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Cover

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

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1409 U-Series Dating of Paleolithic Art in 11 Caves in Spain
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A boron analog of an alkyne has been synthesized by reduction of a brominated precursor.
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T. Dugladze et al.
Inhibition by axo-axonic interneurons functionally separates the input and output of hippocampal pyramidal cells.
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 ATF5-1 Regulates Mitochondrial UPR Activation
A. M. Nargund et al.
When stressed, the mitochondrion reduces import of a transcription factor, which enters the nucleus instead.
10.1126/science.1223560

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The Signal Transduction Knowledge Environment
12 June issue: http://scimat.org/ss061212

RESEARCH ARTICLE: The Transcription Factor TFEB Links mTORC1 Signaling to Transcriptional Control of Lysosomal Homeostasis
A. Rocznik-Ferguson et al.
Podcast
S. M. Ferguson and A. M. VanHook
Regulated nuclear translocation of a transcription factor maintains lysosomal homeostasis.

RESEARCH ARTICLE: The lin-4 MicroRNA Targets the LIN-14 Transcription Factor to Inhibit Nematode Axon Attraction
Y. Zou et al.
A microRNA instructs neurons when to stop axon pathfinding.

PERSPECTIVE: S-Nitrosylation Signaling in Escherichia coli
I. Gasarov and E. Nudler
Two posttranslational modifications of a transcription factor enable bacteria to adapt to changes in NO and O2.

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www.sciencetranslationalmedicine.org
Integrating Medicine and Science
13 June issue: http://scimat.org/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 in 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. V. 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 118 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. Ensing et al.
Mucus-penetrating particles improve drug delivery to the mucusal 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.

SCIENCE CAREERS
www.sciencecareers.org/career_magazine
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://scimat.org/SoldierScientists
Tooling Up: Interview Intangibles
D. Jensen
The most important aspects of your job interview are things you may not have thought about.
http://scimat.org/TU_Intangibles

SCIENCE PODCAST
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Free Weekly Show
On the 15 June Science Podcast: stressed-out grasshoppers, a new way to date cave paintings, counting the dead on a global scale, and more.

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