NEWS & COMMENT

Furor at Lyme Disease Conference
California Rides Its Own Bi-Cycle 1384
Mission Impossible: Saving All Endangered Species 1386
Errant HIV Strain Renders Test Virus Stock Useless 1387
NASA Researchers Protest DOE Turnoff 1388
Panel Clears Needleman of Misconduct 1389
Institute of Medicine Elects New Members 1389

RESEARCH NEWS

Scoring a Technical Knockout in Mice Researchers Wrestle With Concerns Over Cost and Access 1392
Did an Asteroid Leave Its Mark in Montana Bones? 1395
Finding RNA Makes Proteins Gives 'RNA World' a Big Boost 1396
Gammas From Heaven 1397

PERSPECTIVES

New Horizons for RNA Catalysis 1402
N. R. Pace
On the Other Hand... 1403
G. A. Petsko

ARTICLES

Crust Formation and Plate Motion in the Early Archean 1405
A. Kröner and P. W. Lear
Human Organ Transplantation: Background and Consequences 1411
J. E. Murray

DEPARTMENTS

THIS WEEK IN SCIENCE 1371
EDITORIAL 1373
LETTERS 1378

EDITORIAL
Economic Impact Report

LETTERS
The Smithsonian and Sheep Hunting: R. S. Hoffman; E. Marshall • European Science: H. W. Mewes, S. Oliver, A. Goffea; A. Anderson; A. A. Travers, A. Anderson • NIH Leaks: J. Schneider • Fear of Butterflies: A. M. Shapiro • Math Teaching, K-12: Relevant Expertise: S. Mac Lane

RANDOM SAMPLES 1390
An OTA for Parliament • Parkinson's Progress • Birth Control for Animals, etc.

BOOK REVIEWS 1464
A Space for Science, reviewed by D. Serwer • Some Other Books of Interest • Vignettes: Popular Images • Books Received

PRODUCTS & MATERIALS 1467

AAAS Board of Directors
Leon M. Lederman Retiring President, Chairman
Richard F. Thompson
F. Sherwood Rowland President
Eloise E. Clark President-elect
Mary Ellen Avery
Francisco J. Ayala
Robert A. Frosch

Florence P. Haseltine
Alan Schneiss
Jeanne M. Shreeve
Chung Lin Tien
Warren M. Washington
William T. Golden
Treasurer
Richard S. Nicholson
Executive Officer

John Abelson
Frederick W. Alt
Don L. Anderson
Stephen J. Benkovic
David E. Bloom
Floyd E. Bloom
Henry R. Bourne
James J. Bull
Kathryn Calame
C. Thomas Caskey
Dennis W. Choi

John M. Coffin
Bruce F. Edwards
Paul T. Englund
Richard G. Fairbanks
Douglas T. Fearon
Harry A. Fozard
Victor R. Fuchs
Theodore M. Gebara
Margaret J. Gehler
John C. Gerhart
Roger I. M. Glass

Stephen P. Gold
Corey B. Goodman
Stephen J. Gould
Ira Herschkowitz
Eric P. Johnson
Stephen M. Kosslyn
Michael J. LaBarbera
Charles S. Levinson III
Harvey F. Lodish
Richard Losick
Anthony R. Means

Mortimer Mishkin
Roger A. Nicoll
William H. Orme-Johnson II
Stuart L. Pines
Yehuda Pocker
Dennis A. Powers
Ralph S. Quatrano
Y. Ramanathan
Erkki Ruosluhti
Ronald H. Schwartz
Terrence J. Sejnowski

Thomas A. Stein
Richard F. Thompson
Robert T. N. Tjian
Emil R. Unanue
Gerard J. Vermeij
Bert Vogelstein
Harold Weintraub
Zena Werb
George M. Whitesides
Owen N. Witte
Keith Yamamoto

Board of Reviewing Editors

Downloaded from http://science.sciencemag.org on April 20, 2017
A "left-handed" enzyme, HIV-1 protease (shown in front of the mirror as a dimer), that contains d-amino acids has been chemically synthesized. It preferentially cleaves peptide chains of d-amino acids (reaction shown below the molecule). The chemically synthesized "right-handed" form (the l-enantiomer, shown in the mirror) has reciprocal chiral specificity and preferentially cleaves commonly occurring L-amino acid peptides. See page 1445 and the Perspective on page 1403. [Computer graphics modeling and photography: Arthur Olsen, Yng Chen, and Garrett Morris. Additional illustration: Diana DeFrancesco]

**RESEARCH ARTICLES**

Unusual Resistance of Peptidyl Transferase to Protein Extraction Procedures
H. F. Noller, V. Hoffarth, L. Zimmian

Aminoacyl Esterase Activity of the *Tetrahymena* Ribozyme

**REPORTS**

Melting in Semiconductor Nanocrystals
A. N. Goldstein, C. M. Echer, A. P. Alivisatos

Pressure-Induced Coordination Changes in Alkali-Germanate Melts: An in Situ Spectroscopic Investigation
D. L. Farber and Q. Williams

Small Earthquakes, Tectonic Forces
T. C. Hanks

Effects of Aerosol from Biomass Burning on the Global Radiation Budget
J. E. Penner, R. E. Dickinson, C. A. O'Neill

Oxygen Isotopes in Biogenic Silica: Global Changes in Ocean Temperature and Isotopic Composition
A. Shemesh, C. D. Charles, R. G. Fairbanks

Sexually Antagonistic Genes: Experimental Evidence
W. R. Rice

Lyme Disease in California: A Novel Enzootic Transmission Cycle of *Borrelia burgdorferi*
R. N. Brown and R. S. Lane

---

Exhaustive Matching of the Entire Protein Sequence Database
G. H. Gonnet, M. A. Cohen, S. A. Benner

Total Chemical Synthesis of a D-Enzyme: The Enantiomers of HIV-1 Protease Show Demonstration of Reciprocal Chiral Substrate Specificity

Lymphoid Development in Mice
Congenitally Lacking T Cell Receptor αβ-Expressing Cells

NF-xB Subunit Regulation in Nontransformed CD4+ T Lymphocytes
S.-M. Kang, A.-C. Tran, M. Grilli, M. J. Lenardo

Nerve Growth Factor Stimulation of the Ras-Guănine Nucleotide Exchange Factor and GAP Activities
B.-Q. Li, D. Kaplan, H.-f. Kung, T. Kamata

Cytochrome b_{559}: The Flavin-Binding Component of the Phagocyte NADPH Oxidase
D. Rotrosen, C. L. Yeung, T. L. Leto, H. L. Malech, C. H. Kwong

---

**1405**

Early formation of continents

---

**Indicates accompanying feature**
Editor's Summary

This copy is for your personal, non-commercial use only.

Article Tools  Visit the online version of this article to access the personalization and article tools:
http://science.sciencemag.org/content/256/5062

Permissions  Obtain information about reproducing this article:
http://www.sciencemag.org/about/permissions.dtl