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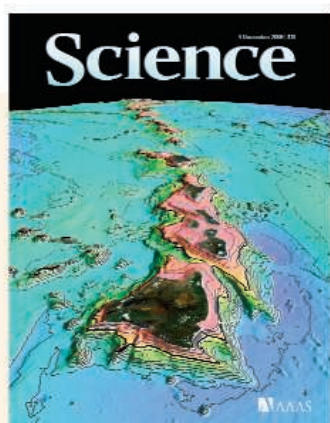


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Image: David Sandwell/University of California, San Diego; Paul Wessel/University of Hawaii

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- 1382 On the Elusive Twelfth Vibrational State of Beryllium Dimer
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- 1384 From Hydrogenases to Noble Metal-Free Catalytic Nanomaterials for H₂ Production and Uptake
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- 1394 Coupling of CO₂ and Ice Sheet Stability Over Major Climate Transitions of the Last 20 Million Years
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- 1397 Indirect Emissions from Biofuels: How Important?
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- 1406 Planarian Hh Signaling Regulates Regeneration Polarity and Links Hh Pathway Evolution to Cilia
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- 1410 Promoting Interest and Performance in High School Science Classes
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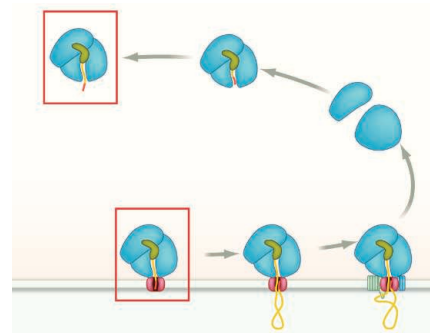
Spotlighting curriculum relevance improves high school outcomes.

- 1412 Structural Insight into Nascent Polypeptide Chain-Mediated Translational Stalling
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- 1415 A Crystal Structure of the Bifunctional Antibiotic Simocyclinone D8, Bound to DNA Gyrase
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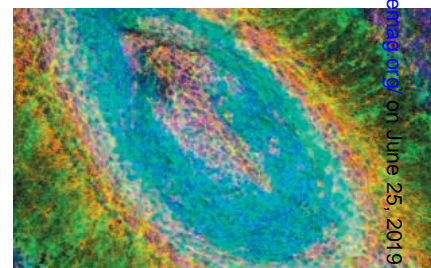
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- 1424 Deletion of *Atoh1* Disrupts Sonic Hedgehog Signaling in the Developing Cerebellum and Prevents Medulloblastoma
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Dendritic Mechanisms Underlying Rapid Synaptic Activation of Fast-Spiking Hippocampal Interneurons

H. Hu et al.

Potassium channel enrichment in the dendrites of hippocampal basket cells defines a mechanism of neural network function.

10.1126/science.1177876

Therapeutic Silencing of MicroRNA-122 in Primates with Chronic Hepatitis C Virus Infection

R. E. Lanford et al.

Targeting a microRNA required for hepatitis C virus infection reduces disease symptoms in chimpanzees.

10.1126/science.1178178

>> [Science Podcast](#)

Targeted 3' Processing of Antisense Transcripts Triggers *Arabidopsis* FLC Chromatin Silencing

F. Liu et al.

A backward transcript of the *FLOWERING LOCUS C* gene of *Arabidopsis* is involved in regulation of the sense-strand transcription.

10.1126/science.1180278

Iron Partitioning and Density Changes of Pyrolite in Earth's Lower Mantle

T. Irifune et al.

Increasing the compositional complexity of mantle samples causes an electronic spin transition to occur at lower pressures.

10.1126/science.1181443

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Highlights From Our Daily News Coverage

Coral Reefs Act Like Sunscreen

Skeletons absorb UV light to protect inhabitants.

Do Titan's Lakes Migrate South for the Winter?

Orbital cycles of Saturn's moon could be causing lakes to pull up stakes.

Americans' Eating Habits More Wasteful Than Ever

Nearly 40% of U.S. food ends up in the garbage, study says.

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EDITORIAL GUIDE: Living by the Numbers

M. B. Yaffe

Articles should be judged on their own merit, not the impact factor of the journal in which they are published.

RESEARCH ARTICLE: Protein Kinase G Controls Brown Fat Cell Differentiation and Mitochondrial Biogenesis

B. Haas et al.

PKG regulates differentiation and thermogenic function in brown adipose tissue.

RESEARCH ARTICLE: RIAM Regulates the Cytoskeletal Distribution and Activation of PLC- γ 1 in T cells

N. Patsoukis et al.

RIAM, an adaptor protein that regulates integrin signaling, is found to also function in T cell receptor-proximal signaling.

PROTOCOL: Quantitative Analysis of Protein-Lipid Interactions Using Tryptophan Fluorescence

C. A. Kraft et al.

The intrinsic fluorescence of tryptophan can be used to quantify the interaction between proteins and lipids.

PODCAST

A. Pfeifer and A. M. VanHook

Protein kinase G is required for the differentiation and fat-burning function of brown adipose tissue.

SCIENCE CAREERS

www.sciencereers.org/career_magazine

Free Career Resources for Scientists

Translating Lupus

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An encounter with a lupus patient crystallized one scientist's concept of "translational research."

Taken for Granted: NIH's Dr. Ruth

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Ruth L. Kirschstein's life of service provides a powerful example for young scientists.

Mind Matters: In Defense of Downtime

I. S. Levine

Working longer does not necessarily mean getting more done.

CTSciNet: The Clinical and Translational Science Network

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Integrating Medicine and Science

EDITORIAL: Peer-to-Peer Sharing Spurs Scientific Innovation

E. A. Zerhouni

Changes in pharmaceutical industry practices can accelerate discoveries.

COMMENTARY: A Call for Sharing—Adapting Pharmaceutical Research to New Realities

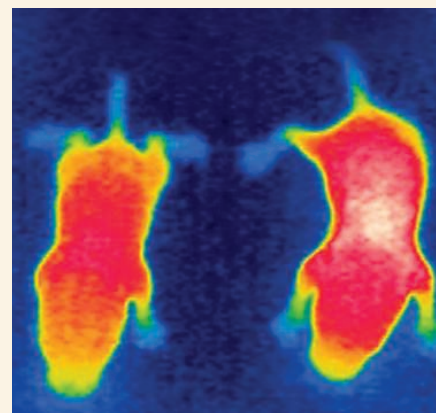
B. H. Munos et al.

Collaborations stand to gain from loosening intellectual property restrictions.

RESEARCH ARTICLE: Identification of an Autoantigen Demonstrates a Link Between Interstitial Lung Disease and a Defect in Central Tolerance

A. K. Shum et al.

A defect in immune tolerance may underlie lung damage in autoimmune diseases.



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Brown fat and body temperature.

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Download the 4 December *Science* Podcast to hear about a microRNA target for treating hepatitis C, the combined effects of nitrogen and CO₂ on plant diversity, the future of evolution, and more.

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