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>> **Policy Podcast**
Listen to an interview with Perspective author Eric Miska on using RNA as a signaling molecule between organisms.

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COVER

Clouds pass over Kenya's Lake Magadi, where geologists are drilling a core to gather detailed climate data from the ancient lake bed. Data on past climates are vital for researchers seeking to understand how anthropogenic climate change will affect Earth's ecosystems and species, including its effects on infectious diseases and food security. See the special section beginning on page 472.

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RESEARCH ARTICLES

- 525 A Role for SIRT2-Dependent Histone H3K18 Deacetylation in Bacterial Infection
H. A. Eskandarian et al.

The bacterial pathogen *Listeria monocytogenes* exploits histone modifications to reprogram its host.

Research Article Summary; for full text: <http://dx.doi.org/10.1126/science.1238858>

- 526 The Evolution of Social Monogamy in Mammals

D. Lukas and T. H. Clutton-Brock

Social monogamy developed in mammalian species where males could not defend access to multiple females.

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- 530 Hierarchical Porous Polymer Scaffolds from Block Copolymers

H. Sai et al.

Spinodal decomposition of block copolymers and oligomeric additives produces three-dimensional hierarchical porous polymers.

- 534 Liquid-Mediated Dense Integration of Graphene Materials for Compact Capacitive Energy Storage

X. Yang et al.

Electrochemical capacitors made with compressed gels of chemically converted graphene exhibit high energy density.

- 537 Detection of a Spinning Object Using Light's Orbital Angular Momentum

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Orbital angular momentum modes of light can be used to detect rotation.

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- 540 Efficient Generation of H₂ by Splitting Water with an Isothermal Redox Cycle

C. L. Muhich et al.

A thermal process for generating H₂ from water uses pressure changes to recycle between catalyst redox states.

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- 542 Anthropogenic Seismicity Rates and Operational Parameters at the Salton Sea Geothermal Field

E. E. Brodsky and L. J. Lajoie

The net volume of geothermal fluid extracted is the most direct control on induced seismicity rate.

- 546 Two Dimensions of Value: Dopamine Neurons Represent Reward But Not Aversiveness

C. D. Fiorillo

Experiments in monkeys suggest that positive and negative expectations are represented by different types of neurons.

- 549 Functional Lysine Modification by an Intrinsically Reactive Primary Glycolytic Metabolite

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- 554 Cytochrome P450 Drives a HIF-Regulated Behavioral Response to Reoxygenation by *C. elegans*

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A worm model of ischemia-reperfusion injury reveals protective mechanisms potentially relevant to stroke and heart attack.

- 558 Robustness and Compensation of Information Transmission of Signaling Pathways

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- 562 Sequencing Y Chromosomes Resolves Discrepancy in Time to Common Ancestor of Males Versus Females

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- 565 Low-Pass DNA Sequencing of 1200 Sardinians Reconstructs European Y-Chromosome Phylogeny

P. Francalacci et al.

Local human demographic history is inferred from in-depth DNA sequence analyses of Sardinian men's Y chromosomes.

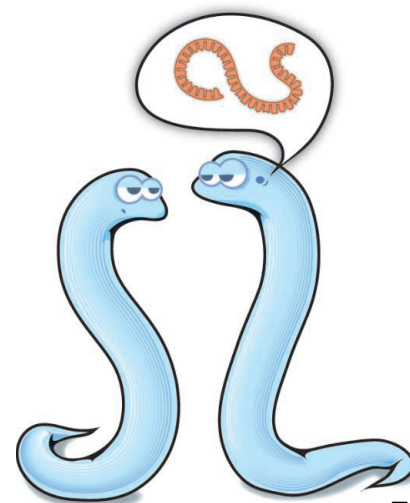
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- 569 The Microbial Metabolites, Short-Chain Fatty Acids, Regulate Colonic T_{reg} Cell Homeostasis

P. M. Smith et al.

Bacterial fermentation products regulate the number and function of regulatory T cells in the mouse colon.

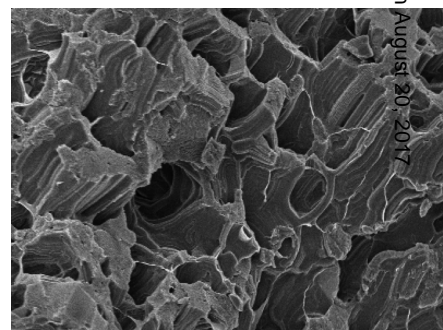
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