



## COVER

Heavy pollution blankets Tiananmen Square, Beijing, on 27 December 2007. Chinese authorities are taking drastic measures to improve the city's air quality for the Olympics. Bad air is just one of many environmental challenges China is facing. See the special News Focus section beginning on page 628.

*Image: Feng Li/Getty Images*

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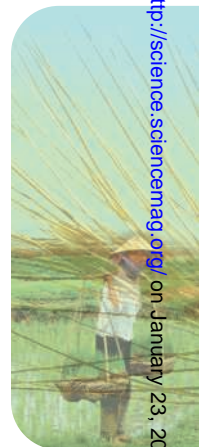
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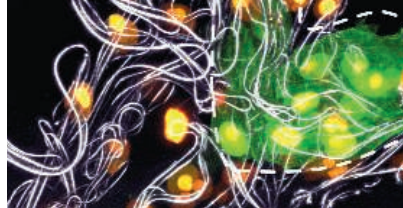
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## SCIENCE EXPRESS

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

### DEVELOPMENTAL BIOLOGY

**Induced Pluripotent Stem Cells Generated from Patients with ALS Can Be Differentiated into Motor Neurons**

*J. T. Dimos et al.*

Skin cells from elderly individuals with a mutation that causes amyotrophic lateral sclerosis (ALS) were used to derive stem cells that could then be differentiated.

10.1126/science.1158799

### PALEOCLIMATE

**Regional Synthesis of Mediterranean Atmospheric Circulation During the Last Glacial Maximum**

*J. Kuhlemann et al.*

A three-dimensional reconstruction of atmospheric temperatures in the Mediterranean during glacial times is analogous to one of winter during the Little Ice Age.

10.1126/science.1157638

### DEVELOPMENTAL BIOLOGY

**Dual Origin of Tissue-Specific Progenitor Cells in *Drosophila* Tracheal Remodeling**

*M. Weaver and M. A. Krasnow*

When fruit flies metamorphose from larvae, a new trachea forms both from undifferentiated cells of the imaginal disc and differentiated cells that re-enter the cell cycle.

10.1126/science.1158712

### CHEMISTRY

**In Situ Formation of an Oxygen-Evolving Catalyst in Neutral Water Containing Phosphate and  $\text{Co}^{2+}$**

*M. W. Kanan and D. G. Nocera*

A catalyst that precipitates in situ when cobalt ions are reduced in a phosphate buffer efficiently forms oxygen from water needed for electrochemical applications.

>> *News story p. 620; Science Podcast*

10.1126/science.1162018

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**Comment on "Magnetic Resonance Spectroscopy Identifies Neural Progenitor Cells in the Live Human Brain"** 640

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[full text at www.sciencemag.org/cgi/content/full/321/5889/640b](http://www.sciencemag.org/cgi/content/full/321/5889/640b)

**Comment on "Magnetic Resonance Spectroscopy Identifies Neural Progenitor Cells in the Live Human Brain"**

*S. D. Friedman*

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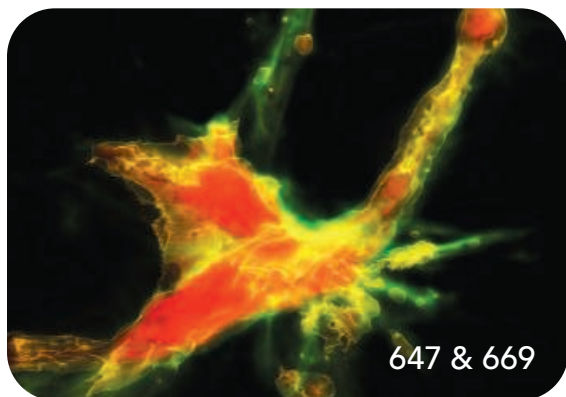
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*A. Tanovic, S. A. Samel, L.-O. Essen, M. A. Marahiel*

A large enzyme complex assembles peptide natural products without ribosomal participation by successive catalytic steps at the end of a flexible, substrate-loaded arm.

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Degradation of one member of a protein complex that forms when a cytokine receptor is activated causes the complex to move to the cytoplasm, triggering the downstream pathway.

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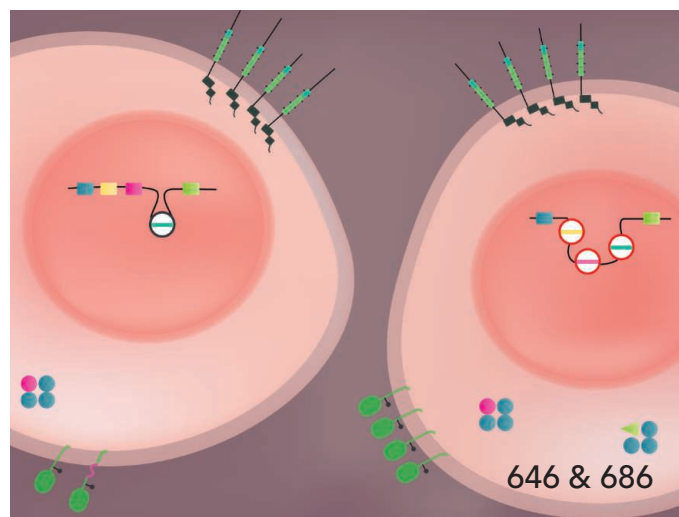
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Pain neurons containing a particular sodium channel respond only to cold, mechanical, and inflammatory pain, not to all painful stimuli as previously assumed. >> *Science Podcast*



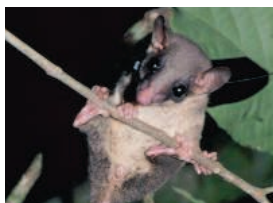
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HIGHLIGHTS FROM OUR DAILY NEWS COVERAGE

### Now That's a Party Animal

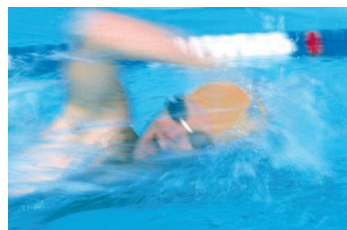
Researchers discover a wild tree shrew that lives on alcoholic nectar.

### Take a Deep Breath—and Thank Mount Everest

Plate tectonics gave rise to atmospheric oxygen.

### To Sleep, Perchance to Forget

Aging may impair the consolidation of memories during sleep.



A career in keeping athletics clean.

## SCIENCE CAREERS

[www.sciencecareers.org/career\\_development](http://www.sciencecareers.org/career_development)

FREE CAREER RESOURCES FOR SCIENTISTS

### Taken for Granted: The Fat Lady Sings

*B. L. Benderly*

Organizers claim success in unionizing postdocs on University of California campuses.

### A Scientist in the Service of Clean Sports

*E. Pain*

Chemist Osquel Barroso matches his scientific and sporting interests at the World Anti-Doping Agency.

>> *News story p. 627*

### Careers in Research Support

*S. Gaidos*

Institutions recognize the advantages of hiring science Ph.D.'s as research administrators.

### August 2008 Funding News

*J. Fernández*

Learn about the latest in research funding, scholarships, fellowships, and internships.



Anesthetics increase postoperative pain.

## SCIENCE SIGNALING

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

THE SIGNAL TRANSDUCTION KNOWLEDGE ENVIRONMENT

### PODCAST

*N. R. Gough and A. M. VanHook*

Some anesthetics activate TRPA1 channels to trigger pain and nerve-mediated inflammation.

### PRESENTATION: A Static Network Analysis Tool for Pharmacological Analysis of Signal Transduction Pathways

*B. B. Samal and L. E. Eiden*

Simulate knocking out one or more components from a pathway to find alternate connections between a stimulus and a target response.

## SCIENCE PODCAST

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