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S. Naeem et al.

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View of a ceiling in Altamira Cave, Cantabria, Spain (original image rotated 180°). The multicolor (brown and red) bison depicted here date to ~18,000 years ago but were painted on top of earlier single-color artwork (red). New uranium-thorium dates on calcite crusts show that the large (~50-centimeter) double-claviform figure (center right) is at least 35,600 years old, indicating that, at the latest, cave painting here began shortly after humans first arrived. See page 1409.

Photo: Pedro Saura
BREVIA
1408 Massive Phytoplankton Blooms Under Arctic Sea Ice
K. R. Arrigo et al.
In midsummer, diatoms have taken advantage of thinning ice cover to feed in nutrient-rich waters.

RESEARCH ARTICLE
1409 U-Series Dating of Paleolithic Art in 11 Caves in Spain
A. W. G. Pike et al.
Dating of calcite crusts overlying art in Spanish caves shows that painting began more than 40,000 years ago.
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1416 Dipolar Antiferromagnetism and Quantum Criticality in LiErF₄
C. Kraemer et al.
Scattering experiments reveal that magnetic ordering can arise from dipolar interactions, not only from exchange.

1420 Ambient-Temperature Isolation of a Compound with a Boron-Boron Triple Bond
H. Braunschweig et al.
A boron analog of an alkyne has been synthesized by reduction of a brominated precursor.
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1422 Reticulated Nanoporous Polymers by Controlled Polymerization-Induced Microphase Separation
M. Seo and M. A. Hillmyer
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K. H. Joy et al.
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C. H. McMichael et al.
Analysis of soils in western Amazonia finds little evidence for pre-Columbian human occupations there.

A Three-Stage Symbiosis Forms the Foundation of Seagrass Ecosystems
T. van der Heide et al.
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D. Hawlena et al.
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Continental-Scale Effects of Nutrient Pollution on Stream Ecosystem Functioning
G. Woodward et al.
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J. E. Purvis et al.
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A Histone Acetyltransferase Regulates Active DNA Demethylation in Arabidopsis
W. Qian et al.
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MORC Family ATPases Required for Heterochromatin Condensation and Gene Silencing
G. Moissiard et al.
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M. Faini et al.
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Awake Hippocampal Sharp-Wave Ripples Support Spatial Memory
S. P. Jadhav et al.
The neuronal “replay” of past experience may allow animals to retrieve specific memories and use them to guide behavior.

Segregation of Axonal and Somatic Activity During Fast Network Oscillations
T. Dugladze et al.
Inhibition by axo-axonic interneurons functionally separates the input and output of hippocampal pyramidal cells.
Adenylate Cyclases of *Trypanosoma brucei* Inhibit the Innate Immune Response of the Host

D. Salmon et al.

Parasites release cyclic adenosine monophosphate when swallowed up by myeloid cells, thereby turning off a host defense pathway.

10.1126/science.1222753

Function, Targets, and Evolution of *Caenorhabditis elegans* piRNAs

M. P. Bagijn et al.

Piwi-bound piwi-interacting RNAs recruit endogenous small interfering RNAs to silence mobile genetic elements.

10.1126/science.1220952

Rapid Progression of Ocean Acidification in the California Current System

N. Gruber et al.

Rising concentrations of atmospheric carbon dioxide threaten to amplify the severity of ocean acidification in upwelling zones.

10.1126/science.1216773

Mitochondrial Import Efficiency of ATFS-1 Regulates Mitochondrial UPR Activation

A. M. Nargund et al.

When stressed, the mitochondrial reduces import of a transcription factor, which enters the nucleus instead.

10.1126/science.1223560

SCIENCE SIGNALING

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12 June issue: http://scim.ag/ss061212

RESEARCH ARTICLE: The Transcription Factor TFEB Links mTORC1 Signaling to Transcriptional Control of lysosomal homeostasis

A. Roczniak-Ferguson et al.

RESEARCH ARTICLE: The lin-4 MicroRNA Targets the LIN-14 Transcription Factor to Inhibit Nematode-Mediated Axon Attraction

Y. Zou et al.

A microRNA instructs neurons when to stop axonal pathfinding.

PERSPECTIVE: S-Nitrosylation Signaling in Escherichia coli

I. Gusarov and E. Nudler

Two posttranslational modifications of a transcription factor enable bacteria to adapt to changes in NO and O2.

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Integrating Medicine and Science

13 June issue: http://scim.ag/stm061312

EDITORIAL: Listen, Understand, Engage

A. Thomson and M. Watson

For more effective vaccine advocacy, scientists and policy-makers must translate and apply insights from the cognitive and social sciences to the way they communicate and engage with the public.

RESEARCH ARTICLE: Cell Carriage, Delivery, and Selective Replication of an Oncolytic Virus in Tumor Patients

R. A. Adair et al.

FOCUS: The Virus That Came in from the Cold

J. C. Bell

Oncolytic reovirus is carried by cells to tumors and protected from neutralizing antibodies in the circulation.

RESEARCH ARTICLE: Myocardial Infarction Triggers Chronic Cardiac Autoimmunity in Type 1 Diabetes

R. S. R. K. Gottumukkala et al.

FOCUS: Autoimmune Diabetes Inflames the Heart

R. H. Eckel and G. S. Eisenbarth

Acute myocardial infarction triggers an autoimmune attack on the heart in a mouse model of type 1 diabetes and in human type 1 diabetic patients.

RESEARCH ARTICLE: Exome Sequencing Can Improve Diagnosis and Alter Patient Management

T. J. Dixon-Salazar et al.

Exome sequencing of 138 patients with neurodevelopmental disorders shows that this technique is useful for identifying new pathogenic mutations and for correcting diagnosis in ~10% of cases.

RESEARCH ARTICLE: Mucus-Penetrating Nanoparticles for Vaginal Drug Delivery Protect Against Herpes Simplex Virus

L. M. Ensign et al.

Mucus-penetrating particles improve drug delivery to the mucosal surface of the mouse vagina and deliver acyclovir for enhanced protection against vaginal herpes infection in mice.

RESEARCH ARTICLE: Successful Treatment of Ebola Virus–Infected Cynomolgus Macaques with Monoclonal Antibodies

X. Qiu et al.

Macaques survived infection with Ebola virus when treated starting at 24 hours after infection with a mix of three neutralizing monoclonal antibodies.

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Free Career Resources for Scientists

Soldiers Becoming Scientists

M. Price

The Post-9/11 GI Bill and other programs are enabling some veterans to pursue careers in science.

http://scim.ag/SoldierScientists

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D. Jensen

The most important aspects of your job interview are things you may not have thought about.

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