**Editorial**

1107 This Week in *Science*

**Letters**

1109 New Horizons in Medicine


**News & Comment**

1117 Europe Split on Embryo Research
1118 A 20% Boost for Soviet Science
1119 Space Reactors Hinder Gamma-Ray Astronomy
1120 Collapse of a Radio Giant
1121 The Worm's Aftermath
1122 Soviet-Based Global Foundation Takes Shape • Sakharov Honored
1123 Genome Project “Alternative Nobels”

**Research News**

1124 Sunspot-Weather Link Holding Up
1125 One More Family of Superconductors
1126 NeXT Embraces a New Way of Programming
1128 Linguists Search for the Mother Tongue
1130 *Random Samples: Feeding the Hungry* • Authors, Authors! • Carlson's Oeuvre

**Articles**

1132 Self-Organization, Transformity, and Information: H. T. Odum
1139 Space, Stars, Ge, and Soot: H. Kroto

**Research Articles**

1146 Microinjected DNA from the X Chromosome Affects Sex Determination in *Caenorhabditis elegans*: W. K. McCoubrey, K. D. Nordstrom, P. M. Meneely

**Reports**


---

*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. Copyright © 1988 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): $70. Domestic institutional subscription (51 issues): $110. Foreign postage extra: Canada $32, other (surface mail) $32, air-sur-
face via Amsterdam $65. First class, airmail, school-year, and student rates on request. Single copies $3.00; back is-
suues $5.00; 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 ac-
count 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 0036-8075/88 $1 + .10. Postmaster: Send Form 3579 to Science, 1333 H Street, NW, Washington, DC 20005. Science is in-
dered 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 app-
reciation of the importance and promise of the methods of science in human progress.
Cover  Colonies of the social wasp, *Polybia occidentalis* (yellows have been enhanced by the electronic flash), often have multiple queens as do colonies of many other neotropical wasps. The presence of multiple egg layers is expected to lower relatedness within colonies. The first estimates of relatedness for these wasps show that it is very low in one species, but in two other species it is not markedly lower than relatedness in some single-queen species. See page 1155. [Colin R. Hughes, Department of Biology, Rice University, Houston, TX 77251]

1155  Genetic Relatedness in Colonies of Tropical Wasps with Multiple Queens: D. C. Queller, J. E. Strassmann, C. R. Hughes

1157  Nitrogen Fixation by Anaerobic Cellulolytic Bacteria: S. B. Leschine, K. Holwell, E. Canale-Parola

1159  An in Vitro System for Accurate Methylation of Internal Adenosine Residues in Messenger RNA: P. Narayan and F. M. Rottman


1164  Intron Existence Predated the Divergence of Eukaryotes and Prokaryotes: M.-C. Shih, P. Heinrich, H. M. Goodman

1166  HIV-Infected Cells Are Killed by rCD4-Ricin A Chain: M. A. Tild, V. Ghete, T. Gregory, E. J. Patzer, J. P. Porter, J. W. Uhr, D. J. Capon, E. S. Vittetta

1168  Fidelity of HIV-1 Reverse Transcriptase: B. D. Preston, B. J. Poesz, L. A. Loeb

1171  The Accuracy of Reverse Transcriptase from HIV-1: J. D. Roberts, K. Bubeneck, T. A. Kunkel

1174  Demethylated CD8 Gene in CD4+ T Cells Suggests That CD4+ Cells Develop from CD8+ Precursors: A. M. Carbone, P. Marrack, J. W. Kappler

1176  Inositol 1,3,4,5-Tetrakisphosphate Induces Ca2+ Sequestration in Rat Liver Cells: T. D. Hill, N. M. Dean, A. L. Boynton

Book Reviews

1182  Science as a Process, reviewed by J. M. Smith  The Law of the Land, H. D. Woodman  Some Other Books of Interest  Books Received

Products & Materials

1186  80386-Based Laptop Computer  Liquid Scintillation Counter  pH Electrode for Small Volumes  Programmable Microtube Incubator  Cloning Systems for cDNA  Software for Chemical Inventory Management  Literature