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Sergey Nenov gives thanks at a church in Odessa, Ukraine. HIV, tuberculosis, and injecting drug use are tightly linked in Eastern Europe, the only region in the world with a growing HIV/AIDS epidemic. Nenov is one of the few people with access to treatment for both infections and opiate dependency. See the special section on HIV/AIDS beginning on page 159 and at www.sciencemag.org/special/aids2010/.

Photo: Malcolm Linton

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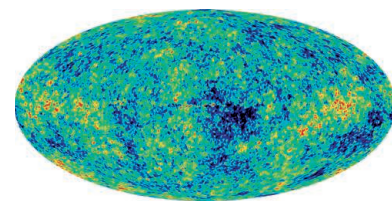
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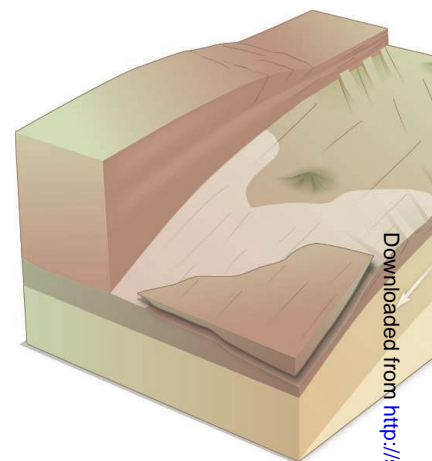
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A mouse model of a human liver disease can be treated using a drug known to be well tolerated.
>> *Perspective p. 154*

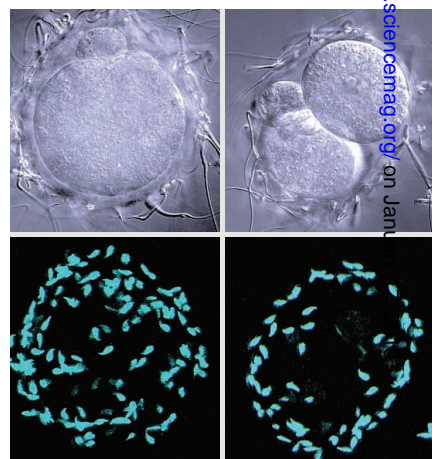
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SCIENCEONLINE

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Global Convergence in the Temperature Sensitivity of Respiration at Ecosystem Level

M. D. Mahecha et al.

The long-standing discrepancy between modeled and empirical measures of ecosystem temperature sensitivity is resolved.

10.1126/science.1189587

Terrestrial Gross Carbon Dioxide Uptake: Global Distribution and Covariation with Climate

C. Beer et al.

A combination of data and models provides an estimate of how much photosynthesis by all the world's plants occurs each year.

10.1126/science.1184984

Structural Basis for Broad and Potent Neutralization of HIV-1 by Antibody VRC01

T. Zhou et al.

10.1126/science.1192819

Rational Design of Envelope Identifies Broadly Neutralizing Human Monoclonal Antibodies to HIV-1

X. Wu et al.

A human antibody achieves broad neutralization by binding the viral site of recognition for the primary host receptor, CD4.

10.1126/science.1187659

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High-Resolution Analysis of Parent-of-Origin Allelic Expression in the Mouse Brain

C. Gregg et al.

A large repertoire of genes shows preferential expression of the paternally or maternally inherited allele.

10.1126/science.1190830

Sex-Specific Parent-of-Origin Allelic Expression in the Mouse Brain

C. Gregg et al.

The relative contributions of the paternal and maternal genomes differ in distinct brain regions and also in males and females.

10.1126/science.1190831

Long Noncoding RNA as Modular Scaffold of Histone Modification Complexes

M.-C. Tsai et al.

The long noncoding RNA HOTAIR binds two distinct protein complexes that modify chromatin and repress transcription.

10.1126/science.1192002

TECHNICALCOMMENTS

Comment on "Differential Sensitivity to Human Communication in Dogs, Wolves, and Human Infants"

S. Fiset

Full text at www.sciencemag.org/cgi/content/full/329/5988/142-b

Comment on "Differential Sensitivity to Human Communication in Dogs, Wolves, and Human Infants"

S. Marshall-Pescini et al.

Full text at www.sciencemag.org/cgi/content/full/329/5988/142-c

Response to Comments on "Differential Sensitivity to Human Communication in Dogs, Wolves, and Human Infants"

J. Topál et al.

Full text at www.sciencemag.org/cgi/content/full/329/5988/142-d

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Highlights From Our Daily News Coverage

Moon's Craters Hold Clues to the Lunar Interior
The Kaguya lunar orbiter finds possible similarities between the moon's and Earth's mantles.

Did Mammoth Extinction Warm Earth?

A sudden surge in northern birch forests 15,000 years ago is linked to climate change.

Friendly Baboons Live Longer

Study shows that people are not the only ones to benefit from having many friends.

SCIENCE SIGNALING

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The Signal Transduction Knowledge Environment

RESEARCH ARTICLE: Error Minimization in Lateral Inhibition Circuits

O. Barad et al.

PODCAST

N. Barkai and A. M. VanHook

Lateral inhibition in proneuronal clusters in the fruit fly relies on competition between cis and trans Notch signaling.

MEETING REPORT: Zinc Bells Rang in Jerusalem!

M. Hershinkel et al.

Researchers met to discuss zinc signaling in health and disease.

SCIENCE CAREERS

www.sciencereers.org/career_magazine

Free Career Resources for Scientists

Getting to Know the Enemy

E. Pain

Russian epidemiologist Elena Dukhovlina studies genetic diversity and transmission of HIV circulating in St. Petersburg.

>> *HIV/AIDS* section p. 159 and www.sciencemag.org/special/aids2010/

Taken for Granted: The Immigration Guru

B. L. Benderly

In a debate long dominated by industry voices, statistician and technology expert Norman Matloff speaks up for the little people.

SCIENCE TRANSLATIONAL MEDICINE

www.sciencetranslationalmedicine.org

Integrating Medicine and Science

EDITORIAL: Recombinant Innovation and Translational Science Trainees

F. J. Meyers

Diversely trained young scholars form the center of an innovation network in translational medicine.

PERSPECTIVE: Twenty-Five Years of Translational Medicine in Antiretroviral Therapy—Promises to Keep

S. Broder

PODCAST

S. Broder and A. M. VanHook

Early translational research on dideoxynucleoside drugs set HIV-1/AIDS on a hopeful path.

>> *HIV/AIDS* section p. 159 and www.sciencemag.org/special/aids2010/

RESEARCH ARTICLE: A Generalized Linear-Quadratic Model for Radiosurgery, Stereotactic Body Radiation Therapy, and High-Dose Rate Brachytherapy

J. Z. Wang et al.

A mathematical model enables better treatment planning for current high-dose cancer therapies.

SCIENCEPODCAST

www.sciencemag.org/multimedia/podcast

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Download the 9 July *Science* Podcast to hear about HIV/AIDS in Eastern Europe, adaptation to parasites via symbiosis, why fireflies synchronize, and more.

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Science Policy News and Analysis

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