

MANAGING EDITOR, RESEARCH JOURNALS **Katrina L. Kelner**
 DEPUTY EDITORS **R. Brooks Hanson, Barbara R. Jasny, Andrew M. Sugden, Valda J. Vinson**

EDITORIAL SENIOR EDITORS/COMMENTARY **Lisa D. Chong, Brad Wible**; SENIOR EDITORS **Gilbert J. Chin, Pamela J. Hines, Paula A. Kiberstis (Boston), Marc S. Lavine (Toronto), Beverly A. Purnell, L. Bryan Ray, Guy Riddihough, H. Jesse Smith, Phillip D. Szuroim (Tennessee), Valda Vinson, Jake S. Yeston, Laura M. Zahn (San Diego)**; ASSOCIATE EDITORS **Kristen L. Mueller, Jelena Stajic, Sacha Vignier, Nicholas S. Wigginton**; BOOK REVIEW EDITOR **Sherman J. Suter**; ASSOCIATE LETTERS EDITOR **Jennifer Sillis**; EDITORIAL MANAGER **Cara Tate**; SENIOR COPY EDITORS **Jeffrey E. Cook, Cynthia Howe, Harry Jach, Lauren Kmeck, Barbara P. Ordway, Trista Wagoner**; COPY EDITOR **Chris Filiatreau**; SENIOR EDITORIAL COORDINATORS **Carolyn Kyle, Beverly Shields**; EDITORIAL COORDINATORS **Joi S. Granger, Anita Wynn**; PUBLICATIONS ASSISTANTS **Ramatulayeh Diop, Le-Toya Mayne Flood, Aneera Dobbins, Jeffrey Hearn, Michael Hicks, Lisa Johnson, Scott Miller, Jerry Richardson, Teresa R. Sakon, Brian White**; EDITORIAL ASSISTANT **Patricia M. Moore**; EXECUTIVE EDITORIAL ASSISTANT **Yolanda O'Bannon (San Francisco)**; EXECUTIVE ASSISTANT **Alison Crawford**; ADMINISTRATIVE SUPPORT **Maryrose Madrid**; EDITORIAL FELLOW **Melissa R. McCarty**

EDITORIAL DIRECTOR, WEB AND NEW MEDIA **Stewart Willis**; SENIOR WEB EDITOR **Sarah Crespi**; WEB EDITOR **Kerry Klein**; WEB DEVELOPMENT MANAGER **Marty Green**; WEB DEVELOPERS **Corinna Cohn, Andrew Whitesell**
 NEWS DEPUTY NEWS EDITORS **Robert Coontz, David Grimm (Online), Eliot Marshall, Jeffrey Mervis, Leslie Roberts, John Travis**; CONTRIBUTING EDITORS **Elizabeth Culotta, Polly Shulman**; NEWS WRITERS **Yudhjit Bhattacharjee, Adrian Cho, Jennifer Couzin-Frankel, Carolyn Gramling, Jocelyn Kaiser, Richard A. Kerr, David Malakoff, Greg Miller, Elizabeth Pennisi, Robert F. Service (Pacific NW), Erik Stokstad**; WEB DEVELOPER **Daniel Berger (Intern Jane L. Lee)**; CONTRIBUTING CORRESPONDENTS **Jon Cohen (San Diego, CA), Daniel Ferber, Ann Gibbons, Sam Keen, Andrew Lawler, Mitch Leslie, Charles C. Mann, Virginia Morell, Gary Taubes**; COPY EDITORS **Linda B. Felaco, Melvin Gallatin, Melissa Raimondi**; ADMINISTRATIVE SUPPORT **Scheraine Mack; BUREAU SAN DIEGO, CA: 760-942-3252, FAX 760-942-4979; Pacific Northwest: 503-963-1940**
 PRODUCTION DIRECTOR **Wendy K. Shank**; ASSISTANT MANAGERS **Rebecca Doshi, Lori Murphy**; SENIOR SPECIALISTS **Steve Forrester, Chris Redwood, Anthony Rosen**; PREFLIGHT DIRECTOR **David M. Tompkins**; MANAGER **Marcus Spiegler**; SPECIALISTS **Jason Hillman, Tara Kelly**
 ART DIRECTOR **Yael Fitzpatrick**; ASSOCIATE ART DIRECTOR **Laura Creveling**; SENIOR ILLUSTRATORS **Chris Bickel, Katharine Sutliff**; ILLUSTRATORS **Yana Hammond, Briceilyn Strauch**; SENIOR ART ASSOCIATES **Holly Bishop, Preston Huey, Nayomi Keityiyagala**; ART ASSOCIATE **Kay Engman**; PHOTO EDITOR **Leslie Blizard**

SCIENCE INTERNATIONAL

EUROPE (science@science-int.co.uk) EDITORIAL: INTERNATIONAL MANAGING EDITOR **Andrew M. Sugden**; SENIOR EDITOR/COMMENTARY **Julia Fahrenkamp-Uppenbrink**; SENIOR EDITORS **Caroline Ash, Stella M. Hurltle, Ian S. Osborne, Peter Stern**; ASSOCIATE EDITOR **Maria Cruz**; CONTRIBUTING EDITOR **Helen Pickersgill**; EDITORIAL SUPPORT **Samantha Hogg, Alice Whaley**; ADMINISTRATIVE SUPPORT **Janet Clements, Nicola Morris, John Wood**; NEWS: DEPUTY NEWS EDITOR, U.K. **Daniel Clerly**; CONTRIBUTING EDITOR, EUROPE **Martin Enserink**; CONTRIBUTING CORRESPONDENTS **Michael Balter (Paris), John Bohannon (Vienna), Gretchen Vogel (Berlin)**
 ASIA Japan Office: **Asca Corporation, Tomoko Furusawa, Rustic Bldg. 7F, 77 Tenjin-cho, Shinjuku-ku, Tokyo 162-0808, Japan; +81 3 6802 4616, FAX +81 3 6802 4615, inquiry@sciencemag.jp**; ASIA NEWS EDITOR **Richard Stone (Beijing: rstone@aaas.org)**; CONTRIBUTING CORRESPONDENTS **Dennis Normile [Japan: +81 (0) 3 3991 0630, FAX +81 (0) 3 5936 3531; dnormile@gol.com]; Hao Xin [China: cindyhao@gmail.com]; Mara Hvistendahl [China: mara@marahvistendahl.com]; Pallava Bagla [South Asia: +91 (0) 11 2271 2896; pbagla@vsnl.com]**

SUBSCRIPTION SERVICES For change of address, missing issues, new orders and renewals, and payment questions: 866-434-AAAS (2227) 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 www.apisource.com/aaas/ code MKB6; AAAS Travels: Betchart Expeditions 800-252-4910; Apple Store www.apple.com/epptstore/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/portal/login.do>; Seabury & Smith Life Insurance 800-424-9883; Subaru VIP Program 202-326-6417; VIP Moving Services 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 positions 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, engineering, and innovation throughout the world for the benefit of all people. The goals of the association are to: enhance communication among scientists, engineers, and the public; promote and defend the integrity of science and its use; strengthen support for the science and technology enterprise; provide a voice for science on societal issues; promote the responsible use of science in public policy; strengthen and diversify the science and technology workforce; foster education in science and technology for everyone; increase public engagement with science and technology; and advance international cooperation in science.

INFORMATION FOR AUTHORS

See pages 752 and 753 of the 10 February 2012 issue or access www.sciencemag.org/about/authors

SENIOR EDITORIAL BOARD

A. Paul Alivisatos, Lawrence Berkeley Nat'l. Laboratory
Cori Bargmann, The Rockefeller Univ.
Ernst Fehr, Univ. of Zurich
Erin O'Shea, Harvard Univ.
Michael S. Turner, University of Chicago

BOARD OF REVIEWING EDITORS

Adriano Aguzzi, Univ. Hospital Zürich
Takuzo Aida, Univ. of Tokyo
Sonia Altizer, Univ. of Georgia
Sebastian Amigorena, Institut Curie
Angelika Amon, MIT
Kathryn Anderson, Memorial Sloan-Kettering Cancer Center
Siv G. E. Andersson, Uppsala Univ.
Peter Andolfatto, Princeton Univ.
Meinrat O. Andreae, Max Planck Inst., Mainz
Johan Auwerx, EPFL
David Auschlainn, Univ. of California Santa Barbara
John A. Bargh, Yale Univ.
Ben Barres, Stanford Medical School
Jordi Bascompte, Estación Biológica de Doñana, CSIC
Facundo Batista, London Research Inst.
Raymond B. Beaman, Univ. of Texas, Dallas
Daniel Baum, Univ. of Wisconsin
Mark Bear, Massachusetts Inst. of Technology
Yasmine Belkaid, NIAID, NIH
Philip Benfey, Duke Univ.
Stephen J. Benkovic, Penn State Univ.
Gregory C. Berzosa, Ohio State Univ.
Gabriele Bergers, Univ. of San Francisco
Peer Bork, EMBL
Bernard Bourdon, Ecole Normale Supérieure de Lyon
Ian Boyd, Univ. of St. Andrews
Christian Büchel, Universitätsklinikum Hamburg-Eppendorf
Joseph A. Burns, Cornell Univ.
William P. Butz, Population Reference Bureau
Georgy Buzsáki, Rutgers Univ.
Mats Carlsson, Univ. of Oslo
Mildred Cho, Stanford Univ.
David Clapham, Children's Hospital, Boston
David Clary, Univ. of Oxford
Jonathan D. Cohen, Princeton Univ.
Robert Cook-Deegan, Duke Univ.
James Collins, Boston Univ.
Alan Cowman, Walter & Eliza Hall Inst.
Robert H. Crabtree, Yale Univ.
Wolfgang Cramer, Medit. Inst. for Ecology & Paleocology

F. Fleming Crim, Univ. of Wisconsin
Jeff L. Dangl, Univ. of North Carolina
Tom Daniel, Univ. of Washington
Frans de Waal, Emory Univ.
Stanslas Dehaene, Collège de France
Robert Desimone, MIT
Claude Desplan, New York Univ.
Ap Dijksterhuis, Radboud Univ. of Nijmegen
Dennis Discher, Univ. of Pennsylvania
Gerald W. Dorn II, Washington Univ. School of Medicine
Jennifer A. Douha, Univ. of California, Berkeley
Julian Downward, Cancer Research UK
Sebastian Dunn, Univ. of California, Los Angeles
Christopher Dye, WHO
David Ehrhardt, Carnegie Inst. of Washington
Tim Elston, Univ. of North Carolina at Chapel Hill
Berhard Ertl, Fritz-Haber-Institut, Berlin
Garry Everitt, Univ. of Cambridge
Paul G. Falkowski, Rutgers Univ.
Ernst Fehr, Univ. of Zurich
Tom Fenchel, Univ. of Copenhagen
Alain Fischer, INSERM
Jordan Fiske, Princeton Univ.
Anne C. Ferguson-Smith, Univ. of Cambridge
Wulfram Gerstner, EPFL Lausanne
Karl-Heinz Glassner, TU Braunschweig
Elizabeth Grove, Univ. of Chicago
Kai Guy, St. Jude's Children's Research Hospital
Taejip Ha, Univ. of Illinois at Urbana-Champaign
Christian Haas, Ludwig Maximilians Univ.
Steven Hahn, Friedrich-Schiller-Universität Jena
Gregory J. Hannon, Cold Spring Harbor Lab.
Martin Heimann, Max Planck Inst., Jena
Isaac Held, NOAA
James A. Hendler, Rensselaer Polytechnic Inst.
Jan G. Herzig, Swiss Fed. Inst. of Aquatic Science & Technology
Ray Hilborn, Univ. of Washington
Michael E. Himmel, National Renewable Energy Lab.
Katrin von Hinrichs, Univ. of Bremen
Kei Hirose, Univ. of Technology
David Hodell, Univ. of Cambridge
David Holden, Imperial College
Lora Hooper, UT Southwestern Medical Ctr at Dallas
Jeffrey A. Hubbell, EPFL Lausanne
Steven Jacobsen, Univ. of California, Los Angeles
Kai Johnsson, EPFL Lausanne
Peter Jonas, Universität Freiburg
William Kaelin Jr., Dana-Farber Cancer Inst.

Daniel Kahne, Harvard Univ.
Bernhard Keimer, Max-Planck Inst., Stuttgart
Joel Kingsolver, Univ. of North Carolina at Chapel Hill
Robert Kingston, Harvard Medical School
Roberto Kolter, Harvard Medical School
Alberto R. Kornblitt, Univ. of Buenos Aires
Leonid Kruglyak, Princeton Univ.
Thomas Langer, Univ. of Cologne
Mitchell A. Lazar, Univ. of Pennsylvania
David Lazer, Harvard Univ.
Virginia Lee, Univ. of Pennsylvania
Ottoline Leyser, Cambridge Univ.
Olle Lindvall, Univ. Hospital, Lund
Marcia C. Linn, Univ. of California, Berkeley
John Liu, Cornell Univ.
Jiangguo Liu, Michigan State Univ.
Jonathan Losos, Harvard Univ.
Ke Lu, Chinese Acad. of Sciences
Laura Machesky, CRUK Beatson Inst. for Cancer Research
Andrew P. Mackenzie, Univ. of St. Andrews
Charles Marshall, Univ. of Edinburgh
Oscar Marin, CSIC & Univ. Miguel Hernández
Charles Marshall, Univ. of California, Berkeley
Martin M. Matzuk, Baylor College of Medicine
Graham Medley, Univ. of Warwick
Yasushi Miyashita, Univ. of Tokyo
Richard Morris, Univ. of Edinburgh
Edward Moser, Norwegian Univ. of Science and Technology
Sean Munro, MRC Lab. of Molecular Biology
Thomas Murray, The Hastings Center
Nicola Nagaosa, Univ. of Tokyo
James Nelson, Stanford Univ. School of Med.
Timothy W. Nilsen, Case Western Reserve Univ.
Pär Nordlund, Karolinska Inst.
Hélène Nowotny, European Research Advisory Board
Uke O'Neill, Trinity College, Dublin
N. Phuan Ong, Princeton Univ.
Joe Orenstein, Univ. of California, Berkeley & Lawrence Berkeley National Lab.
Stuart H. Orkin, Dana-Farber Cancer Inst.
Harry Orr, Univ. of Minnesota
Christine Ortiz, MIT
Andrew Oswald, Univ. of Warwick
Jane Parker, Max-Planck Inst. of Plant Breeding Research
Donald R. Paul, Univ. of Texas at Austin
P. David Pearson, Univ. of California, Berkeley
Reginald M. Penner, Univ. of California, Irvine
John H. J. Petrini, Memorial Sloan-Kettering Cancer Center
Simon Philippot, Univ. of Florida

Philippe Poulin, CNRS
Colin Renfrew, Univ. of Cambridge
Trevor Robbins, Univ. of Cambridge
Barbara A. Romanowicz, Univ. of California, Berkeley
Jens Rostrup-Nielsen, Haldor Topsøe
John R. Ryan, Univ. of Science, Austin
Shimon Sakaguchi, Kyoto Univ.
Miguel Salmeron, Lawrence Berkeley National Lab
Jürgen Sandkühler, Medical Univ. of Vienna
Randy Seeger, Univ. of Cincinnati
Vladimir Shalaya, Purdue Univ.
Joseph Silk, Univ. of Oxford
Denis Simon, Univ. of Oregon
Alison Smith, Johns Innes Centre
Davor Solter, Inst. of Medical Biology, Singapore
John Speakman, Univ. of Aberdeen
Allan C. Spradling, Carnegie Institution of Washington
Jonathan Sprent, Garvan Inst. of Medical Research
Elisbeth Stern, ETH Zürich
Ira Tabas, Columbia Univ.
Yoshiko Takahashi, Nara Inst. of Science and Technology
John Thomas, Duke Univ.
Herbert V. Thoenes, Washington Univ.
Bert Vogelstein, Johns Hopkins Univ.
Cynthia Volkert, Univ. of Göttingen
Bence D. Walter, Harvard Medical School
Douglas Wallace, Dalhousie Univ.
Ian Walmaley, Univ. of Oxford
David A. Wardle, Swedish Univ. of Agric Sciences
Jonathan Zehr, Univ. of Tübingen
Detlef Weigel, Max-Planck Inst., Tübingen
Jonathan Weissman, Univ. of California, San Francisco
Uwe Wessler, Univ. of California, Riverside
Kathy Wilson, Karolinska Inst.
Ian A. Wilson, The Scripps Res. Inst.
Timothy D. Wilson, Univ. of Virginia
Jan Zanen, Leiden Univ.
Kenneth Zaret, Univ. of Penn. School of Medicine
Mayana Zatz, University of Sao Paulo
Jonathan Zehr, Univ. of California, Santa Cruz
Maria Zubair, MIT

BOOK REVIEW BOARD

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