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## COVER

Beach mice (*Peromyscus polionotus*) have recently colonized the white sandy beaches of Florida's Gulf Coast, where they have evolved a novel coat color pattern that camouflages them from predators. In a Report on page 1062, Manceau *et al.* show how small changes in the level and location of expression of a single gene in the mouse embryo cause large changes in adult color pattern.

*Photo: Joel Sartore/joelsartore.com*

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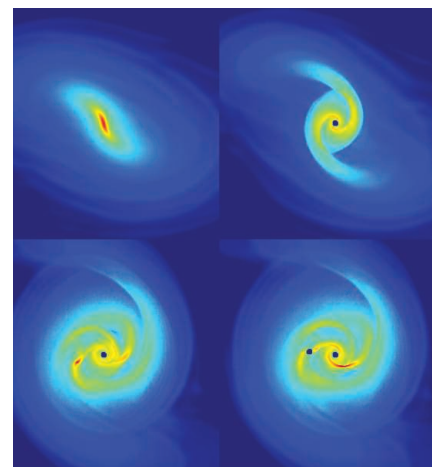
## RESEARCH ARTICLE

- 1036 **Structure of DNMT1-DNA Complex Reveals a Role for Autoinhibition in Maintenance DNA Methylation**  
*J. Song et al.*  
The eukaryote maintenance DNA methyltransferase discriminates against de novo CpG methylation sites.  
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## REPORTS

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*P. C. Clark et al.*  
Numerical simulations show that disks around the first stars in the universe were gravitationally unstable and fragmented.
- 1043 **Suppression of Collisional Shifts in a Strongly Interacting Lattice Clock**  
*M. D. Swallows et al.*  
Increasing atomic interactions improved the accuracy and precision of a clock formed from atoms trapped in an optical lattice.

- 1046 **Direct Measurement of Long-Range Third-Order Coherence in Bose-Einstein Condensates**  
*S. S. Hodgman et al.*  
Correlation of arrival times of metastable helium atoms is consistent with long-range coherence to higher orders.
- 1049 **Synthesis, Structure, and Reactivity of an Iron(V) Nitride**  
*J. J. Scepaniak et al.*  
A reactive iron compound bound to nitrogen has been isolated in an unusually high oxidation state.
- 1052 **The  $S_3^-$  Ion Is Stable in Geological Fluids at Elevated Temperatures and Pressures**  
*G. S. Pokrovski and L. S. Dubrovinsky*  
Instead of sulfide or sulfate, the trisulfur ion  $S_3^-$  is stable at high temperatures.  
>> *Perspective p. 1018*
- 1055 **The Response of Vegetation on the Andean Flank in Western Amazonia to Pleistocene Climate Change**  
*M. L. Cárdenas et al.*  
Pleistocene climate fluctuations caused major shifts in the altitudinal distribution of forest plant species.
- 1058 **A Terminal Pleistocene Child Cremation and Residential Structure from Eastern Beringia**  
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Cremated remains and a burial site in central Alaska provide information on early humans in North America.
- 1062 **The Developmental Role of *Agouti* in Color Pattern Evolution**  
*M. Manceau et al.*  
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*M. S. Ascunze et al.*  
Argentine fire ants have spread around the world from a population that was first established a century ago in North America.
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*S. H. Anderson et al.*  
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>> *Perspective p. 1019*
- 1071 **Global Tissue Revolutions in a Morphogenetic Movement Controlling Elongation**  
*S. L. Haigo and D. Bilder*  
The ellipsoid shape of the *Drosophila* egg is controlled by global tissue revolutions that polarize the matrix.



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- 1074 **Development of Transgenic Fungi That Kill Human Malaria Parasites in Mosquitoes**  
*W. Fang et al.*  
Insect-specific fungi can be used to deliver a range of toxins, antibodies, and other agents to kill vector-borne pathogens.  
>> *Science Podcast*
- 1078 **Transient Regenerative Potential of the Neonatal Mouse Heart**  
*E. R. Porrello et al.*  
The heart in a newborn mouse can rebuild itself after injury, but this regenerative capacity is lost within a few days.
- 1081 **Translation-Independent Localization of mRNA in *E. coli***  
*K. Nevo-Dinur et al.*  
Sequences within messenger RNAs target them to sites in the bacterial cell where the resulting proteins function.  
>> *Perspective p. 1021*

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## SCIENCEONLINE

## SCIENCEEXPRESS

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

### Isotopic Evidence of Cr Partitioning into Earth's Core

*F. Moynier et al.*

Chromium isotopes in meteorites reveal Earth's accretion history.

10.1126/science.1199597

### Meteoritic Clues Point Chromium Toward Earth's Core

*W. F. McDonough*

10.1126/science.1203353

### Catastrophic Drought in the Afro-Asian Monsoon Region During Heinrich Event 1

*J. C. Stager et al.*

An extreme megadrought occurred in the Afro-Asian monsoon region during an iceberg melting episode 50,000 years ago.

10.1126/science.1198322

### Chronic Mucocutaneous Candidiasis in Humans with Inborn Errors of Interleukin-17 Immunity

*A. Puel et al.*

Chronic yeast infections in the absence of other infections result from genetic deficiencies in proinflammatory host responses.

10.1126/science.1200439

### Directional Switching of the Kinesin Cin8 Through Motor Coupling

*J. Roostal et al.*

A molecular motor switches direction upon interacting with individual microtubules or antiparallel microtubules.

10.1126/science.1199945

## TECHNICALCOMMENTS

### Comment on "Mantle Flow Drives the Subsidence of Oceanic Plates"

*M. B. Croon et al.*

Full text at [www.sciencemag.org/cgi/content/full/331/6020/1011-a](http://www.sciencemag.org/cgi/content/full/331/6020/1011-a)

### Response to Comment on "Mantle Flow Drives the Subsidence of Oceanic Plates"

*C. Adam and V. Vidal*

Full text at [www.sciencemag.org/cgi/content/full/331/6020/1011-b](http://www.sciencemag.org/cgi/content/full/331/6020/1011-b)

## SCIENCENOW

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

Highlights From Our Daily News Coverage

### Ancient Britons Used Skulls as Cups

Gruesome goblets were carefully fashioned and may have been used to serve up enemies' brains.

<http://scim.ag/skull-cups>

### Rising Temperatures Bringing Bigger Floods

A new study suggests that CO<sub>2</sub> emissions have boosted the risk of intense precipitation and consequent flooding.

<http://scim.ag/more-floods>

### The Genetics of Long-Distance Flying

Researchers have discovered the first gene linked to migratory behavior in birds.

<http://scim.ag/long-flights>

## SCIENCE SIGNALING

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

The Signal Transduction Knowledge Environment

**22 February issue:** <http://scim.ag/ss022211>

### RESEARCH ARTICLE: ER Stress Inhibits mTORC2 and Akt Signaling Through GSK-3 $\beta$ -Mediated Phosphorylation of Rictor

*C.-H. Chen et al.*

Cellular stress attenuates growth factor signaling through a phosphorylation event that blocks substrate access to the kinase complex mTORC2.

### RESEARCH ARTICLE: The Specificity of Innate Immune Responses Is Enforced by Repression of Interferon Response Elements by NF- $\kappa$ B p50

*C. S. Cheng et al.*

## PODCAST

*A. Hoffmann and A. M. VanHook*

A transcriptional repressor acts as a gatekeeper to restrict the innate immune response to specific stimuli.

### MEETING REPORT: Receptors, Signaling Networks, and Disease

*N. Cuesta et al.*

This meeting in Madrid focused on signaling by immune cells and regulation of and signaling by G protein-coupled receptors.

## SCIENCE CAREERS

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

Free Career Resources for Scientists

### Experimental Error: Most Likely to Secede

*A. Ruben*

No talented child ever says, "I want to pipette repetitively when I grow up."

<http://scim.ag/htL3Zt>

### A Nobel Prize at 36

*E. Pain*

Last year, Konstantin Novoselov became the youngest physics laureate since Brian Josephson in 1973.

<http://scim.ag/gZdlk8>

## SCIENCE TRANSLATIONAL MEDICINE

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

Integrating Medicine and Science

**23 February issue:** <http://scim.ag/stm022311>

### PERSPECTIVE: Tuberculosis Immunopathology—The Neglected Role of Extracellular Matrix Destruction

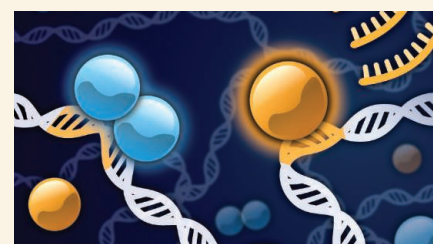
*P. T. Elkington et al.*

Compounds that inhibit matrix metalloproteinases should be tested for their ability to limit tuberculosis morbidity and mortality.

### RESEARCH ARTICLE: Pump-Probe Imaging Differentiates Melanoma from Melanocytic Nevi

*T. E. Matthews et al.*

Multiphoton imaging reveals chemical changes in melanoma compared to benign nevi and could enhance current clinical diagnostic protocols.



## SCIENCE SIGNALING

Competition at the promoter.

### RESEARCH ARTICLE: Micro-NMR for Rapid Molecular Analysis of Human Tumor Samples

*J. B. Haun et al.*

## PODCAST

*R. Weissleder and O. M. Smith*

A portable micro-nuclear magnetic resonance device enables rapid molecular diagnosis from scarce cancer cells in fine-needle aspirates from human tumors.

## SCIENCEPODCAST

[www.sciencemag.org/multimedia/podcast](http://www.sciencemag.org/multimedia/podcast)

Free Weekly Show

On the 25 February Science Podcast: fighting malaria with transgenic fungi, exploiting genomics, your letters to *Science*, and more.

## SCIENCEINSIDER

[news.sciencemag.org/scienceinsider](http://news.sciencemag.org/scienceinsider)

Science Policy News and Analysis

## SPECIAL SERIES

<http://scim.ag/genome10>

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