

**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. Szuroimi (Tennessee), Valda Vinson, Jake S. Yeston, Laura M. Zahn (San Diego); **ASSOCIATE EDITORS** Kristen L. Mueller, Jelena Stajic, Sacha Vignieri, Nicholas S. Wigginton; **BOOK REVIEW EDITOR** Sherman J. Suter; **ASSOCIATE LETTERS EDITOR** Jennifer Silis; **EDITORIAL MANAGER** Cara Tate; **SENIOR COPY EDITORS** Jeffrey E. Cook, Cynthia Howe, Harry Jach, Lauren Kmeck, Barbara P. Ordway, Trista Wagoner; **COPY EDITOR** Chris Filiateau; **SENIOR EDITORIAL COORDINATORS** Carolyn Kyle, Beverly Shields; **EDITORIAL COORDINATORS** Joi S. Granger, Anita Wynn; **PUBLICATIONS ASSISTANTS** Ramatoulaye Diop, Aneera Dobbins, Jeffrey Hearn, Lisa Johnson, Dona Mathieu, Le-Toya Mayne Flood, Shannon McMahon, Scott Miller, Jerry Richardson, Teresa R. Sakon, Brian White; **EDITORIAL ASSISTANT** Patricia M. Moore; **EXECUTIVE EDITOR ASSISTANT** Yolanda O'Bannon (San Francisco); **EXECUTIVE ASSISTANT** Alison Crawford; **ADMINISTRATIVE SUPPORT** Maryrose Madrox; **EDITORIAL FELLOW** Melissa R. McCartney

**EDITORIAL DIRECTOR, WEB AND NEW MEDIA** Stewart Wills; **SENIOR WEB EDITOR** Sarah Crespi; **WEB EDITOR** Kerry Klein; **WEB DEVELOPMENT MANAGER** Martyn Green; **WEB DEVELOPERS** Corinna Cohn, Andrew Whitesell; **INTERN** Edward Hurme **NEWS DEPUTY NEWS EDITORS** Robert Coontz, David Grimm (Online), Eliot Marshall, Jeffrey Nervis, Leslie Roberts, John Travis; **CONTRIBUTING EDITORS** Elizabeth Culotta, Polly Shulman; **NEWS WRITERS** Yudhijit Bhattacharjee, Adrian Cho, Jennifer Couzin-Frankel, Carolyn Gramling, Jocelyn Kaiser, Richard A. Kerr, David Malachuk, Greg Miller, Elizabeth Pennisi, Robert F. Service (Pacific NW), Erik Stokstad; **WEB DEVELOPER** Daniel Berger; **SOCIAL MEDIA STRATEGIST** Meghna Sachdev; **INTERN** Emily Underwood; **CONTRIBUTING CORRESPONDENTS** John Bohannon, Jon Cohen (San Diego, CA), Ann Gibbons, Sam Kean, Eli Kintisch, Andrew Lawler, Mitch Leslie, Charles C. Mann, Virginia Morell, Gary Taubes; **COPY EDITORS** Melissa Raimondi, Kara Estelle, Linda B. Felaco; **ADMINISTRATIVE SUPPORT** Scherraine Mack; **BUREAU** San Diego, CA: 760-942-3252, FAX 760-942-4979; Pacific Northwest: 503-963-1940

**PRODUCTION DIRECTOR** Wendy K. Shank; **ASSISTANT MANAGER** Rebecca Doshi, Lori Murphy; **SENIOR SPECIALISTS** Steve Forrester, Christopher 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 Sutfitt; **ILLUSTRATOR** Yana Hammond; **SENIOR ART ASSOCIATES** Holly Bishop, Preston Huey; **ART ASSOCIATES** Kay Engman, Garvin Grullón, Chrystal Smith; **PHOTO EDITOR** Leslie Blizard

### SCIENCE INTERNATIONAL

**EUROPE** (science@science-int.ck.uio.no) **EDITORIAL: INTERNATIONAL MANAGING EDITOR** Andrew M. Sugden; **SENIOR EDITOR/COMMENTARY** Julia Fahrenkamp-Uppenbrink; **SENIOR EDITORS** Caroline Ash, Stella M. Hurtle, Ian S. Osborne, Peter Stern; **ASSOCIATE EDITOR** Maria Cruz; **CONTRIBUTING EDITOR** Helen Pickersgill; **EDITORIAL SUPPORT** Rachel Roberts, Alice Whaley; **ADMINISTRATIVE SUPPORT** Janet Clements, John Wood; **NEWS: DEPUTY NEWS EDITOR**, U.K. Daniel Clery; **CONTRIBUTING EDITOR**, EUROPE Martin Enserink; **CONTRIBUTING CORRESPONDENTS** Michael Balter (Paris), Kai Kupferschmidt (Berlin), 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 3391 0630, FAX +81 (0) 3 5936 3531; dnormile@gol.com]; Hao Xin [China: cindyhao@gmail.com]; Mara Hvistendahl [China: mhvisten@aaas.org]; Pallava Bagla [South Asia: +91 (0) 11 2271 2896; pbagla@vsnl.com]

**FULFILLMENT SYSTEMS AND OPERATIONS** (membership@aaas.org); **CUSTOMER SERVICE SUPERVISOR** Pat Butler; **SPECIALISTS** LaToya Casteel, Michelle Ofordire, April Marshall; **MANAGER, DATA ENTRY** Mickie Napoleoni; **DATA ENTRY SPECIALISTS** Tarrika Hill, JJ Regan, Eva Mae Campbell

**BUSINESS OPERATIONS AND ADMINISTRATION DIRECTOR** Deborah Rivera-Wienhold; **BUSINESS SYSTEMS AND FINANCIAL ANALYSIS DIRECTOR** Randy Yi; **MANAGER, FULFILLMENT SYSTEMS** Frits Buningh; **SYSTEMS ANALYST** Nicole Mehmedovich; **MANAGER, BUSINESS ANALYSIS** Eric Knott; **MANAGER, BUSINESS OPERATIONS** Jessica Tierney; **BUSINESS ANALYSTS** Cory Lipman, Celeste Troxler; **Christine Wehrli**; **FINANCIAL ANALYST** Julia Nguyen; **RIGHTS AND PERMISSIONS: ADMINISTRATOR** Emilie David; **ASSOCIATE** Elizabeth Sandler; **MARKETING DIRECTOR** Ian King; **MARKETING MANAGERS** Allison Pritchard, Alison Chandler, Julianne Wielga, Samantha Smith; **MARKETING ASSOCIATES** Aimee Aponte, Mary Ellen Crowley, Elizabeth Sattler, Rebecca Riffkin; **SENIOR MARKETING EXECUTIVE** Jennifer Reeves; **DIRECTOR, SITE LICENSING** Tom Ryan; **DIRECTOR, CORPORATE RELATIONS** Eileen Bernadette Moran; **SENIOR PUBLISHER RELATIONS SPECIALIST** Kiki Forsythe; **PUBLISHER RELATIONS MANAGER** Catherine Holland; **PUBLISHER RELATIONS, EASTERN REGION** Keith Layson; **PUBLISHER RELATIONS, WESTERN REGION** Ryan Rexroth; **CUSTOMER RELATIONS MANAGER** Iqoo Edim; **MARKETING MANAGER** Christina Schlecht; **MARKETING ASSOCIATES** Paulina Curto, Mitchell Edmund; **CUSTOMER RELATIONS ASSOCIATE: Joe Horn**; **ELECTRONIC MEDIA: DIRECTOR** Lizabeth Harman; **ASSISTANT MANAGER** Lisa Stanford; **PRODUCTION SPECIALISTS** Antoinette Hodal, Thomas Jaensch, Nichele Johnston, Kimberly Oster; **WEB AND NEW MEDIA: SENIOR PROJECT MANAGER** Trista Smith; **PROJECT LEADER** Luke Johnson **COMPUTER SPECIALISTS** Walter Jones, Kai Zhang, **WEB DEVELOPER** Jeremy Bates; **PROGRAM DIRECTOR, AAAS MEMBER CENTRAL** Peggy Mihelich **DIRECTOR, GLOBAL COLLABORATION, CUSTOM PUBLICATIONS, ADVERTISING** Bill Moran **EDITOR, CUSTOM PUBLISHING** Sean Sanders: 202-326-6430

**ASSISTANT EDITOR, CUSTOM PUBLISHING** Tianna Hicklin 202-326-6463 **ASSOCIATE DIRECTOR, COLLABORATION, CUSTOM PUBLICATIONS/CHINA/TAIWAN/KOREA/ SINGAPORE** Ruolei Wu: +86 1367-101-5294

**PRODUCT** (science\_advertising@aaas.org); **MIDWEST** Rick Bongiovanni: 330-405-7080, FAX 330-405-7081; **EAST COAST/E. CANADA** Laurie Faraday: 508-747-9395, FAX 617-507-8189; **WEST COAST/W. CANADA** Lynne Stickrod: 415-931-9782, FAX 415-520-6940; **UK EUROPE/ ASIA** Roger Gonçalves: TEL/FAX +41 43 243 1358; **JAPAN**, Makiko Hara: +81 (0) 3 6802 4616, FAX +81 (0) 3 6802 4615; ads@sciencemag.jp; **CHINA/TAIWAN** Ruolei Wu: +86 1367 1015 294 rwu@aaas.org

**WORLDWIDE ASSOCIATE DIRECTOR OF SCIENCE CAREERS** Tracy Holmes: +44 (0) 1223 326525, FAX +44 (0) 1223 326532

**CLASSIFIED** (advertise@sciencereaders.org); **U.S.: EAST COAST/WEST COAST/SOUTH CENTRAL/SOUTH AMERICA** Tina Burks: 202-326-6577; **MIDWEST/CANADA/INDUSTRY** Allyson Rose: 202-326-6578; **SALES ADMINISTRATOR** Marci Gallun; **EUROPE/ROW** Sales Benjamin Asfaha, Lucy Nelson; **SALES ASSISTANT** Kelly Grace; **JAPAN** Yuri Kobayashi: +81 (6) 6627-9250; **CAREERS** ads@sciencemag.jp; **CHINA/TAIWAN** Ruolei Wu: +86 1367 1015 294 rwu@aaas.org; **ADVERTISING SUPPORT MANAGER** Karen Foote: 202-326-6740; **ADVERTISING PRODUCTION OPERATIONS MANAGER** Deborah Tompkins; **SENIOR PRODUCTION SPECIALIST/GRAPHIC DESIGNER** Amy Hardcastle; **PRODUCTION SPECIALIST** Yuse Yajimimshuy; **SENIOR TRAFFIC ASSOCIATE** Christine Hall; **SALES COORDINATOR** Shirley Young

**AAAS BOARD OF DIRECTORS** RETIRING PRESIDENT, CHAIR Nina V. Fedoroff; **PRESIDENT** William H. Press; **RETIREMENT-ELECT** Phillip A. Sharp; **TREASURER** David E. Shaw; **CHIEF EXECUTIVE OFFICER** Alan I. Leshner; **BOARD** May R. Berenbaum, Bonnie L. Bassler, Stephen L. Mayo, Raymond Orbach, Julia M. Phillips, Sue V. Rosser, David D. Sabatini, Inder M. Verma



ADVANCING SCIENCE. SERVING SOCIETY

### INFORMATION FOR AUTHORS

See pages 752 and 753 of the 10 February 2012 issue or access [www.sciencemag.org/about/authors](http://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 Anton**, 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 Awschalom**, Univ. of California Santa Barbara  
**Ben Barres**, Stanford Univ.  
**Jordi Bascompte**, Estación Biológica de Doñana, CSIC  
**Facundo Batista**, London Research Inst.  
**Ray H. Baughman**, Univ. of Texas, Dallas  
**David Baum**, Univ. of Wisconsin  
**Mark Bear**, Massachusetts Inst. of Technology  
**Yasmine Belkaid**, NIAID, NIH  
**Philip Benfey**, Duke Univ.  
**Stephen J. Benkovic**, Penn State Univ.  
**Christophe Bernard**, Aix-Marseille Univ.  
**Gregory C. Berzix**, Stanford Univ.  
**Gabriele Bergers**, Univ. of California, San Francisco  
**Peer Bork**, EMBL  
**Bernard Bourdon**, Ecole Normale Supérieure de Lyon  
**Ian Boyd**, Univ. of St. Andrews  
**Christian Büchel**, Universität Hamburg-Eppendorf  
**Joseph A. Burns**, Cornell Univ.  
**William P. Butz**, Population Reference Bureau  
**Gyorgy Buzsáki**, New York Univ., School of Medicine  
**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**, Mediterranean Inst. of Biodiversity and Ecology  
**F. Fleming Crim**, Univ. of Wisconsin  
**Jeff L. Dangl**, Univ. of North Carolina  
**Tom Daniel**, Univ. of Washington

**Frans de Waal**, Emory Univ.  
**Stefanis 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**, Washington Univ. School of Medicine  
**Jennifer A. Doudna**, Univ. of California, Berkeley  
**Julian Downward**, Cancer Research UK  
**Bruce Dunn**, Univ. of California, Los Angeles  
**Christopher Dye**, WHO  
**David Ehrhardt**, Carnegie Inst. of Washington  
**Tim Elston**, Univ. of North Carolina at Chapel Hill  
**Gerhard Ertl**, Fritz-Haber-Institut, Berlin  
**Barry Everitt**, Univ. of Cambridge  
**Paul G. Falkowski**, Rutgers Univ.  
**Ernst Fehr**, Univ. of Zurich  
**Tom Fenchel**, Univ. of Copenhagen  
**Michael Feuer**, The George Washington Univ.  
**Alain Fischer**, INSERM  
**Susan Fiske**, Princeton Univ.  
**Anne C. Ferguson-Smith**, Univ. of Cambridge  
**Wulfraim Gerstner**, EPFL Lausanne  
**Karl-Heinz Glassmeier**, TU Braunschweig  
**Elizabeth Grove**, Univ. of Chicago  
**Kip Guy**, St. Jude's Children's Research Hospital  
**Taejick Ha**, Univ. of Illinois at Urbana-Champaign  
**Christian Haass**, Ludwig Maximilians Univ.  
**Steven Hahn**, Fred Hutchinson Cancer Research Center  
**Gregory J. Hannon**, Cold Spring Harbor Lab.  
**Kai Johnson**, Max Planck Inst., Jena  
**Isaac Held**, NOAA  
**James A. Hendler**, Rensselaer Polytechnic Inst.  
**Janet G. Hering**, Swiss Fed. Inst. of Aquatic Science & Technology  
**Ray Hilborn**, Univ. of Washington  
**Michael E. Himmel**, National Renewable Energy Lab.  
**Kai-Uwe Hinrichs**, Univ. of Bremen  
**Kei Hirose**, Tokyo Inst. of Technology  
**David Holdell**, Univ. of Cambridge  
**David Holdier**, Imperial College  
**Lora Hooper**, UT Southwestern Medical Ctr at Dallas  
**Jeffrey A. Hubbell**, EPFL Lausanne  
**Thomas Hudson**, Ontario Inst. for Cancer Research  
**Steven Jacobsen**, Univ. of California, Los Angeles  
**James C. Jones**, EPRU  
**Peter Jonas**, Universität Freiburg  
**William Kaelin Jr.**, Dana-Farber Cancer Inst.  
**Daniel Kahne**, Harvard Univ.  
**Daniel Kammen**, Univ. of California, Berkeley  
**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  
**Janiguo Liu**, Michigan State Univ.  
**Jonathan Losos**, Harvard Univ.  
**Ke Lu**, Chinese Acad. of Sciences  
**Christian Lüscher**, Univ. of Geneva  
**Laura Maresky**, CRUK Beatson Inst. for Cancer Research  
**Anne Magurran**, Univ. of St. Andrews  
**Oscar Marin**, CSIC & Univ. Miguel Hernández  
**Charles Marshall**, Univ. of California, Berkeley  
**Martin M. Matzuk**, Baylor College of Medicine  
**Graham Medley**, Univ. of Warwick  
**Yasuhiko 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 Wellings Center  
**Naoto Nagaoa**, Univ. of Tokyo  
**James Nelson**, Stanford Univ. School of Med.  
**Timothy W. Nilsen**, Case Western Reserve Univ.  
**Pär Nordlund**, Karolinska Inst.  
**Martin O'Connell**, European Research Advisory Board  
**Luke O'Neill**, Trinity College, Dublin  
**Stuart Newman**, New York Medical College  
**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  
**Steve Palaniappan**, Stanford Univ.  
**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. Petring**, Memorial Sloan-Kettering Cancer Center  
**Simon Philippot**, Univ. of Florida  
**Joshua Plotkin**, Univ. of Pennsylvania  
**Philippe Poulain**, CNRS  
**Colin Renfrew**, Univ. of Cambridge  
**Trevor Roberts**, Univ. of Cambridge  
**Barbara A. Romanowicz**, Univ. of California, Berkeley

**Jens Rostrup-Nielsen**, Haldor Topsøe  
**Mikie Ryan**, Univ. of Texas, Austin  
**Shimon Sakauchi**, Kyoto Univ.  
**Miguel Salmeron**, Lawrence Berkeley National Lab  
**Jürgen Sandkühner**, Medical Univ. of Vienna  
**Randy Seeley**, Univ. of Cincinnati  
**Walter Skalet**, Purdue Univ.  
**Joseph Silk**, Institut d'Astrophysique de Paris  
**Demis Simon**, Arizona State Univ.  
**Alan Smith**, John Innes Centre  
**Davor Solter**, Inst. of Medical Biology, Singapore  
**Peter Sörger**, Harvard Medical School  
**John Speakman**, Univ. of Aberdeen  
**Jonathan C. Spradling**, Carnegie Institution of Washington  
**Allan Snaren**, Garvan Inst. of Medical Research  
**Paula Stephan**, Georgia State Univ. and National Bureau of Economic Research  
**Elisbeth Stern**, ETH Zürich  
**Ira Tabas**, Columbia Univ.  
**Yoshiko Takahashi**, Kyoto Univ.  
**Sarah Teichmann**, Cambridge Univ.  
**John Thomas**, Duke Univ.  
**Herbert Virgin**, Washington Univ.  
**Bert Vogelstein**, Johns Hopkins Univ.  
**Cynthia Volkert**, Univ. of Göttingen  
**Bruce D. Walker**, Harvard Medical School  
**Douglas Wallace**, Dalhousie Univ.  
**Ian Wamley**, Univ. of Oxford  
**David A. Wardle**, Swedish Univ. of Agril Sciences  
**David Waxman**, Fudan Univ.  
**Detlef Weigel**, Max-Planck Inst., Tübingen  
**Jonathan Weissman**, Univ. of California, San Francisco  
**Wes Westler**, Univ. of California, Riverside  
**Kathy Willis**, Oxford Univ.  
**Ian A. Wilson**, The Scripps Res. Inst.  
**Timothy D. Wilson**, Univ. of California  
**Rosemary Wyse**, Johns Hopkins Univ.  
**Jan Zaenen**, Leiden Univ.  
**Kenneth Zaret**, Univ. of Penn. School of Medicine  
**Mayana Zatz**, University of Sao Paulo  
**Jonathan Zeitlin**, Univ. of California, Santa Cruz  
**Maria Zuber**, MIT

### BOOK REVIEW BOARD

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