1039 This Week in Science

Editorial
1041 The Challenge to U.S. Competitiveness: ROBERT M. WHITE

Perspective
1043 What Myosin Might Do: F. SOLOMON

Letters
1049 Randomized Response Technique: A. A. CAMPBELL ■ Risk Perception: T. P. SHEAHER ■ Cancer Control: J. C. BAHRER III; E. CHELISKY ■ Foreign Engineering Students: M. GILKESON

News & Comment
1052 Ozone Plan Splits Administration
1054 Regulating Pesticides: The “Delaney Paradox”
1055 PHS Revitalization Plan Stirs Up NIH
1056 Ariane, Shuttle Delayed Again
1057 Bavaria Requires AIDS Testing
1057 Prosecution Urged In Fraud Case
1058 Briefing: Madagascar Is the Focus of Habitat Project ■ Overhaul Recommended for British Geology ■ Congress to Weigh Animal Patents ■ IBM to Give Cornell a $20-Million Computer ■ A Warning on Oil Imports ■ Vaccine Test Okayed

Research News
1059 Leukemia Virus Linked to Nerve Disease
1061 The Earliest “Humans” Were More Like Apes
1063 An Oxygen Key to the New Superconductors: Where the Oxygen Vacancies Are ■ Vacancy Ordering and Superconductivity ■ Oxygen Isotypes Spell Trouble for Phonons

Articles
1069 Managing the Soils of Sub-Saharan Africa: R. LAL
1076 Freezing: A. D. J. HAYMET

Research Articles
1081 Antisense RNA Inactivation of Myosin Heavy Chain Gene Expression in Dictyostelium discoideum: D. A. KNECHT AND W. F. LOOMIS
1086 Disruption of the Dictyostelium Myosin Heavy Chain Gene by Homologous Recombination: A. DE LOZANNE AND J. A. SPUDICH

Reports
1092 Observation of Phase Transitions in Spreading Activation Networks: J. SHRAGER, T. HOGG, B. A. HUBERMAN

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. 48460) paid at Washington, DC, and at an additional entry. Copyright © 1987 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): $65. Domestic institutional subscription (51 issues): $98. Foreign postage extra: Canada $32; other (surface mail) $27; air-surface via Amsterdam $55. First class, airmail, school-year, and student rates on request. Single copies $2.50 ($3 by mail); back issues $4 ($4.50 by mail); Biotechnology issue, $5.50 ($6 by mail); classroom rates on request; Guide to Biotechnology Products and Instruments $16 ($17 by mail). Change of address: allow 6 weeks, giving old and new addresses and seven-digit account number. 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, 21 Congress Street, Salem, Massachusetts 01970. The identification code for Science is 0036-8075/83 $1 + .10. Postmaster: Send Form 3579 to Science, 1333 H Street, NW, Washington, DC 20005. 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.
COVER  Multinucleated cells of *Dictyostelium discoideum* cells that arise when cytokinesis is impaired by the lack of myosin heavy chain protein. The bright spots are nuclei fluorescently stained with the DNA binding dye Hoechst 33258 after fixation of the cells. The phenotype was produced by transforming cells with a vector that encodes myosin heavy chain antisense RNA. See pages 1081 and 1086.
[D. A. Knecht and W. F. Loomis, University of California San Diego, La Jolla, CA 92039]


1098 Herbivory in Rocks and the Weathering of a Desert: M. Shachak, C. G. Jones, Y. Granot


1110 Human Cerebral Hemispheres Develop at Different Rates and Ages: R. W. Thatcher, R. A. Walker, S. Judice

1114 *Aedes albopictus* in North America: Probable Introduction in Used Tires from Northern Asia: W. A. Hawley, P. Reiter, R. S. Copeland, C. B. Pumpuni, G. B. Craig, Jr.


1120 Expression of the Multidrug-Resistant Gene in Hepatocarcinogenesis and Regenerating Rat Liver: S. S. Thorgeirsson, B. E. Huber, S. Sorrell, A. Fojo, I. Pastan, M. M. Gottesman


---

**Book Reviews**

1125 The Evolution of Human Behavior, reviewed by R. S. O. Harding  ■ Phosphate Deposits of the World, P. Cloud  ■ Fjords, B. F. Molnia  ■ Aeolian Geomorphology, N. Lancaster  ■ Books Received

---

**Software Reviews**

1128 The ASYST Software for Scientific Computing: D. Hary, K. Oshio, S. D. Flanagan