This Week in Science

Frontiers in Biotechnology


CEBAF schedule uncertainty; feds formalizing DNA fingerprinting rules; etc.

A "Chilly Climate" for Women?
Scientists Get Mad at OSI: Richards Panel Out of the Loop? ■ Did Imanishi-Kari Get a Fair "Trial"?
French Ban Immunotherapy Treatment Steps Toward a Cooler Greenhouse
To Stop Kuwait's Fires, First Clear the Mines
Ad Hoc Team Revives SSC Competition
Gene Mapping Japan's Number One Crop

A Genetic Survey of Vanishing Peoples ■ Scientific Split Over Sampling Strategy
Yanomami People Threatened
A Core-Mantle Link?
Gambling on a Shortcut to Genome Sequencing
A Well-Rounded Worm: 220 Kilobases and Counting ■ The Education of C. elegans ■ Roundworm as Canary?
Can Earth's Internal Heat Drive Ocean Circulation?

Recent Advances in the Polymerase Chain Reaction: H. A. ERLICH, D. GELFAND, J. J. SNIJSKY
Monoclonal Antibodies in Diagnosis and Therapy: T. A. WALDMANN
Vaccinia Virus: A Tool for Research and Vaccine Development: B. MOSS

Toward a Science of Metabolic Engineering: J. E. BAILEY

Frontiers in Biotechnology

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. 484/460) paid at Washington, DC, and additional mailing offices. Copyright © 1991 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): $82 ($50 solicited to subscription). Domestic institutional subscription (51 issues): $150. Foreign postage extra: Canada $46, other (surface mail) $46, air freight $60. First class, airmail, school-year, and student rates on request. 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 2003, Marion, OH 43305-2003. 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 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, Massachusetts 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.

The American Association for the Advancement of Science was founded in 1848 and incorporated in 1874. Its objectives 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, to advance education in science, and to increase public understanding and appreciation of the importance and promise of the methods of science in human progress.
COVER Inspired by Leonardo da Vinci's "Proportions of the Human Figure According to Vitruvius," the cover image symbolizes that the creativity of scientists is at the center of technological advances. Scientists' curiosity about biological processes has often led to discoveries that proved useful for biotechnology. One-half of the figure's appendages are robot-like, showing that technology is an extension of its creator. The figure holds a flask of microorganisms, an antibody, and oligonucleotide primers, representing some of the tools of biotechnology discussed in this issue; the fistful of dollars signifies the entrepreneurial aspect of biotechnology. See pages 1643 to 1681. [Illustration by Julie Cherry]

1675 Network Rigidity and Metabolic Engineering in Metabolite Overproduction: G. STEPHANOPoulos and J. J. VALLINO

Research Article

1682 Class II Aminoacyl Transfer RNA Synthetases: Crystal Structure of Yeast Aspartyl-tRNA Synthetase Complexed with tRNA<sup>Asp</sup> • M. RUFF, S. KRISHNASWAMY, M. BOELGIN, A. POTERSZMAN, A. MITSCHLER et al.

Reports


1693 Identification of Widespread Pollution in the Southern Hemisphere Deduced from Satellite Analyses: J. FISHMAN, K. FAKHRUZZAMAN, B. CROS, D. NGANGA

1696 Identity Elements for Specific Aminoacylation of Yeast tRNA<sup>Asp</sup> by Cognate Aspartyl-tRNA Synthetase: J. PÜTZ, J. D. PUGLISI, C. FLORENTZ, R. GIEGÉ

1700 Prevention of Xenograft Rejection by Masking Donor HLA Class I Antigens: D. FAUSTMAN and C. COE


1705 Requirement of Heparan Sulfate for bFGF-Mediated Fibroblast Growth and Myoblast Differentiation: A. C. RAPRAEGER, A. KRUKFA, B. B. OLWIN

1708 Identification of p53 as a Sequence-Specific DNA-Binding Protein: S. E. KERN, K. W. KINZLER, A. BRUSKIN, D. JAROSZ, P. FRIEDMAN, C. PRIVES, B. VOGELSTEIN

1711 Mapping of DNA Instability at the Fragile X to a Trinucleotide Repeat Sequence p(CCG)<sub>n</sub>: E. J. KREMER, M. Pritchard, M. LYNCH, S. YU, K. HOLMAN, E. BAKER, S. T. WARREN, D. SCHLESSINGER, G. R. SUTHERLAND et al.

1715 Structural Determinants of Ion Flow Through Recombinant Glutamate Receptor Channels: T. A. VEROORD, N. BURNASHEV, H. MONYER, P. H. SEEBURG, B. SARKMANN

1718 Facilitation of the Induction of Long-Term Potentiation by GABA<sub>B</sub> Receptors: D. D. MOTT and D. V. LEWIS

Book Reviews

1727 The Invisible Hand, reviewed by L. G. NEUBERG | The Creation of the Anglo-Australian Observatory, R. W. SMITH | The Physics of Musical Instruments, D. E. HALL | Combustion, O. I. SMITH | Books Received

Products & Materials

1731 Transgenic Mice | Organics Removal and Concentration Kit | Configurations Adapter for 3-D Imaging | Primer Design Software | DNA and Protein Sequence Analysis Software Updated | Dot Blotter | Visual Comparison of Chromatograms | Literature
Science 252 (5013), 1591-1731.

http://science.sciencemag.org/content/252/5013

http://www.sciencemag.org/help/reprints-and-permissions

Use of this article is subject to the Terms of Service