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Frontiers in Biotechnology

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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. STEFANOPoulos and J. J. VALLino

Research Article

1682 Class II Aminocyl Transfer RNA Synthetases: Crystal Structure of Yeast Asparty-tRNA Synthetase Complexed with tRNA 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 Aminoclaylation of Yeast tRNA AMP by Cognate Asparty-tRNA Synthetase: J. PÜTZ, 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 Cytoxin: R. W. FINBerg, 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. BURNASHEV, H. MONYER, P. H. SEEBURG, B. SARKMANN

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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