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COVER

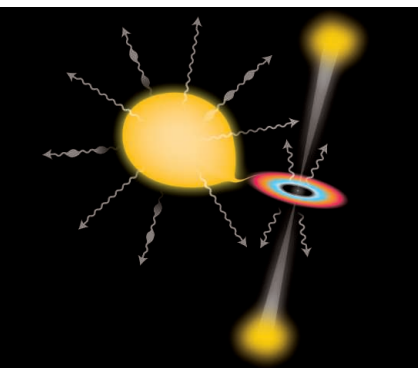
A young wandering albatross (*Diomedea exulans*) glides smoothly over the Southern Ocean swell during a calm day. Albatrosses take advantage of ocean winds to travel more efficiently. Recent changes in Southern Ocean wind conditions have allowed wandering albatrosses to travel more rapidly and shift their foraging range southward, with positive influences on reproduction and potential contributions to albatross conservation. See page 211.

Photo: Paul Tixier

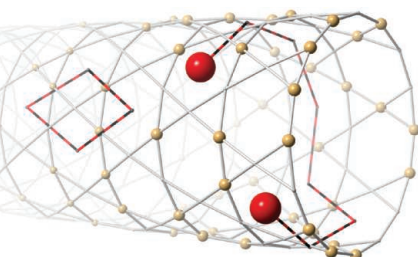
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R. Drdla-Schutting et al.
Opioid administration turns down a pain amplifier by reversing synaptic long-term potentiation in spinal nociceptive pathways.

SCIENCEONLINE

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Female Leadership Raises Aspirations and Educational Attainment for Girls: A Policy Experiment in India

L. Beaman et al.

The effects of female leaders on girls occur via policy changes in the short run and parental aspirations in the longer run.

10.1126/science.1212382

>> [Science Podcast](#)

Innate Response Activator B Cells Protect Against Microbial Sepsis

P. J. Rauch et al.

A specialized population of B lymphocytes is important for controlling bacterial infections and preventing sepsis.

10.1126/science.1215173

Revealing the Superfluid Lambda Transition in the Universal Thermodynamics of a Unitary Fermi Gas

M. J. H. Ku et al.

Thermodynamic quantities for the superfluid transition of a strongly interacting atomic Fermi gas were measured.

10.1126/science.1214987

High-Latitude Forcing of the South American Summer Monsoon During the Last Glacial

L. C. Kanner et al.

High-latitude processes in the Northern and Southern Hemispheres both influence the South American Summer Monsoon.

10.1126/science.1213397

TECHNICALCOMMENTS

Comment on "Late Mousterian Persistence near the Arctic Circle"

N. Zwyns et al.

Full text at www.sciencemag.org/cgi/content/full/335/6065/167-b

Response to "Comment on Late Mousterian Persistence near the Arctic Circle"

L. Slimak et al.

Full text at www.sciencemag.org/cgi/content/full/335/6065/167-c

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New CO₂ Sucker Could Help Clear the Air

A plastic sponge may eventually make its way into artificial trees.

<http://scim.ag/Clear-Air>

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Astronomers create the largest-ever map of dark matter.

http://scim.ag/Dark_Matter

Meat-Eating Plant Traps Victims Underground

A Brazilian species catches worms with leaves buried in the sand.

<http://scim.ag/Plant-Worms>

SCIENCE SIGNALING

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The Signal Transduction Knowledge Environment

10 January issue: <http://scim.ag/ss011012>

EDITORIAL GUIDE: Focus Issue—Wnt and β -Catenin Signaling in Development and Disease

N. R. Gough

Research reveals new functions for Wnt in cancer, tooth development, and neuronal pathfinding.

RESEARCH ARTICLE: Wnt/ β -Catenin Signaling and AXIN1 Regulate Apoptosis Triggered by Inhibition of the Mutant Kinase BRAF^{V600E} in Human Melanoma

T. L. Biechele et al.

PODCAST

T. L. Biechele et al.

Exploiting crosstalk between signaling pathways may lead to more effective melanoma therapies.

RESEARCH ARTICLE: A Wnt-Bmp Feedback Circuit Controls Intertissue Signaling Dynamics in Tooth Organogenesis

D. J. O'Connell et al.

Computational and genetic analyses reveal a Wnt and Bmp circuit in developing teeth in mice.

PROTOCOL: A Dual Array-Based Approach to Assess the Abundance and Posttranslational Modification State of Signaling Proteins

K. Luckert et al.

Combining two strategies enables simultaneous quantification of multiple signaling proteins.

PRESENTATION: Wnt-Induced Calcium Signaling Mediates Axon Growth and Guidance in the Developing Corpus Callosum

B. I. Hutchins et al.

Wnt-mediated axon repulsion requires the calcium- and calmodulin-dependent protein kinase II.

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Integrating Medicine and Science

11 January issue: <http://scim.ag/stm011112>

PERSPECTIVE: Magnetic Resonance Metabolic Imaging of Glioma

P. Metellus and D. Figarella-Branger

Noninvasive spectroscopic imaging of mutated enzymes and their metabolites could represent a new paradigm in glial tumor management.

RESEARCH ARTICLE: Detection of 2-Hydroxyglutarate in IDH-Mutated Glioma Patients by In Vivo Spectral-Editing and 2D Correlation Magnetic Resonance Spectroscopy

O. C. Andronesi

A metabolite overproduced in IDH-mutated brain tumors can be detected noninvasively in patients by spectroscopic imaging.

RESEARCH ARTICLE: Magnetic Resonance of 2-Hydroxyglutarate in IDH1-Mutated Low-Grade Gliomas

A. Elkhaled et al.

Metabolites can be detected ex vivo in biopsy tissue from IDH1-mutant gliomas using proton NMR spectroscopy.

RESEARCH ARTICLE: Alcohol Consumption Induces Endogenous Opioid Release in the Human Orbitofrontal Cortex and Nucleus Accumbens

J. M. Mitchell et al.

Endogenous opioids are released in reward-related brain areas after an alcoholic drink to a greater extent in heavy drinkers than in control subjects.

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Outside Brazil's major scientific hubs, progress requires a mix of patience and impatience.

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Physician-scientist Selma Jeronimo is looking for ways to control the spread of leishmaniasis.

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Brazil's Science Culture Shock

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Physicist Mauro Copelli is working to foster a sustainable research culture in northeastern Brazil.

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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 © 2012 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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335 (6065)
(January 13, 2012)
Science **335** (6065), 144-239.

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