NEWS & COMMENT

Databasing the Brain 1872
Universities Discover That Simplicity Has Its Price
UC Goes Where Harvard Feared to Tread 1875
Smoking and Health: Signs of Damage by Radicals
Spain’s Ambitions in Biology Threatened by Funding Freeze

RESEARCH NEWS

AIDS Vaccines: Is Older Better? 1860
Explaining Puzzling Vaccine Results
Pot, Heroin Unlock New Areas for Neuroscience
Survival of the Fittest in 1992’s Physics and Astronomy Bestiary
Researchers Swap Material Evidence in Boston

PERSPECTIVES

The Gamma-Ray Cosmos 1894
E. L. Chupp
Frosted Flies 1896
M. Ashburner

ARTICLE

Biochemistry of Nitric Oxide and Its Redox-Activated Forms 1898
J. S. Stamler, D. J. Singel, J. Loscalzo

RESEARCH ARTICLES

Impaired Long-Term Potentiation, Spatial Learning, and Hippocampal Development in fn5 Mutant Mice 1903
Selection of a Ribozyme That Functions as a Superior Template in a Self-Copying Reaction 1910
R. Green and J. W. Szostak

DEPARTMENTS

THIS WEEK IN SCIENCE 1859
EDITORIAL 1861
MOLECULE OF THE YEAR 1862
LETTERS 1867

SCIENCESCOPE 1871
RANDOM SAMPLES 1878
SDI Backs Down Over Reactor Interference • Getting Vaccinated for Breakfast? • Review Demanded on Canadian Blood • Tack Out Cold Fusion • Paleontology’s ‘Jurassic’ Windfall, etc.

INSIDE AAAS 1962
BOOK REVIEWS 1967
Innovation as a Social Process, reviewed by S. Usselman • Cannibalism, D. Mock • Perturbing the Organism, M. Dallman • Vignettes: Remembered Revelries • Books Received

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Cover

Cultured human neurons, one of the targets of the potent signaling molecule nitric oxide (the NO of the cover). The diverse and important roles of NO are just beginning to be discovered; see the Editorial on page 1861 and the Molecule of the Year story on page 1862.

[Photograph: Visuals Unlimited]

Reports

1916 Structural and Electronic Properties of La@C$_{32}$
K. Laasonen, W. Andreoni, M. Parrinello

1918 Scanning Tunneling Microscopy of Electrodeposited Ceramic Superlattices

1921 Dynamics of Soil Carbon During Deglaciation of the Laurentide Ice Sheet
J. W. Harden, E. T. Sundquist, R. F. Stallard, R. K. Mark

1924 Evidence from the Lamarck Granodiorite for Rapid Late Cretaceous Crust Formation in California
D. S. Coleman, T. P. Frost, A. F. Glazner

1927 Allometric Engineering: A Causal Analysis of Natural Selection on Offspring Size
B. Sintrover, P. Doughty, R. B. Huey, K. Zamudio

1930 Components of Sterol Biosynthesis Assembled on the Oxygen-Avid Hemoglobin of Ascaris
D. R. Sherman, B. Guinn, M. M. Perdok, D. E. Goldberg

1932 Cryobiological Preservation of Drosophila Embryos

1935 Cellular Proteins Bound to Immunodeficiency Viruses: Implications for Pathogenesis and Vaccines

1938 Protective Effects of a Live Attenuated SIV Vaccine with a Deletion in the nef Gene

1941 Targeted Degradation of c-Fos, But Not v-Fos, by a Phosphorylation-Dependent Signal on c-Jun
A. G. Papavassiliou, M. Treier, C. Chavrier, D. Bohmann

1944 Retinoids Selective for Retinoid X Receptor Response Pathways
J. M. Lehmann, L. Jong, A. Fanjul, J. F. Cameron, X. P. Lu, P. Hafner, M. I. Dawson, M. Pfahl

1946 Isolation and Structure of a Brain Constituent That Binds to the Cannabinoid Receptor

1949 Direct Visualization of the Dendritic and Receptive Fields of Directionally Selective Retinal Ganglion Cells
G. Yang and R. H. Masland

1952 Cloning of a Delta Opioid Receptor by Functional Expression

D. L. Vaux, I. L. Weissman, S. K. Kim

1957 Neutrophil Recruitment by Tumor Necrosis Factor from Mast Cells in Immune Complex Peritonitis
Y. Zhang, B. F. Ramos, B. A. Jakschik

1958 Foiling the hangman's noose...in worms

Indicates accompanying feature

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Science 258 (5090), 1859-1971.

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