This Week in Science

Frontiers in Biotecnology

Citation Counting: T. C. Morrill; R. M. Bateman • Satellite Oceanography in the 1980s: R. E. Cheney and B. C. Douglas • Regulation of Biotecnology: H. I. Miller, R. H. Burris, A. K. Viderer • The Trabi: Not a Problem: K. Konope • Journal of Biological Chemistry and Protein Crystallization Papers: H. Tabor • Antinoise and Energy Expenditure: J. T. Durkin

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

Briefings: Back to the Future • A Tasty Tufted Tuber • Women's Health: A World Crisis • Researcher's Legal Battle Ends • The SIDS-Seal Connection • A Nuclear Cure for Nuclear Waste • When Do You Send Blue Roses?

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. Sninsky
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 Biotecnology

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 Aminocyl Transfer RNA Synthetases: Crystal Structure of Yeast Aspartyl-tRNASynthetase Complexed with tRNA\(^{\text{AMP}}\): M. RUFF, S. KRISHNASWAMY, M. BOEGLIN, 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 Aminoclaytion of Yeast tRNA\(^{\text{AMP}}\) by Cognate Aspartyl-tRNA Synthetase: J. PUTZ, J. D. PUGLISI, C. FLORENTZ, R. GIEGE

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

1703 Selective Elimination of HIV-1-Infected Cells with an Interleukin-2 Receptor-Specific Cytotoxin: R. W. FINKERG, S. M. WAHL, J. B. ALLEN, G. SOMAN, T. B. STROM, J. R. MURPHY, J. C. NICHOLS

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


1715 Structural Determinants of Ion Flow Through Recombinant Glutamate Receptor Channels: T. A. VERDOORN, N. BURNASH, H. MONYER, P. H. SEEBURG, B. SAKMAN

1718 Facilitation of the Induction of Long-Term Potentiation by GABA\(_B\) 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

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Table of Contents 1589

21 JUNE 1991
Science 252 (5013), 1591-1731.

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