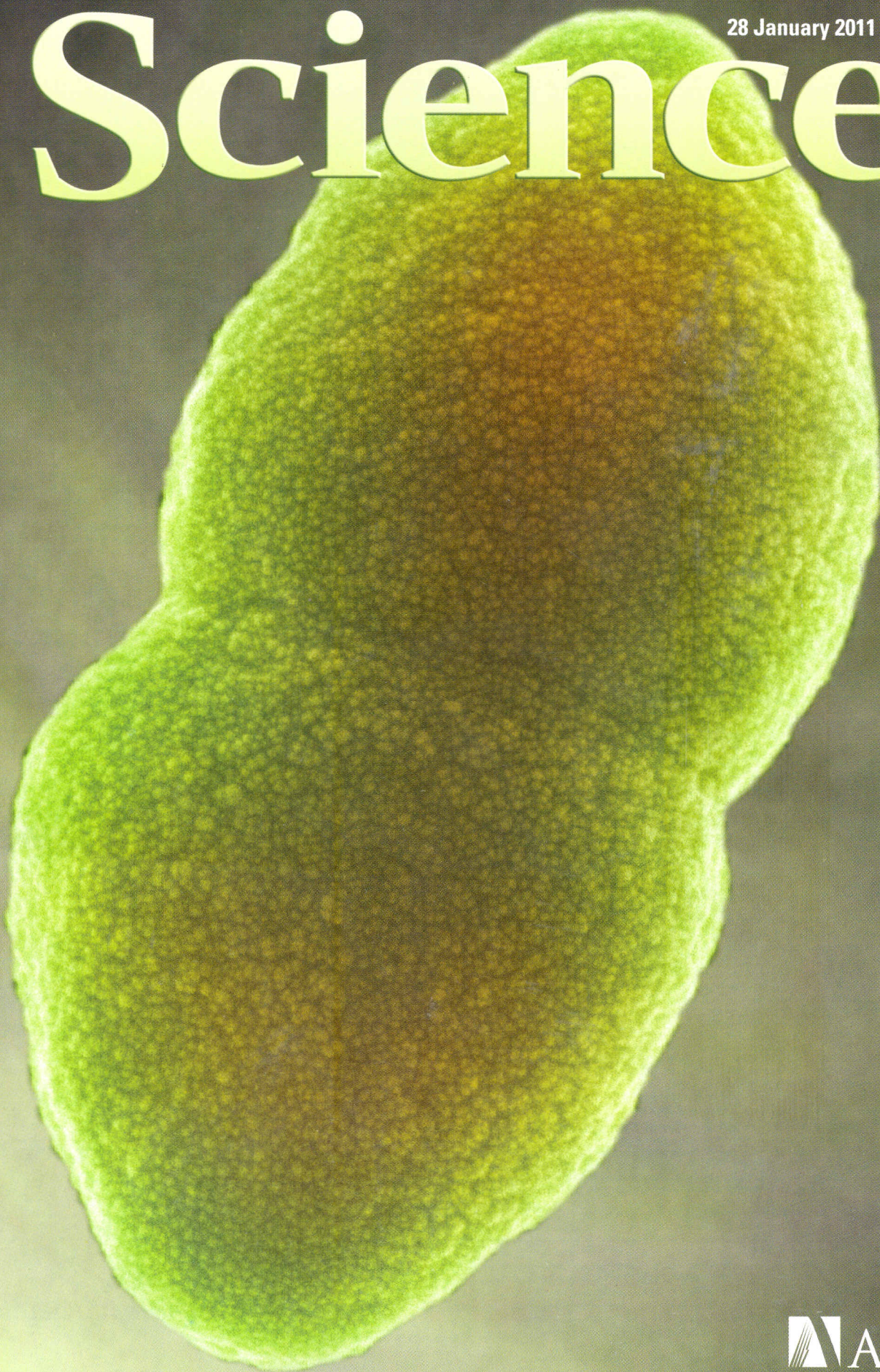


# Science

28 January 2011 | \$10



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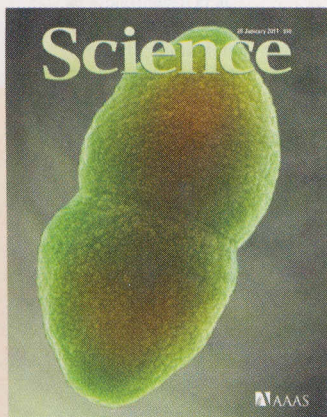
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## COVER

False-colored scanning electron micrograph of the bacterial pathogen *Streptococcus pneumoniae* (typical length, ~1 micrometer), a major cause of pneumonia and meningitis. On page 430, Croucher *et al.* describe the use of whole-genome sequencing to track the global spread of a rapidly recombining *S. pneumoniae* lineage as it adapts to antibiotic use and vaccine introduction.

Image: Dennis Kunkel Microscopy, Inc./Visuals Unlimited, Inc.

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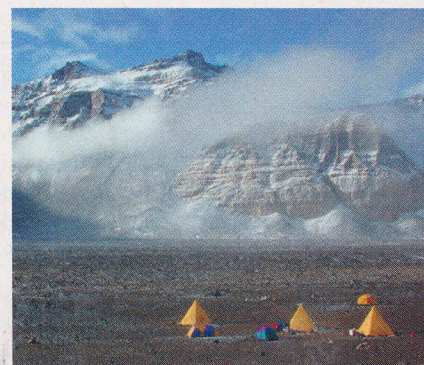
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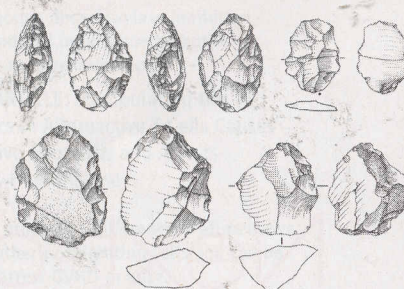
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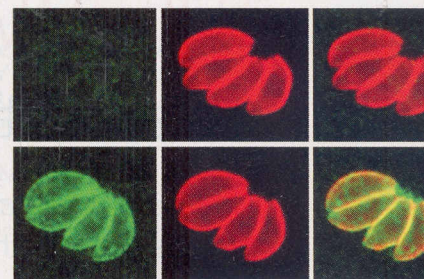
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**Microtubule Stabilization Reduces Scarring and Causes Axon Regeneration After Spinal Cord Injury**

*F. Hellal et al.*

Taxol stimulates the capacity of axons to grow after spinal cord injury.

10.1126/science.1201148

**Structures of SAS-6 Suggest Its Organization in Centrioles**

*M. van Breugel et al.*

Self-assembly of a centriolar protein may contribute to organizing the cartwheel-like hub and establishing centriole symmetry.

10.1126/science.1199325

**The Magnitude and Duration of Late Ordovician–Early Silurian Glaciation**

*S. Finnegan et al.*

Carbonate isotopes reveal a link between past ocean temperatures and mass extinction.

10.1126/science.1200803

**Linking Policy on Climate and Food**

*H. C. J. Godfray et al.*

10.1126/science.1202899

## SCIENCENOW

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

## Highlights From Our Daily News Coverage

**Frédéric Chopin's 'Madness' Diagnosed**

New study argues that composer suffered from a type of epilepsy.

<http://scim.ag/mad-chopin>

**The World's Smallest Farmers**

Single-celled amoebas plant bacteria for food.

<http://scim.ag/tiny-farmers>

**When Trees Attack, Fungus Can Parry**

Genetic analysis reveals why the pine beetle has ravaged so many trees.

<http://scim.ag/Grosmanina>

## SCIENCE SIGNALING

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

## The Signal Transduction Knowledge Environment

25 January issue: <http://scim.ag/ss012511>

**RESEARCH ARTICLE: Genome-Wide RNAi Screen Reveals Disease-Associated Genes That Are Common to Hedgehog and Wnt Signaling**

*L. S. Jacob et al.*

Loss of the kinase and tumor suppressor Stk11 (Lkb1) has opposite effects on Hh and Wnt signaling.

**RESEARCH ARTICLE: V<sub>2</sub> Receptor–Mediated Autocrine Role of Somatodendritic Release of AVP in Rat Vasopressin Neurons Under Hypo-Osmotic Conditions**

*K. Sato et al.*

The antidiuretic hormone arginine vasopressin (AVP) is also an autocrine signal that functions in cell volume regulation.

**RESEARCH ARTICLE: Rho and Rho-Kinase Activity in Adipocytes Contributes to a Vicious Cycle in Obesity That May Involve Mechanical Stretch**

*Y. Hara et al.*

Mechanical stretch activates Rho-kinase in adipocytes, promoting obesity and obesity-related complications.

## PODCAST

Researchers discuss how mechanical stretch regulates signaling in adipocytes and in hypothalamic neurons.

**MEETING REPORT: Dependence Receptors—From Basic Research to Drug Development**

*P. Mehlen and D. E. Bredesen*

**PERSPECTIVE: Control of DNMT1 Abundance in Epigenetic Inheritance by Acetylation, Ubiquitylation, and the Histone Code**

*C. Bronner*

**JOURNAL CLUB: The Role of L(u)ck in T Cell Triggering**

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## SCIENCE CAREERS

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

## Free Career Resources for Scientists

## Science Blogging and Tenure

*V. Raper*

Can pretenured scientists blog about science without damaging their careers?

<http://scim.ag/dFDgml>

**A Loyal Fan of Women's Health Research**

*K. Hede*

Physician-scientist Rebecca Jackson's enthusiasm for research is matched only by her passion for Ohio State football.

<http://scim.ag/hPH8Nj>

**Experimental Error: Lies, Damned Lies, and Seminars**

*A. Ruben*

For all the naive and gullible graduate students out there, here is a handy guide to what those speakers are really saying.

<http://scim.ag/ezFYgK>

## SCIENCE TRANSLATIONAL MEDICINE

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

## Integrating Medicine and Science

26 January issue: <http://scim.ag/stm012611>

**COMMENTARY: Between Confidentiality and Scientific Exchange—The Place of Publication in Drug Discovery and Pharmaceutical Research**

*M. Clozel*

A combined preclinical and clinical publication might be the ideal approach in translational medicine.

**RESEARCH ARTICLE: Uroporphyrinogen Decarboxylase Is a Radiosensitizing Target for Head and Neck Cancer**

*E. Ito et al.*

Uroporphyrinogen decarboxylase inhibition sensitizes head and neck cancer to both radiotherapy and chemotherapy.

**RESEARCH ARTICLE: Manipulating the Bioenergetics of Alloreactive T Cells Causes Their Selective Apoptosis and Arrests Graft-Versus-Host Disease**

*E. Gatz et al.*

Bioenergetic properties differentiate alloreactive T cells from other proliferating cells and can be exploited to arrest GVHD in mice.

## SCIENCE PODCAST

[www.sciencemag.org/multimedia/podcast](http://www.sciencemag.org/multimedia/podcast)  
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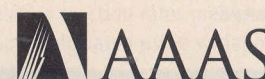
Download the 28 January *Science* Podcast to hear about infants' awareness of social dominance, studying bird metabolism in wind tunnels, your letters to *Science*, and more.

## SCIENCE INSIDER

[news.sciencemag.org/scienceinsider](http://news.sciencemag.org/scienceinsider)  
Science Policy News and Analysis

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