LETTERS
Smoking and Longevity Studies: J. E. Enstrom; The Taub Case: A. R. Morrison and P. J. Hand

EDITORIAL
New Initiatives at NSF: E. A. Knapp

ARTICLES
Studying Enzyme Mechanism by $^{13}$C Nuclear Magnetic Resonance: N. E. Mackenzie, J. P. G. Malthouse, A. I. Scott
Lariat RNA's as Intermediates and Products in the Splicing of Messenger RNA Precursors: R. A. Padgett et al.

NEWS AND COMMENT
Day of Reckoning for the Garrison Project
Crisis Management Under Strain
Agent Orange: Guarded Reassurance
Briefing: Congress Votes $19 Million for Boston University: Scientists Offer to Be "Good-Faith Witnesses": House and Senate Prepare for Battle on Ag Research; Cancer Board Appointees Strong in Science

RESEARCH NEWS
Unexpected Zeta Particle Baffles Physicists
Steroid Hormone Systems Found in Yeast
Stereochemistry in a New Light

BOOK REVIEWS
Empire of Knowledge, reviewed by B. Parrott; Weapons and Hope, D. Frei; The Social Psychology of Creativity, M. Csikszentmihalyi; Masers and Lasers, J. R. Whinnery; Some Other Books of Interest; Books Received
REPORTS

Melting of Diamond: J. S. Gold et al. ................................................................. 921

Interstratified Clays as Fundamental Particles: P. H. Nadeau et al. ......................... 923

Ground Water Redox Reactions: An Analysis of Equilibrium State Applied to Eh Measurements and Geochemical Modeling: R. D. Lindberg and D. D. Runnells. ......................................................... 925

Homology of Genome of AIDS-Associated Virus with Genomes of Human T-Cell Leukemia Viruses: S. K. Arya et al. ............................................................... 927

Growth Self-Incitement in Murine Melanoma B16: A Phenomenological Model: Z. Bajzer, K. Pavelić, S. Vuk-Pavlovic ............................................................... 930

Heparin Binds Endothelial Cell Growth Factor, the Principal Endothelial Cell Mitogen in Bovine Brain: T. Maciag et al. ................................................................. 932

Small DNA Deletions Creating Avirulence in Streptococcus pyogenes: J. G. Spanier, S. J. C. Jones, P. Cleary ............................................................. 935

Scintigraphy of Normal Mouse Ovaries with Monoclonal Antibodies to ZP-2, the Major Zona Pellucida Protein: I. J. East et al. .................................................. 938


Distinctive Termini Characterize Two Families of Human Endogenous Retroviral Sequences: P. E. Steele et al. ................................................................. 943

Alzheimer’s Disease Brain: Alterations in RNA Levels and in a Ribonuclease-Inhibitor Complex: E. M. Sajdel-Sulkowska and C. A. Marotta. ......... 947

Mating and Pregnancy Can Occur in Genetically Hypogonadal Mice with Preoptic Area Brain Grafts: M. J. Gibson et al. ............................................. 949

The Goldfish Ear Codes the Axis of Acoustic Particle Motion in Three Dimensions: R. R. Fay ................................................................. 951

Neuroleptic-Induced Decrease in Plasma Homovanillic Acid and Antipsychotic Activity in Schizophrenic Patients: D. Pickar et al. ............................................. 954

Albumin and Australian Frogs: Molecular Data a Challenge to Speciation Model: L. R. Maxson and J. D. Roberts ...................................................... 957

COVER

Dirt to dirt and rust to rust. Our national economy is based on an investment of high-quality energy to upgrade natural resources into economically useful forms and to maintain finished products against natural entropic decay. There are strong statistical relations between energy use and important macroeconomic indicators for the United States—such as gross national product, labor productivity, and inflation—over the past 60 to 100 years. See page 890. [David Skole, Complex Systems Research Center, University of New Hampshire, Durham 03824]