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
RESEARCH ARTICLES

189 Crystal Structure of the Heterodimeric CLOCK:BMAL1 Transcriptional Activator Complex
N. Huang et al.
Structure-function analyses reveal details of the interaction between two proteins that regulate daily rhythms in mammals.
>> Perspective p. 165

195 MMS19 Assembles Iron-Sulfur Proteins Required for DNA Metabolism and Genomic Integrity
O. Stehling et al.
A protein thought to be involved in DNA repair is, in fact, responsible for inserting iron-sulfur clusters into enzymes.
>> Perspective p. 160; Report p. 243

199 An Overlapping Protein-Coding Region in Influenza A Virus Segment 3 Modulates the Host Response
B. W. Jagger et al.
A previously unidentified influenza protein, partly old and partly new, turns off the expression of host genes.
>> Perspective p. 164

REPORTS

204 Spin-Polarized Light-Emitting Diode Based on an Organic Bipolar Spin Valve
T. D. Nguyen et al.
The light emission from an organic light-emitting diode depends on the spin polarization of the injected current.

209 Dislocation-Driven Deformations in Graphene
J. H. Warner et al.
Two-dimensional dislocation dynamics and the resulting strain fields are studied at high resolution in graphene.
>> Perspective p. 161

212 A Reduced Organic Carbon Component in Martian Basalts
A. Steele et al.
Analysis of 11 martian meteorites reveals complex hydrocarbons associated with magmatic minerals in 10 of them.

216 Ice Volume and Sea Level During the Last Interglacial
A. Dutton and K. Lambeck
Global average sea level during the last interglacial period was 6 to 10 meters higher than it is today.

220 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.
>> News story p. 146

223 Clovis Age Western Stemmed Projectile Points and Human Coprolites at the Paisley Caves
D. L. Jenkins et al.
The age of a Western Stemmed projectile point implies that this culture overlapped with the Clovis culture in North America.
>> Science Podcast

228 Extinction Debt and Windows of Conservation Opportunity in the Brazilian Amazon
O. R. Wearn et al.
Deforestation scenarios predict species extinction rates and identify targets of conservation efforts.
>> Perspective p. 162

232 Structural Basis for Allosteric Regulation of GPCRs by Sodium Ions
W. Liu et al.
a protein-engineering strategy yields a closer look at the receptor-bound water, sodium, and lipid molecules.

236 Molecular Architecture and Assembly Principles of Vibrio cholerae Biofilms
V. Berk et al.
When imaged in real time, biofilm development can be seen to rely on spatial and temporal intercellular contacts.

239 Oscillatory Dynamics of Cdc42 GTPase in the Control of Polarized Growth
M. Das et al.
The regulation of a yeast cell-growth enzyme is dynamic rather than on-off.

243 MMS19 Links Cytoplasmic Iron-Sulfur Cluster Assembly to DNA Metabolism
K. Gari et al.
A protein that associates with DNA metabolism enzymes serves as a platform for the integration of iron-sulfur clusters.
>> Perspective p. 160; Research Article p. 195

CONTENTS continued >>
Editor's Summary