EDITORIAL
1265  The Next Campaign
Leon M. Lederman and Shirley M. Malcom

NEWS OF THE WEEK
1274  Amid the Gloom, Researchers Prepare for a Boom in Funding Budgets in Brief
>> Science Podcast
1276  Loss of Carbon Observatory Highlights Gaps in Data
1277  Study Questions Value of School Software for Students
1278  Author of Iraqi Deaths Study Sanctioned
1279  From Protest to Power: An Advocacy Group Turns 40
1280  Retractions Put Spotlight on China’s Part-Time Professor System
1281  From the Science Policy Blog

NEWS FOCUS
1282  The Danger Within
1284  Nigel Franks: Watching as Ants Go Marching—and Deciding—One by One
1286  On the Origin of Photosynthesis

LETTERS
1288  For Science, No Escape from Politics
T. Clair
Research Rankings: Does Size Matter?
A. Fitter
Response
J. Travis
Certificates Should Be Retired
J. A. Hermos and A. Spiri III
Certificates Should Be Strengthened
P. P. Gunn and S. D. Joiner
Response
L. M. Beskow et al.

BOOKS ET AL.
1291  Sand
M. Welland, reviewed by R. Holman
1292  The Art and Politics of Science
H. Varmus, reviewed by T. Pederson

POLICY FORUM
1293  Responding to Possible Plagiarism
T. C. Long et al.

PERSPECTIVES
1295  More AMPAR Garnish
C. Tigaret and D. Choquet
>> Research Article p. 1313
1296  Eyes on the Prize?
D. K. Levine
>> Report p. 1335
1297  Beyond the Data Deluge
G. Bell et al.
>> Science Podcast
1299  Pinpointing Gravity
N. D’Amico
>> Report p. 1327
1300  Warming Up Food Webs
J. M. Tylianakis
>> Report p. 1347
1301  Anti-Rust Antitrust
D. J. Kliebenstein and H. C. Rowe
>> Reports pp. 1357 and 1360
1302  Infrastructure Design Issues in Disaster-Prone Regions
S. D. Guikema

REVIEW
1304  The Challenge of Finding a Cure for HIV Infection
D. D. Richman et al.

CONTENTS continued >>

COVER
Gray and black wolf pups howling in Wolf Park in Battle Ground, Indiana. In North American gray wolves (Canis lupus), a mutation that alters coat color from brownish-gray to black, which derives from past hybridization with domestic dogs, is increasing in forested habitats because of positive selection. See page 1339.

Image: Monty Sloan

DEPARTMENTS
1261  This Week in Science
1266  Editors’ Choice
1268  Science Staff
1271  Random Samples
1273  Newsmakers
1367  New Products
1368  Science Careers

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BREVIA

Extremely High Mutation Rate of a Hammerhead Viroid

S. Gago et al.

Viroids, the smallest RNA replicators in plants, have the highest error rates yet recorded.

RESEARCH ARTICLES

Dynamic Order-Disorder in Atomistic Models of Structural Glass Formers

L. O. Hedges et al.

The liquid-to-glass transition of a simple mixture is controlled by parameters that drive the system away from equilibrium.

Functional Proteomics Identify Cornichon Proteins as Auxiliary Subunits of AMPA Receptors

J. Schwenk et al.

A distinctive family of proteins involved in the assembly of the most common excitatory brain receptor has been discovered.

REPORTS

Brightly Fluorescent Single-Walled Carbon Nanotubes via an Oxygen-Excluding Surfactant Organization

S.-Y. Ju et al.

Wrapping a molecule around individual single-walled carbon nanotubes enhances fluorescence.

Probing the Angular Momentum Character of the Valence Orbitals of Free Sodium Nanoclusters

C. Bartels et al.

Photoelectron imaging uncovers electronic angular distributions in metallic nanoclusters.

Implications of a VLBI Distance to the Double Pulsar J0737-3039A/B

A. T. Deller et al.

Tests of gravity theory that use this double pulsar, now recognized as being more distant, will be more precise.

Phase-Sensitive Observation of a Spin-Orbital Mott State in Sr$_2$IrO$_4$

B. J. Kim et al.

Resonant x-ray scattering was used to probe and determine the magnetic structure of this transition metal oxide.

The Earliest Horse Harnessing and Milking

A. K. Outram et al.

The Botai Culture on the Eurasian steppe apparently domesticated horses about 5500 years ago.

Promoting Intellectual Discovery: Patents Versus Markets

D. Meloso et al.

A laboratory experiment shows that prizes such as patents are not the only ways to provide incentives for discovery.

Molecular and Evolutionary History of Melanism in North American Gray Wolves

T. M. Anderson et al.

Black coat color in wolves derives from a mutation that originated in domestic dogs.

Drought Sensitivity of the Amazon Rainforest

O. L. Phillips et al.

Widespread surveys show that the Amazon forest lost extensive biomass carbon as a result of the severe 2005 drought.

Species Response to Environmental Change: Impacts of Food Web Interactions and Evolution

J. P. Harmon et al.

The resilience of pea aphids to heat stress depends on interactions with predators and bacterial endosymbionts.

Sensing Chromosome Bi-Orientation by Spatial Separation of Aurora B Kinase from Kinetochoore Substrates

D. Liu et al.

The mechanism for sensing tension across chromosome pairs before mitotic separation relies on the distance between enzyme and substrate.

Geometric Cue for Protein Localization in a Bacterium

K. S. Ramamurthi et al.

Membrane curvature controls the localization of a small peripheral membrane protein during bacterial spore formation.

A Kinase-START Gene Confers Temperature-Dependent Resistance to Wheat Stripe Rust

D. Fu et al.

A Putative ABC Transporter Confers Durable Resistance to Multiple Fungal Pathogens in Wheat

S. G. Krattinger et al.

Several specific genes in wheat confer resistance to common fungal diseases.
Perspective: How Perfect Can Protein Interacts Be?
E. D. Levy et al.
Evolutionary noise in protein-protein interactions implies that not all interactions must be functional.

Podcast
J. Schlessinger and A. M. VanHook
Autophosphorylation events that control the activity of the FGF receptor are kinetically controlled and disrupted by a mutation associated with glioblastoma.

Glossary
Find out what DARC, SFK, and QTL mean in the world of cell signaling.

ScienceCareers
www.sciencecareers.org/career_magazine
Free Career Resources for Scientists
Redefining Tenure at Medical Schools
C. Wald
Fewer faculty jobs are tenure-track in academic medical research.

Can You Be Too Ready for Research Independence?
S. Carpenter
The National Institutes of Health’s K99/R00 award is a great success—maybe too great a success.

March 2009 Funding News
J. Fernández
Learn about the latest in research funding, scholarships, fellowships, and internships.

SciencePodcast
www.sciencemag.org/multimedia/podcast
Free Weekly Show
Download the 6 March Science Podcast to hear about promoting intellectual discovery through markets, the increasing demands of data-intensive science, news about the U.S. science budget, and more.

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