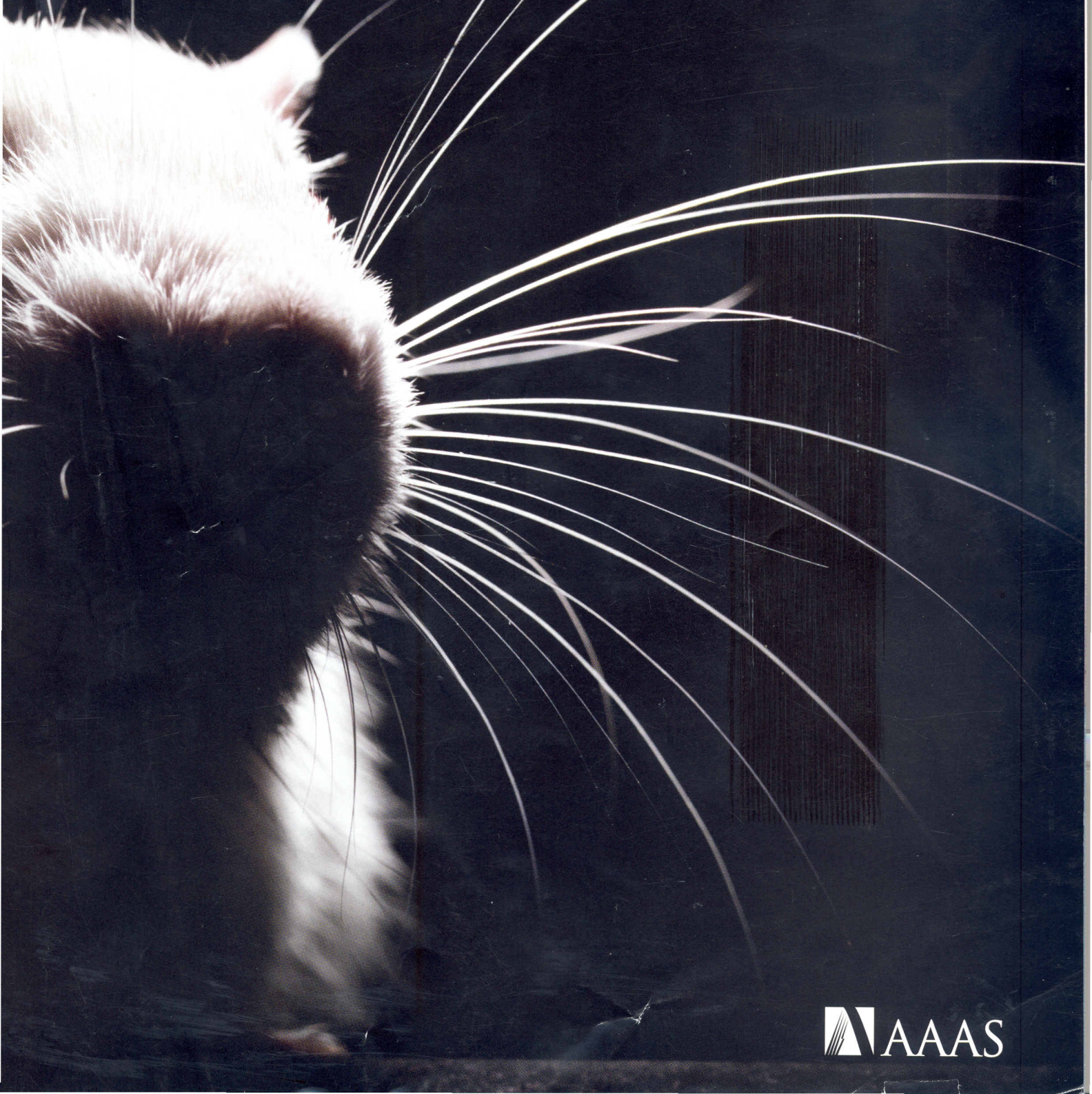


14 October 2011 | \$10

Science



 AAAS

EDITORIAL

- 157 Peruvian Highlands, Fume-Free
Pilar Nores Bodereau
>> Policy Forum p. 180

NEWS OF THE WEEK

- 160 A roundup of the week's top stories

NEWS & ANALYSIS

- 163 Panel Draws Ambitious Road Map for Gulf Restoration
164 Teasing Out Cause and Effect in Macroeconomics
165 Once-Ridiculed Discovery Redefined the Term Crystal
166 HIV Study Renews Scrutiny of Hormonal Contraception
167 African Data Bolster New View of Modern Human Origins
168 Gut Bacteria Lend a Molecular Hand to Viruses
>> Reports pp. 245 and 249

NEWS FOCUS

- 169 Beyond the Data
The Community Weighs In on Broader Impacts
>> Science Podcast
173 Vital Details of Global Warming Are Eluding Forecasters

LETTERS

- 176 Partial Retraction
R. H. Silverman et al.
Chemical Elements: What's in a Name?
J. P. Leal
Biosecurity and the Politics of Fear
P. E. Hulme
177 TECHNICAL COMMENT ABSTRACTS

BOOKS ET AL.

- 178 Redirect
T. D. Wilson, reviewed by G. L. Cohen
179 Browsings

POLICY FORUM

- 180 A Major Environmental Cause of Death
W. J. Martin II et al.
>> Editorial p. 157

PERSPECTIVES

- 182 Keeping Bacteria at a Distance
M. E. V. Johansson and G. C. Hansson
>> Report p. 255
183 Self-Assembly Enters the Design Era
A. Travesset
>> Report p. 204
184 The Costs of Breathing
N. Lane
186 SevERING Mitochondria
A. S. Rambold and J. Lippincott-Schwartz
187 Shining Light on Diabolic Points
B. J. Whitaker
>> Report p. 208
188 Grass Trumps Trees with Fire
A. L. Mayer and A. H. Khalyani
>> Reports pp. 230 and 232

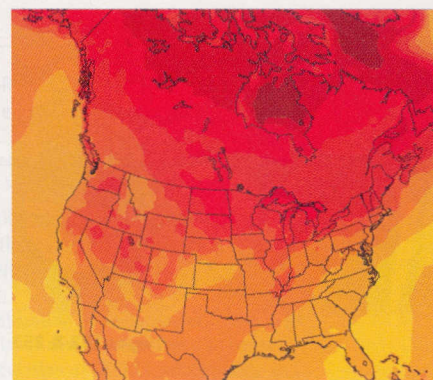
REVIEW

- 190 The Diets of Early Hominins
P. S. Ungar and M. Sponheimer

BREVIEW

- 194 Replication-Dependent Loss of 5-Hydroxymethylcytosine in Mouse Preimplantation Embryos
A. Inoue and Y. Zhang
The oxidation product of methylated cytosine is passively lost from DNA in the zygote as cell division progresses.

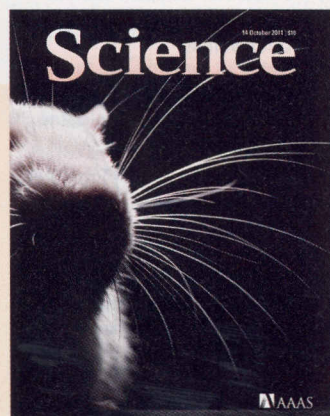
CONTENTS continued >>



page 173



page 178



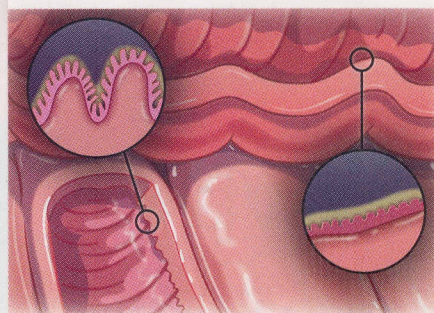
COVER

Whiskers at the snout are instrumental for the rat to explore the external world. During development, sensory information provided by the whiskers is critical for the formation of their representation in the brain. Minlebaev et al. show how this process is controlled by gamma oscillations in developing neuronal networks. See page 226.

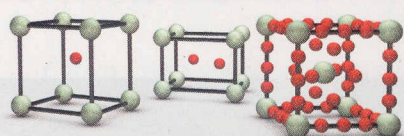
Photo: Henrik Sorensen/Getty Images

DEPARTMENTS

- 153 This Week in Science
158 Editors' Choice
159 Science Staff
259 New Products
260 Science Careers



pages 182 & 255



pages 183 & 204



page 219

RESEARCH ARTICLE

- 195 Synthesized Light Transients**
A. Wirth et al.
Light spanning the near infrared to the ultraviolet has been confined in pulses shorter than a single optical cycle.

REPORTS

- 200 Observation of Correlated Particle-Hole Pairs and String Order in Low-Dimensional Mott Insulators**
M. Endres et al.
Parity correlations in a one-dimensional Bose gas in an optical lattice reveal a hidden "string order."

- 204 Nanoparticle Superlattice Engineering with DNA**
R. J. Macfarlane et al.
Design rules allow the synthesis of nanoparticle-DNA superlattices in nine different lattices.
>> *Perspective p. 183*

- 208 Conical Intersection Dynamics in NO₂ Probed by Homodyne High-Harmonic Spectroscopy**
H. J. Wörner et al.
Coincident vibrational and electronic rearrangements in a photoexcited molecule are tracked in fine detail.
>> *Perspective p. 187*

- 213 Linear Alkane Polymerization on a Gold Surface**
D. Zhong et al.
The confining channel geometry of a gold surface induces selective end-to-end linking of hydrocarbon chains.

- 216 Flash Heating Leads to Low Frictional Strength of Crustal Rocks at Earthquake Slip Rates**
D. L. Goldsby and T. E. Tullis
Extreme temperatures generated over short distances may weaken faults during earthquakes.

- 219 A 100,000-Year-Old Ochre-Processing Workshop at Blombos Cave, South Africa**
C. S. Henshilwood et al.
Early humans mixed and stored ochre pigments in shells 100,000 years ago, an indication of the emergence of higher planning.
>> *Science Podcast*

- 222 The Dynamic Architecture of *Hox* Gene Clusters**
D. Noordermeer et al.
Sequential activation of *Hox* genes correlates with a transition of negative to positive three-dimensional chromosome structure.

- 226 Early Gamma Oscillations Synchronize Developing Thalamus and Cortex**
M. Minlebaev et al.
Thalamic gamma rhythms help develop highly spatially and laminar-specific ascending cortical projections.

- 230 The Global Extent and Determinants of Savanna and Forest as Alternative Biome States**
A. C. Staver et al.
Savanna and forest are alternative states governed by fire at intermediate rainfall levels.

- 232 Global Resilience of Tropical Forest and Savanna to Critical Transitions**
M. Hirota et al.
Tree distributions across continents indicate three distinct stable states in tree cover—forest, savanna, and treeless.
>> *Perspective p. 188*

- 235 The *Escherichia coli* Replisome Is Inherently DNA Damage Tolerant**
J. T. P. Yeeles and K. J. Mariani

The core DNA replication machinery of *Escherichia coli* has an inherent ability to squeeze past DNA damage on the leading strand.

- 238 Sequential Establishment of Stripe Patterns in an Expanding Cell Population**
C. Liu et al.
A synthetic circuit implementing density-controlled bacterial motility autonomously produces a tunable stripe pattern.

- 242 NMR Detection of Structures in the HIV-1 5'-Leader RNA That Regulate Genome Packaging**
K. Lu et al.

An RNA structural switch regulates whether the HIV genome is translated or dimerized and packaged.

- 245 Successful Transmission of a Retrovirus Depends on the Commensal Microbiota**
M. Kane et al.

- 249 Intestinal Microbiota Promote Enteric Virus Replication and Systemic Pathogenesis**
S. K. Kuss et al.
Commensal microflora promote the pathogens of mucosally acquired viruses.
>> *News story p. 168*

- 252 MED12, the Mediator Complex Subunit 12 Gene, Is Mutated at High Frequency in Uterine Leiomyomas**
N. Mäkinen et al.
Uterine fibroids frequently harbor mutations in a specific gene that has been implicated in transcriptional regulation.

- 255 The Antibacterial Lectin RegIII γ Promotes the Spatial Segregation of Microbiota and Host in the Intestine**
S. Vaishnava et al.
Innate immune signaling and antimicrobial peptide activity maintain separation of the microbiota and intestinal epithelium.
>> *Perspective p. 182*

SCIENCEONLINE

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A Potent and Broad Neutralizing Antibody Recognizes and Penetrates the HIV Glycan Shield
R. Pejchal et al.

An HIV antibody achieves potency and breadth by binding simultaneously to two conserved glycans on the viral envelope protein.
10.1126/science.1213256

Correction of Sickle Cell Disease in Adult Mice by Interference with Fetal Hemoglobin Silencing
J. Xu et al.

Manipulation of a transcriptional repressor promotes expression of protective fetal globin genes.
10.1126/science.1211053

Degradation of Paternal Mitochondria by Fertilization-Triggered Autophagy in *C. elegans* Embryos
M. Sato and K. Sato

Maternal inheritance of mitochondrial DNA results from autophagy-dependent clearance of paternal mitochondria.
10.1126/science.1210333

Torsional Carbon Nanotube Artificial Muscles
J. Foroughi et al.

Carbon nanotube yarns are used to make fast, multirotational torsional actuators.
10.1126/science.1211220

>> *Science Podcast*

Twin Matter Waves for Interferometry Beyond the Classical Limit
B. Lücke et al.

An entangled state of up to 10,000 atoms is used to enhance the resolution of an atomic interferometer.
10.1126/science.1208798

TECHNICALCOMMENTS

Comment on "Changes in Climatic Water Balance Drive Downhill Shifts in Plant Species' Optimum Elevations"

A. Wolf and W. R. L. Anderegg

Full text at www.sciencemag.org/cgi/content/full/334/6053/177-a

Comment on "Changes in Climatic Water Balance Drive Downhill Shifts in Plant Species' Optimum Elevations"

R. J. Hijmans

Full text at www.sciencemag.org/cgi/content/full/334/6053/177-b

Comment on "Changes in Climatic Water Balance Drive Downhill Shifts in Plant Species' Optimum Elevations"

N. L. Stephenson and A. J. Das

Full text at www.sciencemag.org/cgi/content/full/334/6053/177-c

Response to Comments on "Changes in Climatic Water Balance Drive Downhill Shifts in Plant Species' Optimum Elevations"

S. Z. Dobrowski et al.

Full text at www.sciencemag.org/cgi/content/full/334/6053/177-d

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The Signal Transduction Knowledge Environment
11 October issue: <http://scim.ag/ss101111>

RESEARCH ARTICLE: Load-Induced Modulation of Signal Transduction Networks

P. Jiang et al.

The presence of downstream partners that interact with enzymatically modified or unmodified signaling proteins changes the dynamics of signal transduction.

RESEARCH ARTICLE: Phosphorylation of Mad Controls Competition Between Wingless and BMP Signaling

E. Eivers et al.

The transcription factor Mad participates in two different developmentally important signaling pathways depending on its phosphorylation status.

PODCAST: *Science Signaling* Podcast—11 October 2011

E. M. De Robertis and A. M. VanHook

Phosphorylation of the transcription factor Mad determines whether it mediates Wingless or BMP signaling.

PERSPECTIVE: De-AMPylation Unmasked—Modulation of Host Membrane Trafficking

H. Ham and K. Orth

The reversible modification of a protein that regulates membrane trafficking promotes the replication of a bacterial pathogen.

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E. R. Edelman and G. A. FitzGerald

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M. C. Beckerle et al.

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I. Kryczek et al.

Human T_H17 cells function as long-lived effector memory cells in the context of chronic disease.

RESEARCH ARTICLE: Diabetes Impairs Hematopoietic Stem Cell Mobilization by Altering Niche Function

F. Ferraro et al.

Impaired mobilization of hematopoietic stem cells in diabetic mice is due to sympathetic nervous system dysregulation of CXCL12 distribution.

RESEARCH ARTICLE: Vitamin D Is Required for IFN- λ -Mediated Antimicrobial Activity of Human Macrophages

M. Fabri et al.

Vitamin D is required for both innate and adaptive immunity to tuberculosis.

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M. Price

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