Mexican free-tailed bats roost at Bracken Cave near San Antonio, Texas. Streicker et al. (p. 676) describe how the spread of new forms of rabies virus is restricted between bat species; Frick et al. (p. 679) explain how a fungal disease of bats, white-nose syndrome, is likely to lead to local extinctions of once-common bat species.

RESEARCH ARTICLES

643  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.
>> Perspective p. 636; Report p. 682

649  Role of Secondary Sensory Cortices in Emotional Memory Storage and Retrieval in Rats
T. Sacco and B. Sacchetti
An emotional memory gradually becomes widely distributed throughout the cortex.

REPORTS

656  Normal Modes and Density of States of Disordered Colloidal Solids
D. Kaya et al.
The motion of colloidal gel particles is used to determine the mechanical and thermal properties of a disordered system.

659  Massive Dirac Fermion on the Surface of a Magnetically Doped Topological Insulator
Y. L. Chen et al.
Adding magnetic atoms to a topological insulator breaks its time-reversal symmetry.
>> Perspective p. 639

662  Quantum Correlations in Optical Angle–Orbital Angular Momentum Variables
J. Leach et al.
Strong quantum correlations are induced between the angular position and angular momentum of two photons.

665  MESSENGER Observations of Extreme Loading and Unloading of Mercury’s Magnetic Tail
J. A. Slavin et al.
Relative to Earth, Mercury’s magnetospheric substorms are more intense and occur on shorter time scales.

668  Evidence for Young Volcanism on Mercury from the Third MESSENGER Flyby
L. M. Pro克ter et al.
Volcanism and associated deformation on Mercury may have lasted well into the last half of the history of the solar system.

672  Mercury’s Complex Exosphere: Results from MESSENGER’s Third Flyby
R. J. Vervack Jr. et al.
Mercury’s exosphere is more varied and more intertwined with its magnetospheric environment than previously thought.

676  Host Phylogeny Constrains Cross-Species Emergence and Establishment of Rabies Virus in Bats
D. G. Streicker et al.
Rabies virus’ innate capacity to replicate and adapt cannot overcome host genetic barriers to cross-species transfer.

679  An Emerging Disease Causes Regional Population Collapse of a Common North American Bat Species
W. F. Frick et al.
Like the passenger pigeon, millions of little brown bats face the possibility of rapid extinction, this time from disease.
>> Perspective p. 634; Science Podcast

682  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.
>> Perspective p. 636; Research Article p. 643

686  Nonlinear Elasticity and an 8-nm Working Stroke of Single Myosin Molecules in Myofilaments
M. Kaya and H. Higuchi
Single-molecule measurements refine our understanding of how muscle myosin works.

689  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.

693  FAN1 Acts with FANCI-FANCD2 to Promote DNA Interstrand Cross-Link Repair
T. Liu et al.
The nuclease FAN1 acts with Fanconi anemia proteins to help repair damaged DNA.
Strange Metal Transport Realized by Gauge/Gravity Duality
T. Faulkner et al.
Black hole theory is used to develop a mathematical description of a class of metals with unusual electronic properties.
10.1126/science.1189134

The Chlorine Isotope Composition of the Moon and Implications for an Anhydrous Mantle
Z. D. Sharp et al.
The range of chlorine isotope values of the Moon is distinct from those of Earth and meteorites, indicating that the Moon is dry.
10.1126/science.1192606

Aryl Hydrocarbon Receptor Antagonists Promote the Expansion of Human Hematopoietic Stem Cells
A. E Boitano et al.
The identification of a mechanism for ex vivo amplification may facilitate clinical application of hematopoietic stem cell therapies.
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Structural Basis for Activation of Class Ib Ribonucleotide Reductase
A. K. Bao et al.
A single protein activates two different metallofactors by distinct chemistries.
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Glutamine Deamidation and Dysfunction of Ubiquitin/NEDD8 Induced by a Bacterial Effector Family
J. Cui et al.
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Western Diet Tied to Intestinal Disease and Allergies
Gut bacteria may make people in developed countries more prone to a variety of maladies.

Orangutans Go Green
Apes are amazingly energy efficient for their size.

Marijuana Time Warp
Active ingredient in cannabis disrupts the body's internal clock.

A viral G protein–coupled receptor may initiate a positive feedback loop to promote tumor proliferation and vascularization.

The Signal Transduction Knowledge Environment
RESEARCH ARTICLE: HCMV-Encoded Chemokine Receptor US28 Mediates Proliferative Signaling Through the IL-6–STAT3 Axis
E. Slinger et al.

A viral G protein–coupled receptor may initiate a positive feedback loop to promote tumor proliferation and vascularization.

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J. Kwon et al.
Reactive oxygen species enhance T cell receptor signaling by promoting the phosphorylation of a proximal kinase.

The Signal Transduction Knowledge Environment
SCIENCE CAREERS
www.sciencemag.org/career_magazine
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Download the 6 August Science Podcast to hear about bats threatened by white-nose syndrome, Arctic methane, the water content of the Moon’s interior, and more.

Science Policy News and Analysis

Drug-specific modulation of an oncogenic signaling pathway can help predict tumor sensitivity to candidate drugs.

RESEARCH ARTICLE: Ferroportin and Iron Regulation in Breast Cancer Progression and Prognosis
Z. K. Pinnix et al.
An iron efflux pump is a pivotal protein in breast cancer biology and a strong and independent predictor of breast cancer prognosis.

Science Policy News and Analysis

Drug-specific modulation of an oncogenic signaling pathway can help predict tumor sensitivity to candidate drugs.

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J. N. Andersen et al.

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Science 329 (5992), 606-697.

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