ADVANCEMENT
AMERICAN
ASSOCIATION FOR THE
ADVANCEMENT OF
SCIENCE

447 This Week in Science

Editorial

449 Global Change

Letters


News & Comment

461 Soul-Searching After China Crackdown • Stories of Repression from China
463 Alaskan Oil Spill: Health Risks Uncovered
464 Fetal Tissue Transplants Win U.K. Approval • Germany to Ban Embryo Use
465 Funding Fight Over Facilities
466 Should States Regulate Biotechnology?

Research News

467 Big First Scored with Nerve Diseases
468 Deep Holes Yielding Geoscience Surprises • Drilling Has Its Rewards
470 Circumcision May Protect Against the AIDS Virus
472 Briefings: Layoffs AHEAD at Brookhaven? • Scientists as Brainy as MBAs • Free NIH • Animal Activists Get Stony Brook Files • Worm Bites Dad • Hippocasts on the Launch Pad

Articles

480 What Has Caused the Secular Increase in Solar Nitrogen-15? • J. F. Kerridge
486 Drugs from Emasculated Hormones: The Principle of Syntopic Antagonism: J. Black

Research Articles

500 Neptune's Story: P. Goldreich, N. Murray, P. Y. Longaretti, D. Banfield

SCIENCE is published weekly on Friday, except the last week in December, and with an extra issue in February 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 at an additional entry. Now combined with The Scientific Monthly © Copyright, 1989 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) $75. Domestic institutional subscription (51 issues) $120. Foreign postage extra: Canada $45, other (surface mail) $46, air mail via Amsterdam $85. First class, airmail, school-year, and student rates on request. Single copy sales: Current issues, $3.50; back issues, $5.00; Biotechnology issue, $6.00 (for postage and handling, add per copy $0.50 U.S., $1.00 all foreign); Guide to Biotechnology Products and Instruments, $18 (for postage and handling add per copy $1.00 U.S., $1.50 Canada, $2.00 other foreign). 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 $.10 per page is paid directly to CCC, 27 Congress Street, Salem, Massachusetts 01970. The identification code for Science is 0036-8075/93 $1 + .10. Change of address: allow 6 weeks, giving old and new addresses and 11-digit account number. Postmaster: Send Form 3579 to Science, P.O. Box 1722, Riverston, NJ 08077. 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 objects 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, and to increase public understanding and appreciation of the importance and promise of the methods of science in human progress.
4. Wafer

Donald

President

Richard

Retiring

AUGUST

I

mi

_S.

C.

President,

Massey

Langenberg

I989

Joseph

JohnH.

Mary

FranciscoJ.

WilliamT.

Beatrix

Executive

RichardS.Nicholson

E.Bloom

G.Clutter

H.

Gibbons

Hamburg

Golden

Avery

Jr.

507

510

513

516

519

522

525

528

532

535

538

541

546

C3H10T1/2 cells transfected with a MyoD1 expression vehicle. Nuclear expression of transfected MyoD1 was localized by antisera to MyoD1 and a rhodamine-conjugated secondary antibody (red). Expression of MyoD1 converted this fibroblast to a muscle cell, as shown by the expression of myosin heavy chain [visualized with a fluorescein-conjugated secondary antibody (green)]. DAPI staining shows the nuclei of untransfected cells (blue). See page S32. [Photograph by Stephen J. Tapskott]

Reports

505 Melting Inhibition and Superheating of Ice by an Antifreeze Glycopeptide: C. A. Knight and A. L. DeVries


510 Hydrophobic Organization of Membrane Proteins: D. C. Rees, L. DeAntonio, D. Eisenberg


516 β-Adrenergic Inhibition of Cardiac Sodium Channels by Dual G-Protein Pathways: B. Schubert, A. M. J. Van Dongen, G. E. Kirsch, A. M. Brown

519 The Effect of Deprenyl (Selegiline) on the Natural History of Parkinson’s Disease: J. W. Tetrad and J. W. Langston

522 Triggering of Allostery in an Enzyme by a Point Mutation: Ornithine Transcarbamoylase: L. C. Kuo, I. Zambidis, C. Caron


528 Domain Separation in the Activation of Glycogen Phosphorylase a: E. J. Goldsmith, S. R. Sprang, R. Hamlin, N.-H. Xuong, R. J. Fletterick

532 5-Bromo-2’-Deoxyuridine Blocks Myogenesis by Extinguishing Expression of MyoD1: S. J. Tapscott, A. B. Lassar, R. L. Davis, The Weintraub

Inside AAAS


Book Reviews

541 Models of Nature, reviewed by D. Joravsky Disenchanted Night, N. Harris Some Other Books of Interest Books Received

Products & Materials

546 3-D Molecular Simulation and Modeling Blotting Apparatus Numeric Computation Software Portable Computer with Desktop Features Object-Oriented Pascal Literature