

Science

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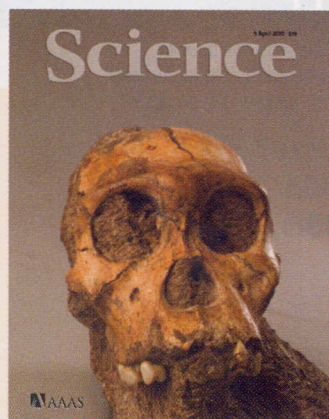
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COVER

Cranium of *Australopithecus sediba* (specimen UW88-50), a new species of australopithec found at the Malapa site in South Africa. Two partial skeletons, dated to about 1.9 million years ago, share many derived features with *Homo* and may thus shed light on the evolution of that genus. See the related Research Articles on pages 195 and 205 and the related News story on page 154.

Photo: Brett Eloff, courtesy of Lee Berger and the University of the Witwatersrand

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R. McDaniell et al.

An appreciable amount of variation in chromatin status and transcription factor binding has a genetic basis.

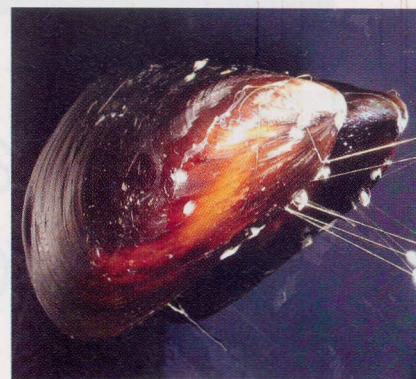
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X.-W. Zhang et al.

Arsenic, a drug used clinically for leukemia, binds directly to an oncogenic protein, thereby promoting its degradation.
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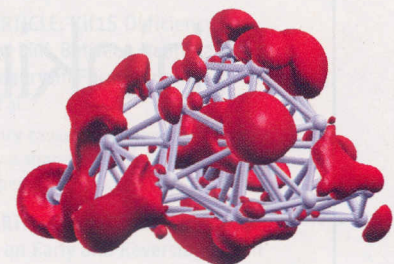
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Researchers describe a method to obtain transgenic mice for the study of T cell responses to infectious disease.

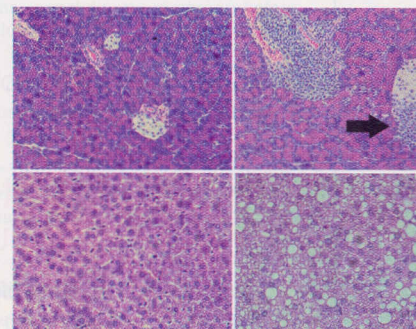
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Recent Hot-Spot Volcanism on Venus
from VIRTIS Emissivity Data

S. E. Smrekar et al.

Satellite observations suggest that Venus is a
geologically active planet.

10.1126/science.1186785

Coadministration of a Tumor-Penetrating Peptide
Enhances the Efficacy of Cancer Drugs

K. N. Sugahara et al.

Anticancer drugs are more effective in mice
when they are injected with a peptide that helps
the drugs penetrate the tumor.

10.1126/science.1183057

Five-Vertebrate ChIP-seq Reveals the Evolutionary
Dynamics of Transcription Factor Binding

D. Schmidt et al.

Binding of two liver-specific transcription factors
in several vertebrate species reveals complex
regulatory evolution.

10.1126/science.1186176

Reconstitution of Outer Membrane Protein
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C. L. Hagan et al.

Assembly of a β -barrel membrane protein in a
cell-free system does not require added energy.

10.1126/science.1188919

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Highlights From Our Daily News Coverage

Mass of the Common Quark
Finally Nailed Down

Physicists measure fundamental bits of
nuclear matter to within 1.5%.

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Thalidomide eases symptoms of
rare blood vessel disease.

East Coast Winds Would Support
a Stable Power Grid

Regionally interconnected turbines could
supply power for much of the country.

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RESEARCH ARTICLE: Stabilization of VEGFR2
Signaling by Cerebral Cavernous Malformation 3
Is Critical for Vascular Development

Y. He et al.

CCM3, which is associated with inherited
cerebrovascular defects, prevents ligand-mediated
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RESEARCH ARTICLE: AAA+ Proteins RUVBL1 and
RUVBL2 Coordinate PIKK Activity and Function
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N. Izumi et al.

Two ATPases regulate molecular complexes
that ensure genome integrity and accurate
gene expression.

RESEARCH ARTICLE: Regulation of
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Specific Dominant-Negative Effects of
Melanocortin 2 Receptor Accessory Protein 2

J. A. Sebag and P. M. Hinkle

Two homologous accessory proteins exert opposing
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PERSPECTIVE: A Trojan Horse
for Parkinson's Disease

Y. Hu and Y. Tong

Inhibition of the kinase activity of LRRK2
may be neuroprotective.

SCIENCE CAREERS

www.sciencereers.org/career_magazine

Free Career Resources for Scientists

Scientists Embrace Openness

C. Wald

Some scientists go to great lengths to make
everything they do in the lab transparent.

All in the Details: Careers in Regulatory Science

N. Volkers

Regulations at every step of drug development
mean jobs for regulatory scientists.

From Researcher to Outreach

L. Laursen

A career in outreach makes connecting
science with the public a full-time job.

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PERSPECTIVE: Rod-Derived Cone Viability
Factor for Treating Blinding Diseases—
From Clinic to Redox Signaling

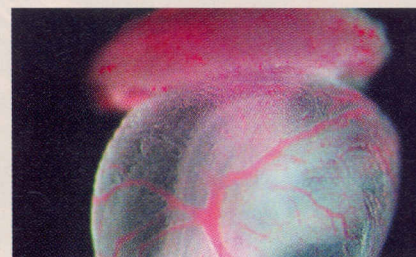
T. Léveillard and J.-A. Sahel

A neuroprotective protein may be broadly useful
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by mutations in a number of different genes.

COMMENTARY: Training Translators
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C. Skarke and G. A. Fitzgerald

Human capital is a rate-limiting constraint
in translational medicine and therapeutics.



SCIENCE SIGNALING
Building blood vessels.

RESEARCH ARTICLE: Klf15 Deficiency
Is a Molecular Link Between Heart Failure
and Aortic Aneurysm Formation

S. M. Haldar et al.

Klf15 deficiency causes cardiomyopathy and
aortopathy by a shared mechanism and defines
a novel therapeutic pathway.

RESEARCH ARTICLE: Airway PI3K Pathway
Activation Is an Early and Reversible Event
in Lung Cancer Development

A. M. Gustafson et al.

A cancer-associated signaling pathway is reversibly
activated in the normal airways of smokers before
they develop lung cancer.

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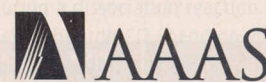
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