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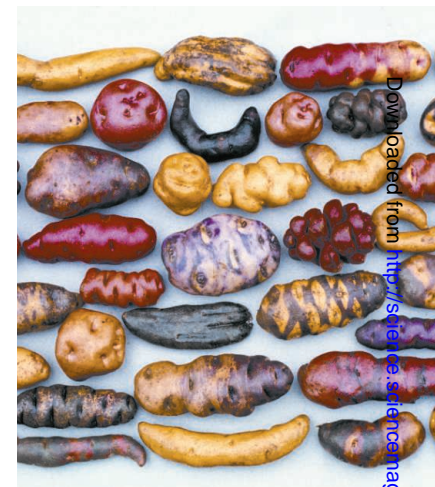
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Conceptual illustration of information, in the form of electrical impulses, flowing through neuronal processes within the brain. Fundamental aspects of neuroscience are based in the study of neurons and how they interact. An Editorial (p. 567) and several Reviews (pp. 618 and 623), Reports (pp. 690, 693, and 697), and Perspectives (pp. 606 and 608) highlight current and future approaches in neuroscience research.

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- 639 **A Fluoride-Derived Electrophilic Late-Stage Fluorination Reagent for PET Imaging**  
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- 643 **Ionic Liquid-Mediated Selective Conversion of CO<sub>2</sub> to CO at Low Overpotentials**  
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- 674 **N-Terminal Acetylation Acts as an Avidity Enhancer Within an Interconnected Multiprotein Complex**

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- 678 **mTORC1 Senses Lysosomal Amino Acids Through an Inside-Out Mechanism That Requires the Vacuolar H<sup>+</sup>-ATPase**

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- 693 **Bidirectional Control of Social Hierarchy by Synaptic Efficacy in Medial Prefrontal Cortex**

F. Wang et al.

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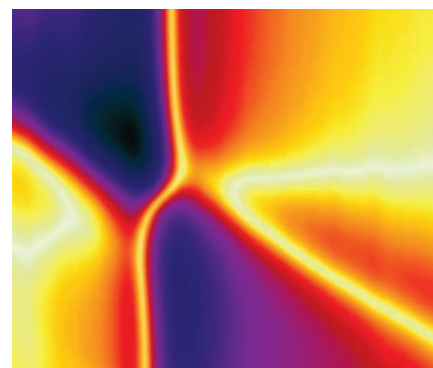
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## SCIENCEEXPRESS

[www.scienceexpress.org](http://www.scienceexpress.org)

### Fermi Detection of a Luminous $\gamma$ -Ray Pulsar in a Globular Cluster

*The Fermi LAT Collaboration*

Contrary to expectations, the  $\gamma$ -rays from a distant cluster of stars are dominated by emission from a single neutron star.

10.1126/science.1207141

### Crystal Structure of the Eukaryotic 60S Ribosomal Subunit in Complex with Initiation Factor 6

*S. Klinge et al.*

The 3.5 angstrom-resolution structure provides insights into the architecture of the eukaryotic ribosome and its regulation.

10.1126/science.1211204

### Entorhinal Cortex Layer III Input to the Hippocampus Is Crucial for Temporal Association Memory

*J. Suh et al.*

A specific neural circuit integrates temporally dispersed stimuli into a coherent memory episode.

10.1126/science.1210125

### Inhibition of Pyruvate Kinase M2 by Reactive Oxygen Species Contributes to Cellular Antioxidant Responses

*D. Anastasiou et al.*

The glycolytic metabolism of cancers differs from normal tissues, allowing tumor cells to survive under oxidative stress.

10.1126/science.1211485

### Experimental Evolution of Reduced Sex Ratio Adjustment Under Local Mate Competition

*E. Macke et al.*

Tests of Hamilton's theory on a spider mite show that populations evolve with less phenotypic plasticity in their sex ratio.

10.1126/science.1212177

### Deep Human Genealogies Reveal a Selective Advantage to Be on an Expanding Wave Front

*C. Moreau et al.*

Women in the vanguard of range expansions, such as the European settlement of Quebec, married young and had more offspring.

10.1126/science.1212880

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### Editorial Expression of Concern on Stapel and Lindenberg Report

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10.1126/science.1216027

## TECHNICALCOMMENTS

### Comment on "Atmospheric $P_{CO_2}$ Perturbations Associated with the Central Atlantic Magmatic Province"

*M. R. Rampino and K. Caldeira*

Full text at [www.sciencemag.org/cgi/content/full/334/6056/594-b](http://www.sciencemag.org/cgi/content/full/334/6056/594-b)

### Response to Comment on "Atmospheric $P_{CO_2}$ Perturbations Associated with the Central Atlantic Magmatic Province"

*M. F. Schaller et al.*

Full text at [www.sciencemag.org/cgi/content/full/334/6056/594-c](http://www.sciencemag.org/cgi/content/full/334/6056/594-c)

## SCIENCENOW

[www.sciencenow.org](http://www.sciencenow.org)

Highlights From Our Daily News Coverage

### Happiness Associated With Longer Life

Among older people, upbeat moods could mean greater life span.

[http://scim.ag/\\_longlife](http://scim.ag/_longlife)

### Cover Your Ears!

Musicologists learn what makes chalkboard screeches so painful.

[http://scim.ag/\\_chalkboard](http://scim.ag/_chalkboard)

### The Case of the Haunted Golf Club

Does the 'spirit' of a previous owner of sports equipment carry over to new users?

[http://scim.ag/\\_golfclub](http://scim.ag/_golfclub)

## SCIENCE SIGNALING

[www.sciencesignaling.org](http://www.sciencesignaling.org)

The Signal Transduction Knowledge Environment

**1 November issue:** <http://scim.ag/ss110111>

### RESEARCH ARTICLE: p53 and MicroRNA-34 Are Suppressors of Canonical Wnt Signaling

*N. H. Kim et al.*

The tumor suppressor p53 activates miRNA-34 to inhibit Wnt signaling and colorectal cancer cell invasiveness.

### RESEARCH ARTICLE: A CC' Loop Decoy Peptide Blocks the Interaction between Act1 and IL-17RA to Attenuate IL-17- and IL-25-Induced Inflammation

*C. Liu et al.*

### PODCAST

*X. Li and A. M. VanHook*

A cell-permeable peptide derived from an adaptor protein blocks cytokine receptor signaling and reduces inflammation.

### RESEARCH ARTICLE: Persistent Stimulation with Interleukin-17 Desensitizes Cells Through SCF $\beta$ -TrCP-Mediated Degradation of Act1

*P. Shi et al.*

Persistent inflammation may be prevented by degradation of an adaptor protein required for inflammatory cytokine receptor signaling.

## SCIENCE TRANSLATIONAL MEDICINE

[www.sciencetranslationalmedicine.org](http://www.sciencetranslationalmedicine.org)

Integrating Medicine and Science

**2 November issue:** <http://scim.ag/stm110211>

### FOCUS: Epstein-Barr Virus—An Important Vaccine Target for Cancer Prevention

*J. I. Cohen et al.*

Epstein-Barr virus vaccine research should focus on the prevention of EBV-associated cancers and infectious mononucleosis.

### PERSPECTIVE: Epigenetics of Nicotine—Another Nail in the Coughing

*N. D. Volkow*

Chronic nicotine exposure rewired the brains of rodents and enhanced their behavioral response to cocaine.

### RESEARCH ARTICLE: Molecular Mechanism for a Gateway Drug—Epigenetic Changes Initiated by Nicotine Prime Gene Expression by Cocaine

*A. Levine et al.*

Nicotine changes the way brain cells respond to cocaine, possibly explaining how smoking acts as a gateway for cocaine abuse.

### RESEARCH ARTICLE: Lipotoxicity Causes Multisystem Organ Failure and Exacerbates Acute Pancreatitis in Obesity

*S. Navina et al.*

Unsaturated fatty acids cause lipotoxicity and mediate acute adverse outcomes in obese individuals with pancreatitis.

### RESEARCH ARTICLE: ALDH2 Activator Inhibits Increased Myocardial Infarction Injury by Nitroglycerin Tolerance

*L. Sun et al.*

Tolerance to nitroglycerin, a drug often used to treat chest pain, increases susceptibility to injury by myocardial infarction.

## SCIENCE CAREERS

[www.sciencemag.org/career\\_magazine](http://www.sciencemag.org/career_magazine)

Free Career Resources for Scientists

### Taken for Granted: Getting to Aaahhh!

*B. L. Benderly*

A former postdoc finds a deeply satisfying career teaching high school.

[http://scim.ag/tfg\\_teaching](http://scim.ag/tfg_teaching)

### Conquering Information Overload

*S. A. Holgate*

How can you keep from drowning in the sea of information your work depends on?

[http://scim.ag/info\\_overload](http://scim.ag/info_overload)

### In Person: At Summer Davos

*M. Anand*

At a world summit, a young scientist recognizes the importance of engaging real-world problems and the wider community.

[http://scim.ag/Summer\\_Davos](http://scim.ag/Summer_Davos)

## SCIENCEPODCAST

[www.sciencemag.org/multimedia/podcast](http://www.sciencemag.org/multimedia/podcast)

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On the 4 November *Science* Podcast: social networks and brain structure, fertility at the range front, keeping vigil at Changbai-Paektu volcano, and more.

## SCIENCEINSIDER

[news.sciencemag.org/scienceinsider](http://news.sciencemag.org/scienceinsider)

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SCIENCE (ISSN 0036-8075) is published weekly on Friday, except the last week in December, by the American Association for the Advancement of Science, 1200 New York Avenue, NW, Washington, DC 20005. Periodicals Mail postage (publication No. 484460) paid at Washington, DC, and additional mailing offices. Copyright © 2011, 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): \$149 (\$74 allocated to subscription). Domestic institutional subscription (51 issues): \$990; Foreign postage extra: Mexico, Caribbean (surface mail) \$55; other countries (air assist delivery) \$85. First class, airmail, student, and emeritus rates on request. Canadian rates with GST available upon request, GST #1254 88122. Publications Mail Agreement Number 1069624. Printed in the U.S.A.

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**334 (6056)**

*Science* **334** (6056), 563-705.

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