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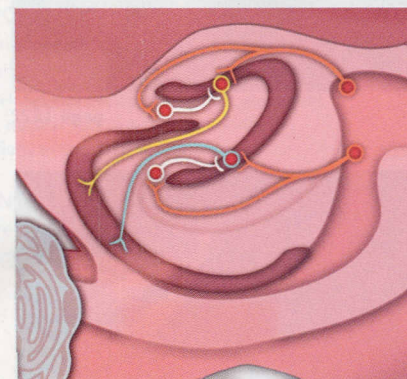
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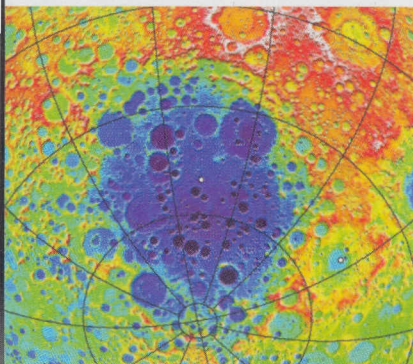
COVER

Cooling pool containing a plutonium-uranium mixed-oxide fuel rod at Fukushima Dai-ichi nuclear power station, Japan, in August 2010. A tsunami on 11 March 2011 damaged three of the station's reactors, prompting reassessment of Japan's reliance on nuclear power and its approach to disaster preparedness. See the Review by Burns *et al.* (page 1184), as well as the related Editorial (page 1147) and News story (page 1164).

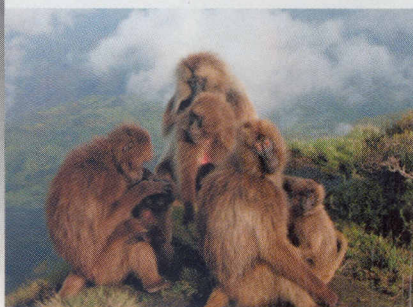
Photo: Tomohiro Ohsumi/Bloomberg via Getty Images

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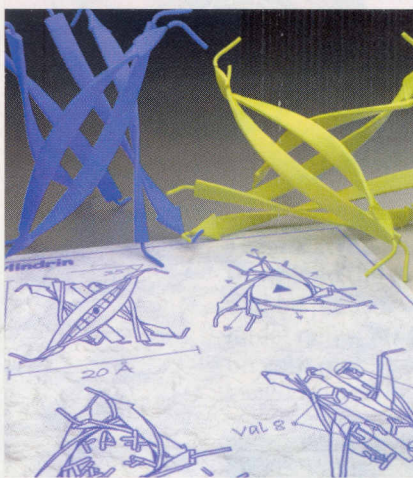
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SCIENCEONLINE

SCIENCEEXPRESS

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Extrachromosomal MicroDNAs and Chromosomal Microdeletions in Normal Tissues

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The formation of circular microDNAs can result in somatic and germline microdeletions in mammalian cells.

10.1126/science.1213307

A Segmentation Clock with Two-Segment Periodicity in Insects

A. F. Sarrazin et al.

Oscillating gene expression, a key feature of vertebrate segmentation, is shown to occur during segmentation in beetles.

10.1126/science.1218256

Mapping the Core of the *Arabidopsis* Circadian Clock Defines the Network Structure of the Oscillator

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Morning and evening components of circadian rhythms are coordinated and stabilized by a repressor.

10.1126/science.1219075

Gap Junctions Compensate for Sublinear Dendritic Integration in an Inhibitory Network

K. Vervaeke et al.

Synaptic charge spreads into the dendrites of neighboring interneurons via dendritic gap junctions.

10.1126/science.1215101

A 2D Quantum Walk Simulation of Two-Particle Dynamics

A. Schreiber et al.

An optical approach extends quantum walk methodology from one to two dimensions.

10.1126/science.1218448

TECHNICALCOMMENTS

Comment on "Fossilized Nuclei and Germination Structures Identify Ediacaran 'Animal Embryos' as Encysting Protists"

S. Xiao et al.

Full text at www.sciencemag.org/cgi/content/full/335/6073/1169-c

Response to Comment on "Fossilized Nuclei and Germination Structures Identify Ediacaran 'Animal Embryos' as Encysting Protists"

T. Hultgren et al.

Full text at www.sciencemag.org/cgi/content/full/335/6073/1169-d

SCIENCENOW

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Highlights From Our Daily News Coverage

Sharing the Blame for the Mammoth's Extinction

A new study attributes the worldwide demise of these big beasts to both climate change and humans.

http://scim.ag/Blame_Extinction

Plants Gone Wild: Antarctica Edition

Tourists and scientists are ferrying seeds of invasive species to the coldest continent.

http://scim.ag/Plants_Antarctica

Proposed Cloaking Device for Water Waves Could Protect Ships at Sea

This scheme works on a principle different from electromagnetic invisibility cloaks.

<http://scim.ag/Cloaking-Device>

SCIENCE SIGNALING

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The Signal Transduction Knowledge Environment

6 March issue: <http://scim.ag/ss030612>

RESEARCH ARTICLE: Akt and ERK Control the Proliferative Response of Mammary Epithelial Cells to the Growth Factors IGF-1 and EGF Through the Cell Cycle Inhibitor p57^{Kip2}

D. T. Worster et al.

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J. G. Albeck et al.

Signaling from two growth factors converges on the cell cycle inhibitor p57 to regulate proliferation and limit oncogenesis.

RESEARCH ARTICLE: STING Specifies IRF3 Phosphorylation by TBK1 in the Cytosolic DNA Signaling Pathway

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PERSPECTIVE: The STING in the Tail for Cytosolic DNA-Dependent Activation of IRF3

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The scaffold STING directs the kinase TBK1 toward its substrate, the transcription factor IRF3, to promote antiviral signaling.

SCIENCE TRANSLATIONAL MEDICINE

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Integrating Medicine and Science

7 March issue: <http://scim.ag/stm030712>

RESEARCH ARTICLE: Fasting Cycles Retard Growth of Tumors and Sensitize a Range of Cancer Cell Types to Chemotherapy

C. Lee et al.

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RESEARCH ARTICLE: Chimerism and Tolerance Without GVHD or Engraftment Syndrome in HLA-Mismatched Combined Kidney and Hematopoietic Stem Cell Transplantation

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FOCUS: The Quest for Transplantation Tolerance—Have We Finally Sipped from the Cup?

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New advances in achieving hematopoietic chimerism may facilitate immunological tolerance to kidney transplants.

RESEARCH ARTICLE: A Human Stem Cell Model of Early Alzheimer's Disease Pathology in Down Syndrome

Y. Shi et al.

Cultured cerebral cortex neurons generated from human Down syndrome-induced pluripotent stem cells rapidly develop Alzheimer's disease pathologies.

SCIENCE CAREERS

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Free Career Resources for Scientists

Science in the Community

E. Pain

Researchers have much to gain from involving citizens as research partners—provided they are prepared and open-minded.

<http://scim.ag/CommunityScience>

Your Research, Their Hope

M. Price

Scientists working with patient-advocacy groups need to set legal and ethical guidelines so interactions can be mutually beneficial.

http://scim.ag/Research_Hope

Biotech Training Programs Expand Employment Options

C. Mintz

Trainees who obtain industry-specific training are more likely to find jobs in the life-sciences industry.

<http://scim.ag/MintzBiotechTraining>

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On the 9 March Science Podcast: magnetic anomalies on the Moon, nuclear fuel in a reactor accident, light adaptations in the deep sea, and more.

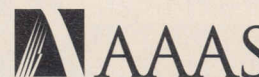
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Science Policy News and Analysis

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