This Week in Science

Editorial

Sequences and Consequences of the Human Genome

Letters


News & Comment

Gasoline: The Unclean Fuel?
A Catbird's Seat on Amazon Destruction
A Conversation with D. Allan Bromley
Plan for Genome Centers Sparks a Controversy
Will New Evidence Support Cold Fusion?
Hot Fusion Plans Get Icy Reception
Supercomputer Policy Under Review

Research News

Conductive Polymers Recharged ■ In Search of Stability
A New Soviet Plan for Exploring the Planets
An Astrophysical Guide to the Weather on Earth
Neptune's Triton Spews a Plume
Briefings: Engineers’ Nobel to Microchip Pioneers ■ Scientific Illiteracy ■ Math Magazine for Gifted Students ■ Go-Ahead for Colon Cancer Treatment ■ Permanent R&D Tax Credit Moves Ahead ■ Dallas HIV Survey Proceeding ■ Activists Call for Procter & Gamble Boycott ■ Baltimore Asked to Head Rockefeller

Articles

Understanding Behavior in Escalation Situations: B. M. Staw and J. Ross
Systems Analysis at the Molecular Scale: H. Rabitz
Lectins as Cell Recognition Molecules: N. Sharon and H. Lis

Research Articles


SCIENCE is published weekly on Friday, except the last week in December, and with an extra issue in March 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 at an additional entry. Now combined with The Scientific Monthly’s Copyright © 1989 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): $75. Domestic institutional subscription (51 issues): $120. Foreign postage extra: Canada $46, other (surface mail) $46, air mail via Amsterdam $85. First class, airmail, school-year, and student rates on request. Single copy sales: Current issue, $3.50; back issues, $5.00; Biotechnology issue, $6.00 (for postage and handling, add per copy $0.50 U.S., $1.00 all foreign); Guide to Biotechnology Products and Instruments, $18 (for postage and handling add per copy $1.00 U.S., $1.50 Canada, $2.00 other foreign). 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 page plus $0.10 per page is paid directly to CCC, 27 Congress Street, Salem, Massachusetts 01970. The identification code for Science is 0036-8075/83 $1 + .10. Change of address: allow 6 weeks, giving old and new addresses and 11-digit account number. Postmaster: Send Form 3579 to Science, P.O. Box 1722, Riverton, NJ 08077. Science is indexed in the Reader's Guide to Periodical Literature and in several specialized indexes.

The American Association for the Advancement of Science was founded in 1848 and incorporated in 1874. Its objects are to further the work of scientists, to facilitate cooperation among them, to foster scientific freedom and responsibility, to improve the effectiveness of science in the promotion of human welfare, and to increase public understanding and appreciation of the importance and promise of the methods of science in human progress.
Living nonadherent P388D1 cells (from murine lymphoid neoplasm), stained here with a red fluorescent dye, are retained in wells (50 μm square and 50 μm deep) etched into the surface of a potentiometric silicon biosensor. The sensor measures metabolic rates, which are affected by a variety of biological and chemical agents. See page 243. [Photograph by J. C. Owicki and K. M. Kercso, Molecular Devices Corporation, Menlo Park, CA 94025]

**Reports**

241 The Early Radiation and Relationships of the Major Arthropod Groups: D. E. G. Briggs and R. A. Fortey


247 One Enzyme Makes a Fungal Pathogen, But Not a Saprophyte, Virulent on a New Host Plant: W. Schäfer, D. Straney, L. Ciuffetti, H. D. Van Etten, O. C. Yoder

249 Interleukin-1 Costimulatory Activity on the Interleukin-2 Promoter Via AP-1: K. Muegge, T. M. Williams, J. Kant, M. Karin, R. Chiu, A. Schmidt, U. Siebenlist, H. A. Young, S. K. Durum


257 Protection of Dentate Hilar Cells from Prolonged Stimulation by Intracellular Calcium Chelation: H. E. Scharfman and P. A. Schwartzkroin

**Technical Comments**


**Meetings**

264 Gordon Research Conferences: Winter Program ■ Registration Form: A. M. Cruckshank

**Book Reviews**

271 Cults, reviewed by W. S. Bainbridge ■ Perspectives in Ecological Theory, A. M. Hastings ■ Rigid-Chain Polymers, R. E. Prud'Homme and R. S. Stein ■ Books Received

**Products & Materials**

275 Composition Analysis of Unknown Samples ■ Integrated Laboratory for Complete DNA Analysis ■ Monoclonal Antibodies ■ pH Checker and Fault Locator ■ HIV-1 Research Test Kit ■ Intracellular Ion Measuring System ■ Literature
Science 246 (4927), 187-275.