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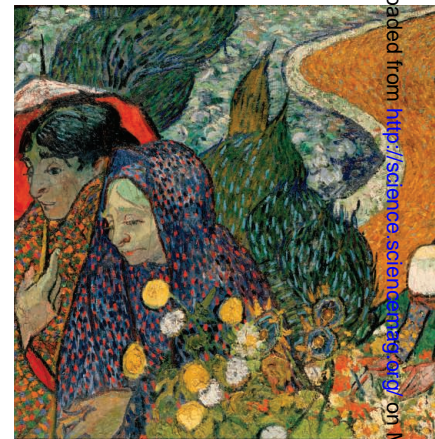
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COVER

Enhanced-color view of the “Snowman” craters (Marcia, Calpurnia, and Minucia) on the asteroid Vesta generated by combining imaging and topography data from NASA’s Dawn spacecraft. The 60-kilometer-wide Marcia crater (at bottom) is one of the youngest large craters on Vesta with a small central peak, as well as light and dark streaks on its walls. See the series of six Reports beginning on page 684.

Image generated using Dawn Framing Camera images: Lucille Le Corre (MPS), David O’Brien (PSI), Vishnu Reddy (MPS/UND); PI of Dawn mission: Christopher T. Russell (UCLA); Dawn Framing Camera leader: Andreas Nathues (MPS), significant contributions from Ralf Jaumann (DLR)

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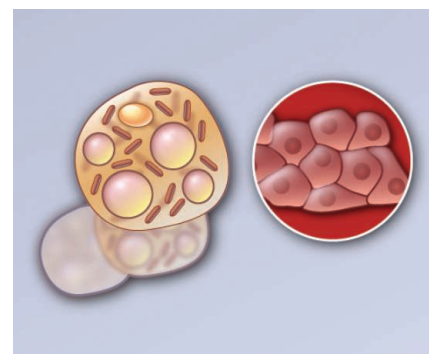
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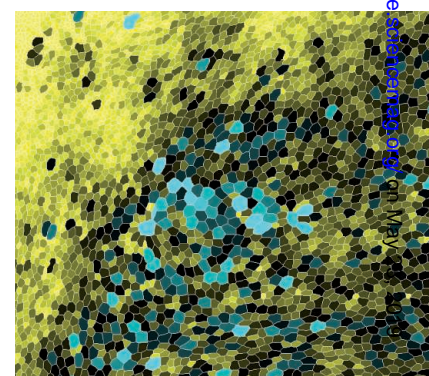
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A Rogue Earthquake Off Sumatra

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The Heliosphere's Interstellar Interaction: No Bow Shock

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Observations from the Interstellar Boundary Explorer are not consistent with a bow shock ahead of the heliosphere.

10.1126/science.1221054

The Detection and Characterization of a Nontransiting Planet by Transit Timing Variations

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Analysis of the deviations in the orbit of a transiting exoplanet revealed an outer planet in the same planetary system.

10.1126/science.1221141

Evidence of Things Not Seen

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Regulated Virulence Controls the Ability of a Pathogen to Compete with the Gut Microbiota

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10.1126/science.1222195

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10.1126/science.1223303

Secreted Kinase Phosphorylates Extracellular Proteins That Regulate Biom mineralization

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The elusive enzyme that modifies proteins involved in building bone and teeth has now been identified.

10.1126/science.1217817

Vitamin K₂ Is a Mitochondrial Electron Carrier That Rescues Pink1 Deficiency

M. Vos et al.

Adding vitamin K rescues fruit flies bearing a mutation in a Parkinson's disease gene homolog.

10.1126/science.1218632

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Canines yawn when they hear people yawn, suggesting cross-species empathy.

http://scim.ag/Dogs_Pain

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'Soft skulls' were present in human ancestors.

<http://scim.ag/Flexible-Heads>

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http://scim.ag/Outdoors_Allergies

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8 May issue: <http://scim.ag/ss050812>

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Series on Structural Biology

W. Wong

Research and commentary highlight the use of structural analysis to understand signaling molecules and events.

RESEARCH ARTICLE: An ATP-Site On-Off Switch That Restricts Phosphatase Accessibility of Akt

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PERSPECTIVE: Uncaging Akt

S. J. Humphrey and D. E. James

ATP and ADP regulate a conformational switch that determines the kinase activity of Akt.

RESEARCH ARTICLE: Syndecan 4 Regulates FGFR1 Signaling in Endothelial Cells by Directing Macropinocytosis

A. Elfenbein et al.

The FGF2 co-receptor syndecan 4 shapes endothelial signaling initiated by a fibroblast growth factor receptor.

PODCAST

M. T. Nelson and A. M. VanHook

Maximal blood vessel dilation can be induced by calcium influx through a just few channel molecules in vascular endothelial cells.

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9 May issue: <http://scim.ag/stm050912>

RESEARCH ARTICLE: Mixed Chimerism and Growth Factors Augment β Cell Regeneration and Reverse Late-Stage Type 1 Diabetes

M. Wang et al.

FOCUS: Three Strikes and You're Cured

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Glucose tolerance can be restored in a mouse model of type 1 diabetes.

RESEARCH ARTICLE: The Predictive Capacity of Personal Genome Sequencing

N. J. Roberts et al.

FOCUS: What's a Genome Worth?

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Analysis of data from monozygotic twins assesses how well whole-genome sequencing can predict disease risk in the general population.

RESEARCH ARTICLE: Survivin Is a Therapeutic Target in Merkel Cell Carcinoma

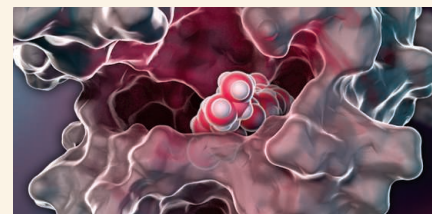
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A targeted therapy for a virus-induced cancer involves blockade of the cellular oncoprotein survivin.

RESEARCH ARTICLE: Extended Survival of Glioblastoma Patients After Chemoprotective HSC Gene Therapy

J. E. Adair et al.

Gene therapy using P140K-modified hematopoietic progenitor cells is chemoprotective, enabling glioblastoma patients to withstand myelotoxic doses of chemotherapy.



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E. Pain

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S. Webb

At a meeting on Long Island, some neuroscientists got tips on how to win an R01 in lean times.

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J. Austin

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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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336 (6082)

Science **336** (6082), 643-751.

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