American Association for the Advancement of Science

This Week in Science

Editorial

1481 New Year's Resolutions and the Black Bear

Perspective

1482 How Eco RI Recognizes and Cuts DNAH. M. Berman

Letters

1484 DOD's University Research Initiative: R. L. Kerber n Comet Showers, Periodic Extinctions, and Iridium; R. A. Muller; C. B. Hatfield; F. T. Kynth and J. T. Wasson n Fact Versus Supposition: D. E. Uphoff

News & Comment

1487 Space Station Plan Upsets Europe

1488 NIMH Review of Fraud Charge Moves Slowly

1489 Senator Blasts Administration's Reinterpretation of ABM Treaty

1490 Immune System Theories on Trial

1493 "Friends" Dance for Library of Medicine

Herrington Bucks Super Collider

1494 University Group Seeks to Reclaim the Space Shuttle's External Tanks

Briefing: OMB Slashes NIH Budget for FY 88 n French Research Minister Resigns n EEC to Cut Animal Use n Comings and Goings

Research News

1495 The New Art of Telescope Making

1497 Making Antibodies Work Like Enzymes

1498 Math Proof Refuted During Berkeley Scrutiny

1500 Recognizing Ancestors Is a Species Problem

Articles

1509 Advent and Course of Pastoralism in the Kalahari: J. R. Denbow and E. N. Wilmsen

1515 New Production Techniques for Alberta Oil Sands: M. A. Cagggy


Research Articles

1526 Structure of the DNA–Eco RI Endonuclease Recognition Complex at 3 Å Resolution: J. A. McClarin, C. A. Frederick, B.-C. Wang, P. Greene, H. W. Boyer, J. Grable, J. M. Rosenberg

Reports

1543 Long-Term Brightness Variations of Neptune and the Solar Cycle Modulation of Its Albedo: G. W. Lockwood and D. T. Thompson

1986 December

Cover: Combining site (heavy chain in red, light chain in blue) of antibodies which bind ligands containing tetrahedral phosphate (here phosphorylcholine shown as blue surface with phosphate bonds colored cyan) can stabilize a hydrolytic transition state and thus function as a highly specific enzyme. See page 1570. [Coordinates of the McPC603 antibody-antigen complex from D. Davies, National Institutes of Health. Computer graphic modeling and photograph by Arthur J. Olson, Research Institute of Scripps Clinic, La Jolla, CA, using software by A. J. Olson and Michael L. Connolly]

1549 Thyroid Hormone Induction of an Autocrine Growth Factor Secreted by Pituitary Tumor Cells: P. M. Hinkle and P. A. Kinsella

1552 Two Different ai-Active Elements Transfer the Transcriptional Effects of Both EGF and Phorbol Esters: H. P. Esholtz, H. J. Mangalam, E. Potter, V. R. Albert, S. Supowitt, R. M. Evans, M. G. Rosenfeld


1563 CD8+ Lymphocytes Can Control HIV Infection in Vitro by Suppressing Virus Replication: C. M. Walker, D. J. Moody, D. P. Stites, J. A. Levy

1566 Catalytic Antibodies: A. Tramontano, K. D. Janda, R. A. Lerner

1570 Selective Chemical Catalysis by an Antibody: S. J. Pollack, J. W. Jacobs, P. G. Schultz


1577 Lipid Domains in Fluid Membranes: A Quick-Freeze Differential Scanning Calorimetry Study: D. L. Melchior

1580 Early Cretaceous Angiosperm Leaves from Southern South America: E. J. Romero and S. Archangelsky

1582 Separation of Large DNA Molecules by Contour-Clamped Homogeneous Electric Fields: G. Chu, D. Vollrath, R. W. Davis

Technical Comments


AAAS Meetings

1507 Annual Meeting: The World of Science Awaits You ■ Advanced Registration Form; Hotel Reservation Form

Book Reviews

1592 Big Blue, reviewed by W. L. Baldwin ■ The Eagle's Nest, W. Stanton ■ Spiders, B. D. Opell ■ The Geology of China, K. Burke ■ Some Other Books of Interest ■ Books Received

Products & Materials

1597 Image Analysis System ■ Word Processing Package for Scientists ■ FFT Subroutine Library ■ Programmable Titrator and Controller ■ Genetic Information Software and Data Base ■ X-Ray Diffraction Computer System ■ Literature

Author Index for Volume 234 is found on pages I-X

Information for Contributors is found on pages XI-XII