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HIV/AIDS IN AMERICA

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COVER

The epicenter of the HIV/AIDS epidemic in the United States has shifted from the East and West Coasts to the Deep South, where young black men who have sex with men are now becoming infected at a high rate. One of these men is Joshua Alexander, 25, shown here sitting in front of his mother's house in Greenville, Mississippi. See the special section beginning on page 167. For the story behind the cover, go to <http://scim.ag/cov6091>.

Photo: Malcolm Linton

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A previously unidentified influenza protein, partly old and partly new, turns off the expression of host genes.
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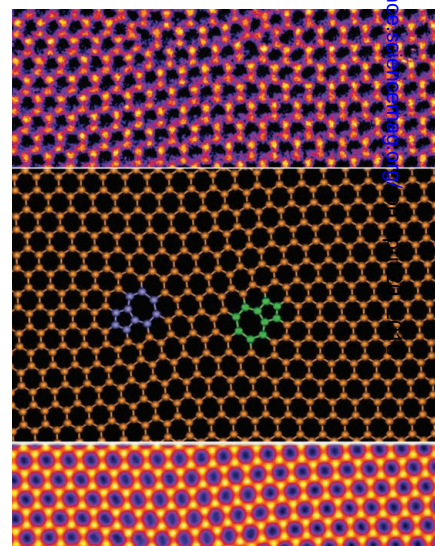
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Getting HIV Treatment to the Most People

S. Lynch et al.

10.1126/science.1225702

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The Provenances of Asteroids, and Their Contributions to the Volatile Inventories of the Terrestrial Planets

C. M. O'D. Alexander et al.

Hydrogen isotopic analysis of primitive meteorites implicates asteroids as early sources of Earth's water.

10.1126/science.1223474

Long-Range Incommensurate Charge Fluctuations in $(Y,Nd)Ba_2Cu_3O_{6+x}$

G. Ghiringhelli et al.

Scattering experiments uncover an order competing with superconductivity in a cuprate family.

10.1126/science.1223532

Cartwheel Architecture of *Trichonympha* Basal Body

P. Guichard et al.

Electron microscopy provides a close-up view of the ninefold-symmetric stacked rings at the base of cilia and flagella.

10.1126/science.1222789

Identification of Small Molecule Activators of Cryptochrome

T. Hirota et al.

A small molecule binds to a core protein in the circadian clock and slows down time.

10.1126/science.1223710

Quantitative Modulation of Polycomb Silencing Underlies Natural Variation in Vernalization

V. Coutham et al.

Arabidopsis adjusts the onset of flowering to the length of winters via an epigenetic mechanism.

10.1126/science.1221881

GFAJ-1 Is an Arsenate-Resistant, Phosphate-Dependent Organism

T. J. Erb et al.

10.1126/science.1218455

Absence of Detectable Arsenate in DNA from Arsenate-Grown GFAJ-1 Cells

M. L. Reaves et al.

Claims of arsenic substitution for phosphorus in the biomolecules of a Mono Lake bacterium are not independently reproduced.

10.1126/science.1219861

TECHNICALCOMMENTS

Comment on "Plant Species Richness and Ecosystem Multifunctionality in Global Drylands"

T. Jucker and D. A. Coomes

Full text at www.sciencemag.org/cgi/content/ful/337/6091/155-c

Response to Comment on "Plant Species Richness and Ecosystem Multifunctionality in Global Drylands"

F. T. Maestre et al.

Full text at www.sciencemag.org/cgi/content/ful/337/6091/155-d

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Highlights From Our Daily News Coverage

A Big Magnet in a Small Fish

Scientists have isolated magnetic cells that give some fish their sense of direction.

http://scim.ag/Magnetic_Cells

Space Weather Forecasted by South Pole Neutron Detectors

A team proposes a new way to monitor solar storms.

http://scim.ag/Neutron_Detectors

A Shotgun for Blood Clots

Nanoparticles home in on and dissolve blockages in veins and arteries.

http://scim.ag/Blood_Clots

SCIENCE SIGNALING

www.sciencesignaling.org

The Signal Transduction Knowledge Environment

10 July issue: <http://scim.ag/ss071012>

RESEARCH ARTICLE: Differential Regulation by Cyclic Nucleotides of the CNGA4 and CNGB1b Subunits in Olfactory Cyclic Nucleotide-Gated Channels

V. Nache et al.

Different subunits of olfactory CNG channels enable specific regulation of channel activity by cAMP or cGMP.

RESEARCH ARTICLE: Complementary Phosphorylation Sites in the Adaptor Protein SLP-76 Promote Synergistic Activation of Natural Killer Cells

H. S. Kim and E. O. Long

SLP-76 acts as a molecular checkpoint in the activation of NK cells of the immune system.

LETTERS: Comment and Response on "A Dynamic Network Model of mTOR Signaling Reveals TSC-Independent mTORC2 Regulation": Building a Model of the mTOR Signaling Network with a Potentially Faulty Tool

Comment: B. D. Manning

Response: P. Dalle Pezze et al.

Manning and Dalle Pezze et al. discuss whether phosphorylation of Ser²⁴⁸¹ of mTOR can serve as a specific readout of mTORC2 activity.

SCIENCE CAREERS

www.sciencereers.org/career_magazine

Free Career Resources for Scientists

A Capitol Job for a Midwestern Transplant

J. Cohen

Tiffany West helped turn Washington, D.C.'s HIV/AIDS effort into a widely admired program.

<http://scim.ag/CapitolJob>

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Out of India

J. Cohen

Moupali Das's roots led her to public health and caring for HIV/AIDS patients.

<http://scim.ag/OutOfIndia>

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Career Q&A: Laurel Haak and the ORCID Project

J. Austin

The newly appointed executive director of ORCID discusses her career and her latest challenge.

http://scim.ag/QA_LaurelHaak

SCIENCE TRANSLATIONAL MEDICINE

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Integrating Medicine and Science

11 July issue: <http://scim.ag/stm071112>

REVIEW: Deep Brain Stimulation for Psychiatric Disease

C. Hamani and Y. Temel

Animal models can help to improve deep brain stimulation for neuropsychiatric disease.

RESEARCH ARTICLE: High-Resolution Definition of Vaccine-Elicited B Cell Responses Against the HIV Primary Receptor Binding Site

C. Sundling et al.

Vaccine-elicited mAbs are different from infection-elicited antibodies against the HIV-1 Env CD4bs.

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RESEARCH ARTICLE: Matrix Metalloproteinase Induction of Rac1b, a Key Effector of Lung Cancer Progression

M. L. Stallings-Mann et al.

FOCUS: Got a Light? Illuminating Lung Cancer

S. S. McAllister

New mouse models shed light on mechanisms of lung cancer progression and pinpoint a potential therapeutic target.

RESEARCH ARTICLE: Reproducible Quantification of Cancer-Associated Proteins in Body Fluids Using Targeted Proteomics

R. Hüttenhain et al.

A compendium of SRM assays for cancer-associated proteins provides a resource for accelerating and planning biomarker verification studies.

RESEARCH ARTICLE: PGC-1 α Rescues Huntington's Disease Proteotoxicity

T. Tsunemi et al.

PGC-1 α rescues Huntington's disease neurodegeneration by inducing a master regulator of autophagy.

SCIENCEPODCAST

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Free Weekly Show

On the 13 July *Science* Podcast: a vaccine recombines in the wild, early North American inhabitants, HIV/AIDS in the U.S., and more.

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