NEWS & COMMENT

NASA at the Edge of the Abyss 20
Warm Reception for Substitute Coolant 22
The Academy Gives a Hard Push 23
The Richards Panel Tosses a Curve 23
NIH Spells Out Plans for A $45 Million Initiative 24
The Whitehead Institute Reaches Toward Adulthood 25

RESEARCH NEWS

Putting a Cosmic Illusion to Work 30
Test Could Yield Improved Colon Cancer Detection 32
Neandertal Language Debate: Tongues Wag Anew 33
Is "Flying Primate" Hypothesis Headed for a Crash Landing? 34
Fugitive Carbon Dioxide: It's Not Hiding in the Ocean 35

SPECIAL SECTION

Computing in Science 44
The Third Branch of Science Debuts • Massively Parallel Machines Usher In Next Level of Computing Power • Mathematicians Join the Computer Revolution • Bringing the Computer Revolution Down to a Personal Level • Reader Response

PERSPECTIVES

Ultracomputers: A Teraflop Before Its Time 64
G. Bell
Selfish Genes 65
J. J. Bull, I. J. Molineux, J. H. Werren

ARTICLES

Physics and Device Applications of Optical Microcavities 66
H. Yokoyama
Biasm and Carbon Budget of European Forests, 1971 to 1990 70
P. E. Kauppi, K. Mielikainen, K. Kuusela

DEPARTMENTS

THIS WEEK IN SCIENCE 7
EDITORIAL 9
Scientific Research in Universities

LETTERS 11
Patenting Complementary DNA: A. Howarth; A. Ruberti • Anomalies in Sociology: D. P. Barash • The Search for Eve: R. L. Cann

SCIENCESCOPE 19
Patriot missile critic cleared, returns fire; USDA fishes for biotech regs; etc.

RANDOM SAMPLES 28
Rooting Out Waste in Academia • Soil and Trouble • Propping up Cold Fusion • Immunology: Pollutants a Growing Threat • A Case of Orbital Alzheimer's • Greening Greens the Old-Fashioned Way • Mercury's Metabolic Fingerprint

BOOK REVIEWS 116
Deadly Dust, reviewed by J. L. Weeks • Giving Blood, L. H. Aiken • Visionaries: Complexities and Simplicities • Books Received

PRODUCTS & MATERIALS 122
RESEARCH ARTICLE
Oceanic Uptake of Fossil Fuel CO₂: Carbon-13 Evidence
P. D. Quay, B. Tilbrook, C. S. Wong

REPORTS
Diamond from the Dabie Shan Metamorphic Rocks and Its Implication for Tectonic Setting
Xu Shutong, A. I. Okay, Ji Shouyuan, A. M. C. Sengör, Su Wen, Liu Yican, Jiang Laili

Variations in Strength and Slip Rate Along the San Andreas Fault System
C. H. Jones and S. G. Wesnousky

Rejection of the “Flying Primate” Hypothesis by Phylogenetic Evidence from the ε-Globin Gene
W. J. Bailey, J. L. Slightom, M. Goodman

Maternal-Effect Selfish Genes in Flour Beetles
R. W. Beeman, K. S. Friesen, R. E. Denell

A Conformation of Cyclosporin A in Aqueous Environment Revealed by the X-ray Structure of a Cyclosporin-Fab Complex
D. Altschuh, O. Vix, B. Rees, J.-C. Thierry

Competition for Overlapping Sites in the Regulatory Region of the Drosophila Gene and Krüppel
M. Hoch, N. Gerwin, H. Taubert, H. Jäckle

Molecular Cloning of the Interleukin-1β Converting Enzyme

Balancing Selection at Allozyme Loci in Oysters: Implications from Nuclear RFLPs
S. A. Karl and J. C. Avise

Identification of ras Oncogene Mutations in the Stool of Patients with Curable Colorectal Tumors
D. Sidransky, T. Tokino, S. R. Hamilton, K. W. Kinzler, B. Levin, P. Frost, B. Vogelstein

CD19: Lowering the Threshold for Antigen Receptor Stimulation of B Lymphocytes
R. H. Carter and D. T. Fearon

Participation of Non-Zinc Finger Residues in DNA Binding by Two Nuclear Orphan Receptors
T. E. Wilson, R. E. Paulsen, K. A. Padgett, J. Milbrandt

TECHNICAL COMMENTS
The Disulfide Folding Pathway of BPTI
T. E. Creighton; J. S. Weissman and P. S. Kim

Balancing Selection at Allozyme Loci in Oysters: Implications from Nuclear RFLPs
S. A. Karl and J. C. Avise

Identification of ras Oncogene Mutations in the Stool of Patients with Curable Colorectal Tumors
D. Sidransky, T. Tokino, S. R. Hamilton, K. W. Kinzler, B. Levin, P. Frost, B. Vogelstein

CD19: Lowering the Threshold for Antigen Receptor Stimulation of B Lymphocytes
R. H. Carter and D. T. Fearon

Participation of Non-Zinc Finger Residues in DNA Binding by Two Nuclear Orphan Receptors
T. E. Wilson, R. E. Paulsen, K. A. Padgett, J. Milbrandt

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. 484460) paid at Washington, DC, and additional mailing offices. Copyright © 1992 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): $87 (47 allocated to subscription). Domestic institutional subscription (51 issues): $195. Foreign postage extra: Mexico, Caribbean (surface mail) $50; other countries (air assist delivery) $95. First class, airmail, student and emeritus rates on request. Canadian rates with GST available upon request, GST #125488122. 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 2033, Marion, OH 43305-2033. 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 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 copy plus $0.10 per page is paid directly to CCC, 27 Congress Street, Salem, MA 01970. The identification code for Science is 0036-8075/82 $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.