### Editorial
- 1077 Science Advice to the Government

### Letters

### News & Comment
- 1082 Science Advice Back to the Future?
- 1084 The Long, Lost Survey on Sex
- 1086 Pesticides to Be Judged on Leachability
- 1087 Locusts Find Prime Jumping-Off Place
- 1087 AIDS Policy in the Making
- 1088 What Perestroika Means for American Business
- 1089 Superconductor Funds Flat
- 1090 Briefing: SSC Site Pick Delayed • APA Likely to Sell *Psychology Today* • Howard Hughes Establishes Unit at MIT • Ukrainian Scientists Protest Nuclear Plans • Somalis Escape Execution • NAS Opens Japan Office

### Research News
- 1091 Orchestrating the Sperm-Egg Summit: Interferon-Like Factor Signals Pregnancy • Sperm Receptor Gene Sequenced • New Functions for a Testes Growth Factor
- 1093 Cell Growth Control Comes Under Scrutiny

### Articles
- 1105 Insights into Enzyme Function from Studies on Mutants of Dihydrofolate Reductase: S. J. Benkovic, C. A. Fierke, A. M. Naylor
- 1110 Manufacturing Innovation and American Industrial Competitiveness: S. S. Cohen and J. Zysman
- 1115 Free-Electron Lasers: C. A. Brau

### Research Articles
- 1121 Insertional Mutagenesis of the *Drosophila* Genome with Single P Elements: L. Cooley, R. Kelley, A. Spradling

### 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. 464450) 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): $65. Domestic institutional subscription (51 issues): $98. Foreign postage extra: Canada $32, other (surface mail) $27, air-surface via Amsterdam $65. First class, airmail, school-year, and student rates on request. Single copies $3.00 ($3.00 by mail); back issues $4.50 ($5.00 by mail); Biotechnology issue, $5.50 ($6 by mail); classroom rates on request; Guide to Bio-technology 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 $0.15 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.*

1137 Estrogen-Dependent In Vitro Transcription from the Vitellogenin Promoter in Liver Nuclear Extracts: B. Cortés, R. Hippskind, I. Theulaz, W. Wahl

1139 Germline Transformation Used to Define Key Features of Heat-Shock Response Elements: Hua Xiao and J. T. Lis

1142 Multipotent Precursors Can Give Rise to All Major Cell Types of the Frog Retina: R. Wetts and S. E. Fraser


1147 Synaptic Reorganization in the Hippocampus Induced by Abnormal Functional Activity: T. Sutula, H. Xiao-Xian, J. Cazagos, G. Scott


**AAAS Meetings**

1154 *Thirteenth Annual AAAS Colloquium on R&D Policy: Advance Registration Form and Hotel Reservation Form*

**AAAS News**

1156 Awards Presented at Annual Meeting: J. Wrath *SB&F* Reviews High School Texts * Pacifi c Division Holds R&D Conference * SWARM Meets in Wichita Late This Month * More Museum Benefits for Members: M. Zendell

**Meetings**

1159 *Gordon Research Conferences: A. M. Cruickshank * Program and Registration Form

**Book Reviews**

1183 Molecules and Morphology in Evolution, reviewed by T. Rowe * Organic Chemistry: The Name Game, O. C. Dermer * Continental Extensional Tectonics, D. B. Slemmons * Phycomyces, D. H. Griffin * Books Received

**Products & Materials**

1188 Query Software for On-Line Services * Microplate Reader * Spectrophotometer * Glucose, L-Lactate Analyzer * Automated Protein, Enzyme Separation * Electrophoresis Solution * Protein Kinase Inhibitors * Literature

**Board of Directors**

Shella E. Widnall, Retiring President, Chairman

Walter E. Massey, President

Richard C. Atkinson, President-elect

Harold Amos

Floyd E. Bloom

Mary E. Clutter

Eugene H. Cote-Robles

Mildred S. Dresselhaus

Beatrix A. Hamburger

Donald N. Langenberg

Frank von Hippel

William T. Golden

Treasurer

Ann W. Trivelpiece

Executive Officer

**Editorial Board**

Elizabeth B. Bailey

David Baltimore

William J. Brinkman

Philip E. Converse

Joseph L. Goldstein

F. Clark Howell

James D. Kol Jr.

Leon Knopoff

Oliver A. Nelson

Helen M. Ranney

David M. Rapoport

Howard A. Schneiderman

Larry L. Smarr

Robert M. Solow

James D. Watson

**Board of Reviewing Editors**

John Abeloff

Gael Al-Awadi

Don L. Anderson

Stephen J. Benkovic

Floyd E. Bloom

James J. Butler

Charles R. Cantor

Ralph J. Coe

John M. Coffin

Bruce F. Eldridge

Paul T. Englund

Theodore H. Geballe

Roger I. M. Glass

Stephen P. Gold

Robert B. Goldberg

Corey S. Goodman

Jack Gorski

Stephen J. Gould

Richard M. Held

Gloria Huppler

Eric F. Johnson

Konrad B. Krauskopf

Charles S. Levings III

Richard Losick

Karl L. Magleby

Philippa Marrack

Joseph B. Martin

John C. McGiff

Mortimer Mishkin

Jiri Novotny

Gordon H. Orians

Carl O. Pabo

John S. Pearse

Yeshayauch Pockell

Jean Paul Revel

James E. Rothman

Daniel V. Sarni

Thomas C. Schilling

Ronald H. Schwartz

Otto T. Sobing

Robert T. N. Tjian

Virginia Trimble

Geerat V. Vermeij

Harold Weintraub

Irving L. Weissman

George M. Whitesides

Owen N. Witte

William B. Wood
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/239/4844

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