

1200 New York Avenue, NW
Washington, DC 20005

Editorial: 202-326-6550, FAX 202-289-7562

News: 202-326-6581, FAX 202-371-9227

Bateman House, 82-88 Hills Road
Cambridge, UK CB2 1LQ

+44 (0) 1223 326500, FAX +44 (0) 1223 326501

SUBSCRIPTION SERVICES For change of address, missing issues, new orders and renewals, and payment questions: 866-434-AAAS (227) or 202-326-6417, FAX 202-842-1065. Mailing addresses: AAAS, P.O. Box 96178, Washington, DC 20090-6178 or AAAS Member Services, 1200 New York Avenue, NW, Washington, DC 20005

INSTITUTIONAL SITE LICENSES please call 202-326-6755 for any questions or information

REPRINTS: Author Inquiries 800-635-7181

Commercial Inquiries 803-359-4578

PERMISSIONS 202-326-7074, FAX 202-682-0816

MEMBER BENEFITS AAAS/Barnes&Noble.com bookstore www.aaas.org/bn; AAAS Online Store <http://www.apisource.com/aaas/> code MKB6; AAAS Travels: Betchart Expeditions 800-252-4910; Apple Store www.apple.com/store/aaas; Bank of America MasterCard 1-800-833-6262 priority code FAA3YU; Cold Spring Harbor Laboratory Press Publications www.cshlpress.com/affiliates/aaas.htm; GEICO Auto Insurance www.geico.com/landingpage/go51.htm?logo=17624; Hertz 800-654-2200 CDP#343457; Office Depot <https://bsd.officedepot.com/portallgoin.do>; Seabury & Smith Life Insurance 800-424-9883; Subaru VIP Program 202-326-6417; VIP Moving Services <http://www.vipmayflower.com/domestic/index.html>; Other Benefits: AAAS Member Services 202-326-6417 or www.aaasmember.org.

science_editors@aaas.org (for general editorial queries)

science_letters@aaas.org (for queries about letters)

science_reviews@aaas.org (for returning manuscript reviews)

science_bookrevs@aaas.org (for book review queries)

Published by the American Association for the Advancement of Science (AAAS), *Science* serves its readers as a forum for the presentation and discussion of important issues related to the advancement of science, including the presentation of minority or conflicting points of view, rather than by publishing only material on which a consensus has been reached. Accordingly, all articles published in *Science*—including editorials, news and comment, and book reviews—are signed and reflect the individual views of the authors and not official points of view adopted by AAAS or the institutions with which the authors are affiliated.

AAAS was founded in 1848 and incorporated in 1874. Its mission is to advance science and innovation throughout the world for the benefit of all people. The goals of the association are to: foster communication among scientists, engineers and the public; enhance international cooperation in science and its applications; promote the responsible conduct and use of science and technology; foster education in science and technology for everyone; enhance the science and technology workforce and infrastructure; increase public understanding and appreciation of science and technology; and strengthen support for the science and technology enterprise.

INFORMATION FOR AUTHORS

See pages 634 and 635 of the 1 February 2008 issue or access www.sciencemag.org/about/authors

EDITOR-IN-CHIEF Donald Kennedy

EXECUTIVE EDITOR Monica M. Bradford

DEPUTY EDITORS NEWS EDITOR

R. Brooks Hanson, Barbara R. Jasny, Colin Norman
Katrina L. Kelnor

EDITORIAL SUPERVISOR SENIOR EDITOR Phillip D. Szuromi; **SENIOR EDITOR/PERSPECTIVES** Lisa D. Chong; **SENIOR EDITORS** Gilbert J. Chin, Pamela J. Hines, Paula A. Kiberstis (Boston), Marc S. Lavine (Toronto), Beverly A. Purnell, L. Bryan Ray, Guy Riddiough, H. Jesse Smith, Valda Vinson, David Voss; **ASSOCIATE EDITORS** Jake S. Yeston, Laura M. Zahn; **ONLINE EDITOR** Stewart Willis; **ASSOCIATE ONLINE EDITORS** Robert Frederick, Tara S. Marathe; **BOOK REVIEW EDITOR** Sherman J. Suter; **ASSOCIATE LETTERS EDITOR** Jennifer Sills; **EDITORIAL MANAGER** Cara Tate; **SENIOR COPY EDITORS** Jeffrey E. Cook, Cynthia Howe, Harry Jach, Barbara P. Ordway, Trista Wagoner; **COPY EDITORS** Lauren Kmeck, Peter Mooreside; **EDITORIAL COORDINATORS** Carolyn Kyle, Beverly Shields; **PUBLICATIONS ASSISTANTS** Ramatoulaye Diop, Chris Filiatreau, Joi S. Branger, Jeffrey Hearn, Lisa Johnson, Scott Miller, Jerry Richardson, Brian White, Anita Wynn; **EDITORIAL ASSISTANTS** Carlos L. Durham, Emily Guye, Patricia M. Moore, Jennifer A. Seibert; **EXECUTIVE ASSISTANT** Sylvia S. Kihara; **ADMINISTRATIVE SUPPORT** Maryrose Madrid

NEWS SENIOR CORRESPONDENT Jean Marx; **DEPUTY NEWS EDITORS** Robert Coontz, Eliot Marshall, Jeffrey Mervis, Leslie Roberts; **CONTRIBUTING EDITORS** Elizabeth Colutta, Polly Shulman; **NEWS WRITERS** Yudhijit Bhattacharjee, Adrian Cho, Jennifer Couzin, David Grimm, Constance Holden, Jocelyn Kaiser, Richard A. Kerr, Eli Kintisch, Andrew Lawler (New England), Greg Miller, Elizabeth Pennisi, Robert F. Service (Pacific NW), Erik Stokstad; **INTERN** Elsa Youngsteadt; **CONTRIBUTING CORRESPONDENTS** Jon Cohen (San Diego, CA), Daniel Ferber, Ann Gibbons, Robert Irlin, Mitch Leslie, Charles C. Mann, Virginia Morell, Evelyn Strauss, Gary Taubes; **COPY EDITORS** Rachel Curran, Linda B. Felaco, Melvin Galling; **ADMINISTRATIVE SUPPORT** Scherraine Mack, Fannie Groom; **BUREAU** New England: 207-549-7755, San Diego, CA: 760-942-3252, FAX 760-942-4979, Pacific Northwest: 503-963-1940

PRODUCTION DIRECTOR James Landry; **SENIOR MANAGER** Wendy K. Shank; **ASSISTANT MANAGER** Rebecca Doshi; **SENIOR SPECIALISTS** Jay Covert, Chris Redwood; **SPECIALIST** Steve Forrester; **PREFLIGHT DIRECTOR** David M. Tompkins; **MANAGER** Marcus Spiegel; **SPECIALIST** Jessie Mudjitaba

ART DIRECTOR Kelly Buckheit Krause; **ASSOCIATE ART DIRECTOR** Aaron Morales; **ILLUSTRATORS** Chris Bickel, Katharine Sultiff; **SENIOR ART ASSOCIATES** Holly Bishop, Laura Creveling, Preston Huey, Nayomi Kevitthyagala; **ASSOCIATE** Jessica Newfield; **PHOTO EDITOR** Leslie Blizard

SCIENCE INTERNATIONAL

EUROPE (science-int.co.uk) **EDITORIAL/INTERNATIONAL MANAGING EDITOR** Andrew M. Sugden; **SENIOR EDITOR/PERSPECTIVES** Julia Fahrenkamp-Uppenbrink; **SENIOR EDITORS** Caroline Ash, Stella M. Hurltle, Ian S. Osborne, Stephen J. Simpson, Peter Stern; **EDITORIAL SUPPORT** Deborah Dennison, Rachel Roberts, Alice Whaley; **ADMINISTRATIVE SUPPORT** John Cannell, Janet Clements, Jill White; **NEWS: EUROPE NEWS EDITOR** John Travis; **DEPUTY NEWS EDITOR** Daniel Clery; **CONTRIBUTING CORRESPONDENTS** Michael Balter (Paris), John Bohannon (Vienna), Martin Enserink (Amsterdam and Paris), Gretchen Vogel (Berlin); **INTERN** Elizabeth Quill

ASIA Japan Office: Asca Corporation, Eiko Ishioka, Fusako Tamura, 1-8-13, Hirano-cho, Chuo-ku, Osaka-shi, Osaka, 541-0046 Japan; +81 (0) 6 202 6272, FAX +81 (0) 6 202 6271; asca@os.gulf.or.jp; **ASIA NEWS EDITOR** Richard Stone (Beijing: rstone@aaas.org); **CONTRIBUTING CORRESPONDENTS** Dennis Normile (Japan: +81 (0) 3 391 0630, FAX 81 (0) 3 5936 3531; dnormile@gol.com); Hao Xin (China: +86 (0) 10 6307 4439 or 6307 3676, FAX +86 (0) 10 6307 4358; cindyhao@gmail.com); Pallava Bagla (South Asia: +91 (0) 11 2271 2896; pbagla@vsnl.com)

AFRICA Robert Koenig (contributing correspondent, rob.koenig@gmail.com)

EXECUTIVE PUBLISHER Alan I. Leshner

PUBLISHER Beth Rosner

FULFILLMENT SYSTEMS AND OPERATIONS (membership@aaas.org); **DIRECTOR** Waylon Butler; **CUSTOMER SERVICE SUPERVISOR** Pat Butler; **SPECIALISTS** Laurie Baker, Latoya Casteel, LaVonda Crawford, Vicki Linton; **DATA ENTRY SUPERVISOR** Cynthia Johnson; **SPECIALISTS** Tarrica Hill, Erin Layne, Sheila Thomas

BUSINESS OPERATIONS AND ADMINISTRATION DIRECTOR Deborah Rivera-Wienhold; **ASSISTANT DIRECTOR, BUSINESS OPERATIONS** Randy Yi; **SENIOR FINANCIAL ANALYSTS** Michael LoBue, Jessica Tierney; **FINANCIAL ANALYST** Nicole Nicholson; **RIGHTS AND PERMISSIONS: ADMINISTRATOR** Emilie Davis; **ASSOCIATE** Elizabeth Sandler; **MARKETING DIRECTOR** John Meyers; **MARKETING MANAGERS** Allison Pritchard, Darryl Walter; **MARKETING ASSOCIATES** Aimee Aponte, Alison Chandler, Mary Ellen Crowley, Marcia Leach, Julianne Wielga, Wendy Wise; **INTERNATIONAL MARKETING MANAGER** Wendy Sturley; **MARKETING EXECUTIVE** Jennifer Reeves; **MARKETING/MEMBER SERVICES EXECUTIVE** Linda Rusk; **SITE LICENSE SALES DIRECTOR** Tom Ryan; **SALES MANAGER** Russ Edra; **SALES AND CUSTOMER SERVICE** Mehan Dossani, Iqum Edo, Kiki Forsythe, Catherine Holland, Phillip Smith, Philip Tsolakidis; **ELECTRONIC MEDIA: MANAGER** Elizabeth Harman; **PROJECT MANAGER** Trista Snyder; **ASSISTANT MANAGER** Lisa Stanford; **SENIOR PRODUCTION SPECIALIST** Walter Jones; **PRODUCTION SPECIALISTS** Nichole Johnston, Kimberly Oster

ADVERTISING DIRECTOR WORLDWIDE AD SALES Bill Moran

PRODUCT (advertising@aaas.org); **CONSUMER & SPONSORSHIP SALES MANAGER** Tina Morra: 202-326-6542; **MIDWEST RICK BONGIOVANNI**: 330-405-7080, FAX 330-405-7081; **WEST COAST/W. CANADA** Teola Young: 650-964-2266; **EAST COAST/ CANADA** Christopher Breslin: 443-512-0330, FAX 443-512-0331; **UK/EUROPE/ASIA** Michelle Field: +44 (0) 1223-326-524, FAX +44 (0) 1223-325-532; **JAPAN** Mashy Yoshikawa: +81 (0) 33235 5961, FAX +81 (0) 33235 5852; **SENIOR TRAFFIC ASSOCIATE** Deandra Simms

COMMERCIAL EDITOR Sean Sanders: 202-326-6430

CLASSIFIED (advertise@sciencecareers.org); **US: RECRUITMENT SALES MANAGER** Ian King: 202-326-6528, FAX 202-289-6742; **INSIDE SALES MANAGER: MIDWEST/CANADA** Daryl Anderson: 202-326-6543; **NORTHEAST** Alexis Fleming: 202-326-6578; **SOUTHEAST** Tina Burks: 202-326-6577; **WEST** Nicholas Hintibidze: 202-326-6533; **SALES COORDINATORS** Erika Foad, Rohan Edmondson, Shirley Young; **INTERNATIONAL: SALES MANAGER** Tracy Holmes: +44 (0) 1223 326525, FAX +44 (0) 1223 326532; **SALES** Marium Huda, Alex Palmer, Alessandra Sorgente; **SALES ASSISTANT** Louise Moore; **JAPAN** Mashy Yoshikawa +81 (0) 33235 5961, FAX +81 (0) 33235 5852; **ADVERTISING PRODUCTION OPERATIONS MANAGER** Deborah Tompkins; **SENIOR PRODUCTION SPECIALISTS** Robert Buck, Amy Hardcastle; **SENIOR TRAFFIC ASSOCIATE** Christina Hall; **PUBLICATIONS ASSISTANT** Mary Lagnaoui

AAAS BOARD OF DIRECTORS **RETIRING PRESIDENT, CHAIR** John P. Holdren; **PRESIDENT** David Baltimore; **PRESIDENT-ELECT** James J. McCarthy; **TREASURER** David E. Shaw; **CHIEF EXECUTIVE OFFICER** Alan I. Leshner; **BOARD** John E. Dowling, Lynn W. Enquist, Susan M. Fitzpatrick, Alice Gast, Linda P. B. Katchi, Cherry A. Murray, Thomas D. Pollard, Kathryn D. Sullivan



ADVANCING SCIENCE. SERVING SOCIETY

SENIOR EDITORIAL BOARD

John I. Brauman, *Chair, Stanford Univ.*
Richard Lockard, *Harvard Univ.*
Robert May, *Univ. of Oxford*
Marcia McClurt, *Monterey Bay Aquarium Research Inst.*
Linda Partridge, *Univ. College London*
Vera C. Rubin, *Carnegie Institution*
Christopher R. Somerville, *Carnegie Institution*
George M. Whitesides, *Harvard Univ.*

BOARD OF REVIEWING EDITORS

Joanna Aizenberg, *Harvard Univ.*
R. McNeill Alexander, *Leeds Univ.*
David Altschuler, *Broad Institute*
Arturo Alvarez-Buylla, *Univ. of California, San Francisco*
Richard Amasino, *Univ. of Wisconsin, Madison*
Angelika Amon, *MIT*
Meinrat O. Andreae, *Max Planck Inst., Mainz*
Kristi S. Anseth, *Univ. of Colorado*
John A. Bargh, *Yale Univ.*
Cornelia I. Bargmann, *Rockefeller Univ.*
Marisa Bartolomei, *Univ. of Penn. School of Med.*
Ray H. Baughman, *Univ. of Texas, Dallas*
Stephen J. Benkovic, *Penn State Univ.*
Michael J. Bevan, *Univ. of Washington*
Ton Bisseling, *Wageningen Univ.*
Mina Bissell, *Lawrence Berkeley National Lab*
Peter Borik, *EMBL*
Dianna Bowles, *Univ. of York*
Robert W. Boyd, *Univ. of Rochester*
Paul M. Brakefield, *Leiden Univ.*
Dennis Bray, *Univ. of Cambridge*
Stephen Buratowski, *Harvard Medical School*
Jillian M. Buriak, *Univ. of Alberta*
Joseph A. Burns, *Cornell Univ.*
William P. Butz, *Population Reference Bureau*
Peter Carmeliet, *Univ. of Leuven, VIB*
Gerbrand Cedar, *MIT*
Mildred Cox, *Stanford Univ.*
David Clapham, *Children's Hospital, Boston*
David Clary, *Oxford University*

J. M. Claverie, *CNRS, Marseille*
Jonathan D. Cohen, *Princeton Univ.*
Stephen M. Cohen, *EMBL*
Robert H. Crabtree, *Yale Univ.*
F. Fleming Crim, *Univ. of Wisconsin*
William Cumberland, *Univ. of California, Los Angeles*
George O. Daley, *Children's Hospital, Boston*
Jeff L. Dangl, *Univ. of North Carolina*
Edward DeLong, *MIT*
Emmanouil T. Dermitzakis, *Wellcome Trust Sanger Inst.*
Robert Desimone, *MIT*
Dennis Discher, *Univ. of Pennsylvania*
Scott C. Doney, *Woods Hole Oceanographic Inst.*
Peter J. Donovan, *Univ. of California, Irvine*
W. Ford Doolittle, *Dalhousie Univ.*
Jennifer A. Doudna, *Univ. of California, Berkeley*
Julian Downward, *Cancer Research UK*
Denis Duboule, *Univ. of Geneva/EPPFL Lausanne*
Christopher Dye, *WHO*
Richard Ellis, *Cal Tech*
Gerhard Ertl, *Fritz-Haber-Institut, Berlin*
Douglas H. Erwin, *Smithsonian Institution*
Mark Estelle, *Indiana Univ.*
Barry Everitt, *Univ. of Cambridge*
Paul G. Falkowski, *Rutgers Univ.*
Ernst Fehr, *Univ. of Zurich*
Tom Fenichel, *Univ. of Copenhagen*
Alain Fischer, *INSERM*
Scott E. Fraser, *Cal Tech*
Chris D. Frith, *Univ. College London*
Wulfram Gerstner, *EPPFL Lausanne*
Charles Godfray, *Univ. of Oxford*
Christian Haass, *Ludwig Maximilians Univ.*
Niels Hansen, *Technical Univ. of Denmark*
Dennis L. Hartmann, *Univ. of Washington*
Chris Hawkesworth, *Univ. of Bristol*
Martin Heimann, *Max Planck Inst., Jena*
James A. Hendler, *Rensselaer Polytechnic Inst.*
Ray Hilborn, *Univ. of Washington*
Ove Hoegh-Guldberg, *Univ. of Queensland*
Ronald R. Hoy, *Cornell Univ.*
Evelyn L. Hu, *Univ. of California, Santa Barbara*
Olli Ikkala, *Helsinki Univ. of Technology*
Meyer B. Jackson, *Univ. of Wisconsin Med. School*

Stephen Jackson, *Univ. of Cambridge*
Steven Jacobsen, *Univ. of California, Los Angeles*
Peter Jonas, *Universität Freiburg*
Daniel Kahne, *Harvard Univ.*
Gerard Karsenti, *Columbia Univ. College of P&S*
Bernhard Keimer, *Max Planck Inst., Stuttgart*
Elizabeth A. Kellog, *Univ. of Missouri, St. Louis*
Alan B. Krueger, *Princeton Univ.*
Lee Kump, *Penn State Univ.*
Mitchell A. Lazar, *Univ. of Pennsylvania*
Virginia Lee, *Univ. of Pennsylvania*
Anthony J. Leggett, *Univ. of Illinois, Urbana-Champaign*
Michael J. Lenardo, *NIAID, NIH*
Norman L. Letvin, *Beth Israel Deaconess Medical Center*
Olle Lindvall, *Univ. Hospital, Lund*
John Lis, *Cornell Univ.*
Richard Lockard, *Harvard Univ.*
Ke Lu, *Chinese Acad. of Sciences*
Andrew P. Mackenzie, *Univ. of St. Andrews*
Raul Madariaga, *Ecole Normale Supérieure, Paris*
John M. Marshall, *Univ. of Science and Technology*
Michael Maltin, *King's College, London*
Virginia Miller, *Washington Univ.*
Yasushi Miyashita, *Univ. of Tokyo*
Richard Morris, *Univ. of Edinburgh*
Edward Moser, *Univ. of Science and Technology*
Naoto Nagasawa, *Univ. of Tokyo*
James Nelson, *Stanford Univ. School of Med.*
Timothy W. Nilsen, *Case Western Reserve Univ.*
Roeland Nolte, *Univ. of Mijmegen*
Helga Nowotny, *European Research Advisory Board*
Eric N. Olson, *Univ. of Texas, SW*
Erin O'Shea, *Harvard Univ.*
Elinor Ostrom, *Indiana Univ.*
Jonathan T. Overpeck, *Univ. of Arizona*
John Pendry, *Imperial College*
Philippe Poulin, *CNRS*
Molly Power, *Univ. of California, Berkeley*
Marilyn Przeworski, *Univ. of Chicago*
David J. Read, *Univ. of Sheffield*
Les Real, *Emory Univ.*
Colin Renfrew, *Univ. of Cambridge*
Trevor Robbins, *Univ. of Cambridge*
Barbara A. Romanowicz, *Univ. of California, Berkeley*
Nancy Ross, *Virginia Tech*

Edward M. Rubin, *Lawrence Berkeley National Lab*
J. Roy Sambles, *Univ. of Exeter*
Jürgen Sandkühn, *Medical Univ. of Vienna*
David S. Schimel, *National Center for Atmospheric Research*
David W. Schindler, *Univ. of Alberta*
Georg Schulz, *Albert-Ludwigs-Universität*
Paul Schulze-Lefert, *Max Planck Inst., Cologne*
Terrence J. Sejnowski, *The Salk Institute*
David Sibley, *Washington Univ.*
Montgomery Slatkin, *Univ. of California, Berkeley*
George Somero, *Stanford Univ.*
Joan Steitz, *Yale Univ.*
Elisbeth Stern, *ETH Zürich*
Thomas Stocker, *Univ. of Bern*
Jerome Strauss, *Virginia Commonwealth Univ.*
Glenn Telling, *Univ. of Kentucky*
Marc Tessier-Lavigne, *Genentech*
Mielch van der Kooij, *Astronomical Inst. of Amsterdam*
Dirk van der Kluis, *Univ. of Toronto*
Bert Vogelstein, *Johns Hopkins Univ.*
Christopher A. Walsh, *Harvard Medical School*
Graham Warren, *Yale Univ. School of Med.*
Colin Watts, *Univ. of Dundee*
Detlef Weigel, *Max Planck Inst., Tübingen*
Jonathan Weissman, *Univ. of California, San Francisco*
Ellen D. Williams, *Univ. of Maryland*
Ian A. Wilson, *The Scripps Res. Inst.*
Jerry Workman, *Stowers Inst. for Medical Research*
John R. Yates III, *The Scripps Res. Inst.*
Jan Zaenen, *Leiden Univ.*
Martin Zatz, *NIMH*
Huda Zoghbi, *Baylor College of Medicine*
Maria Zuber, *MIT*

BOOK REVIEW BOARD

John Aldrich, *Duke Univ.*
David Bloom, *Harvard Univ.*
Angela Creager, *Princeton Univ.*
Richard Swedner, *Univ. of Chicago*
Ed Wasserman, *DuPont*
Lewis Wolpert, *Univ. College London*