul T. Englund
 Richard G. Fairbanks
 Douglas T. Fearon

Harry A. Fozzard
 K. Friedrich
 Theodore H. Geballe
 Margaret J. Geller
 John C. Gerhart
 Roger I. M. Glass
 Stephen P. Goff
 Peter N. Goodfellow
 Corey S. Goodman
 Stephen J. Gould
 Ira Herskowitz

Eric F. Johnson
 Stephen M. Kosslyn
 Michael LaBarbera
 Charles S. Levings III
 Alexander Levitzki
 Harvey F. Lodish
 Richard Losick
 Diane Mathis
 Anthony R. Means
 Shigetada Nakanishi
 Roger A. Nicoll

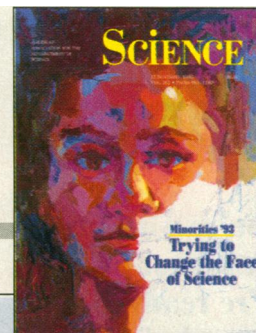
William H. Orme-Johnson III
 Stuart L. Pimm
 Yeshayau Pocker
 Dennis A. Powers
 Ralph S. Quatrano
 V. Ramanathan
 Douglas C. Rees
 T. M. Rice
 Erkki Ruoslahti
 David C. Rubie

Gottfried Schatz
 Jozef Schell
 Ronald H. Schwartz
 Terrence J. Sejnowski
 Ellen Solomon
 Thomas A. Steitz
 Michael P. Stryker
 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
 William A. Wulf
 Keith Yamamoto

Science presents a largely white face to the world. In this issue, a special news section beginning on page 1089 reviews attempts to add color to that face. By creating job opportunities in academia and industry, and by becoming scientific policy-makers, minority sci-

entists are making some inroads. But obstacles such as a lack of role models, economic hard times, and some cultural values held by both majority and minority groups are strewn across a far-from-finished canvas. [Painting: Camille Przewodek]



1089

MINORITIES IN SCIENCE '93

Finding—and Keeping—Minority Professors • *What Works*: Reaching Critical Mass in Graduate School • Minorities Move From Lab Rats to Policy Wonks • Germany's Turks Struggle Into Science • Are Foreigners Squeezing Minorities Out? • *What Works*: Building a Global Lab • Bringing Science Back to the Neighborhood • A 'Model Minority' Speaks Out on Cultural Shyness • Schools Stumble on an Afrocentric Science Essay • Last Hired, First Fired? Minorities Retreat in Defense • Minority Networks Forge Bonds in Chemistry • Plenty of Jobs, Little Minority Support in Biotech • White Men Can Mentor: Help From the Majority • *What Works*: Growing a Diverse Lab Culture • A Guide to Minority Aid From Scientific Societies • Plugging In: A Resource Guide to Minority Programs • Reader Response/Reprint Order Forms

REPORTS

Long-Range Photoinduced Electron Transfer Through a DNA Helix 1025

C. J. Murphy, M. R. Arkin, Y. Jenkins, N. D. Ghatlia, S. H. Bossmann, N. J. Turro, J. K. Barton

Picosecond Resolution in Scanning Tunneling Microscopy 1029

G. Nunes Jr. and M. R. Freeman

Evidence for Large Upward Trends of Ultraviolet-B Radiation Linked to Ozone Depletion 1032

J. B. Kerr and C. T. McElroy

Images of Excited H₃⁺ at the Foot of the Io Flux Tube in Jupiter's Atmosphere 1035

J. E. P. Connerney, R. Baron, T. Satoh, T. Owen

Dependence of Calmodulin Localization in the Retina on the NINAC Unconventional Myosin 1038

J. A. Porter, M. Yu, S. K. Doberstein, T. D. Pollard, C. Montell

Crystal Structure of Neocarzinostatin, an Antitumor Protein-Chromophore Complex 1042

K.-H. Kim, B.-M. Kwon, A. G. Myers, D. C. Rees

An Archimedian Spiral: The Basal Disk of the *Wolinella* Flagellar Motor 1046

H. Engelhardt, S. C. Schuster, E. Baeuerlein

Replication-Specific Inactivation of the pT181 Plasmid Initiator Protein 1048

A. Rasooly and R. P. Novick

Release of Active Cytokinin by a β-Glucosidase Localized to the Maize Root Meristem 1051

B. Brzobohatý, I. Moore, P. Kristoffersen, L. Bako, N. Campos, J. Schell, K. Palme

Rice Prolamine Protein Body Biogenesis: A BiP-Mediated Process 1054

X. Li, Y. Wu, D.-Z. Zhang, J. W. Gillikin, R. S. Boston, V. R. Franceschi, T. W. Okita

Formation and Hydrolysis of Cyclic ADP-Ribose Catalyzed by Lymphocyte Antigen CD38 1056

M. Howard, J. C. Grimaldi, J. F. Bazan, F. E. Lund, L. Santos-Argumedo, R. M. E. Parkhouse, T. F. Walseth, H. C. Lee

Immune Responses in Interleukin-2-Deficient Mice 1059

T. M. Kündig, H. Schorle, M. F. Bachmann, H. Hengartner, R. M. Zinkernagel, I. Horak

A Ca-Dependent Early Step in the Release of Catecholamines from Adrenal Chromaffin Cells 1061

L. von Rüden and E. Neher

Inhibition of the EGF-Activated MAP Kinase Signaling Pathway by Adenosine 3',5'-Monophosphate 1065

J. Wu, P. Dent, T. Jelinek, A. Wolfman, M. J. Weber, T. W. Sturgill

Inhibition by cAMP of Ras-Dependent Activation of Raf 1069

S. J. Cook and F. McCormick

Unidirectional Coupling of Gap Junctions Between Neuroglia 1072

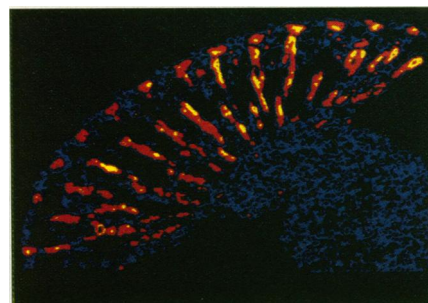
S. R. Robinson, E. C. G. M. Hampson, M. N. Munro, D. I. Vaney

TECHNICAL COMMENTS

Protection from HIV Infection or AIDS? 1074

F. Miedema, L. Meyaard, M. R. Klein, J. Salk, P. A. Bretscher, P. L. Salk, M. Clerici, G. M. Shearer

1038

Calmodulin in the *Drosophila* eye

AAAS Board of Directors

F. Sherwood Rowland
Retiring President,
Chairman
Eloise E. Clark
President
Francisco J. Ayala
President-elect

Alan Schriesheim
Jean'ne M. Shreeve
Chang-Lin Tien
Warren M. Washington
Nancy S. Wexler

Robert A. Frosch
Florence P. Haseltine
William A. Lester, Jr.

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 © 1993 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): \$205. 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 #125488122. **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.**

Science

262 (5136)

Science **262** (5136), 969-1136.

ARTICLE TOOLS

<http://science.sciencemag.org/content/262/5136>

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 © 1993 The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works.