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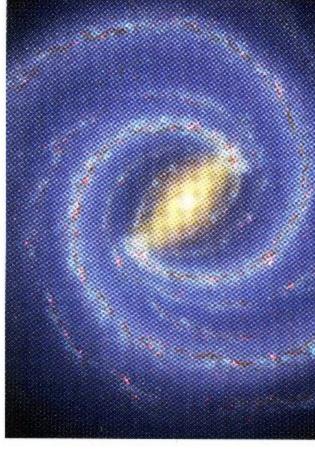
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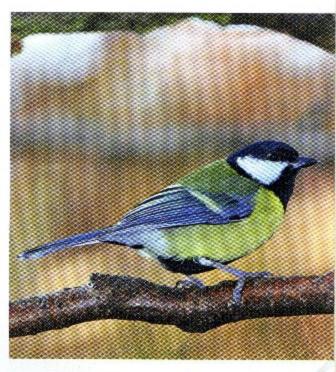
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COVER

Scanning electron micrograph of the fruit fly Drosophila melanogaster (magnification 80×, eyes pseudo-colored). Sestrin, an evolutionarily conserved protein, helps protect fruit flies from age-related pathologies, including fat accumulation, muscle degeneration, and heart failure. See page 1223.

Image: T. Deerinck and M. Ellisman/National Center for Microscopy and Imaging Research, University of California, San Diego

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1219 Contributions of Stratospheric Water Vapor to Decadal Changes in the Rate of Global Warming S. Solomon et al.

> Decreases in stratospheric water vapor after the year 2000 slowed the rate of increase in global surface temperature.

1223 Sestrin as a Feedback Inhibitor of TOR That Prevents Age-Related Pathologies J. H. Lee et al.

Sestrin proteins protect fruit flies from the tissue degeneration and disruption of metabolic homeostasis that accompany aging. >> Perspective p. 1210

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1228 | Symmetric Inertial Confinement Fusion Implosions at Ultra-High Laser Energies | S. H. Glenzer et al.

1231 Charged-Particle Probing of X-ray—Driven Inertial-Fusion Implosions

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Laser-driven temperatures and implosion symmetry are close to the requirements for inertial-fusion ignition.

>> Perspective p. 1208

1235 Deglacial Meltwater Pulse 1B and Younger Dryas Sea Levels Revisited with Boreholes at Tahiti

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A coral-based record of sea level from Tahiti defines changes in the rate of sea-level rise between 14,000 and 9000 years ago.

1238 Geodynamo, Solar Wind, and Magnetopause 3.4 to 3.45 Billion Years Ago

J. A. Tarduno et al.

Analysis of ancient silicate crystals indicates that Earth's magnetic field existed 3.40 to 3.45 billion years ago.

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1241 Calibrating the Cryogenian

F. A. Macdonald et al.

A volcanic tuff dated to 716.5 million years ago calibrates the timing of a global glaciation event and eukaryotic survival. >> News story p. 1186

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Gas-phase sulfuric acid and water react fast enough to account for the concentration of atmospheric sulfuric acid particles.

1246 Extensive Methane Venting to the Atmosphere from Sediments of the East Siberian Arctic Shelf N. Shakhova et al.

Methane emissions from this region of sub-sea permafrost are comparable to previous estimates for the world ocean. >> Perspective p. 1211; Science Podcast

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1254 RTEL-1 Enforces Meiotic Crossover Interference and Homeostasis

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Crossing over between homologous chromosomes in meiosis is controlled in part by an anti-recombination enzyme.

1258 Spatially Ordered Dynamics of the Bacterial Carbon Fixation Machinery

D. F. Savage et al.

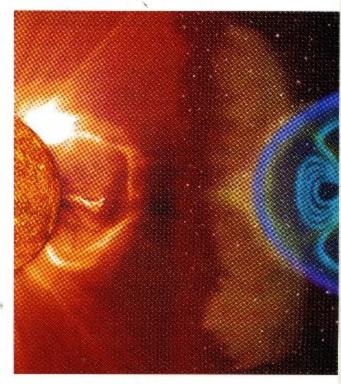
Tight control of the spatial arrangement of carboxysome organelles optimizes carbon fixation in cyanobacterial cells.

1261 Retromer Is Required for Apoptotic Cell Clearance by Phagocytic Receptor Recycling

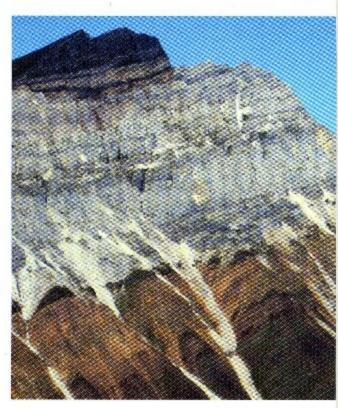
D. Chen et al.

An intracellular membrane-sorting machinery participates in cellular corpse clearance.

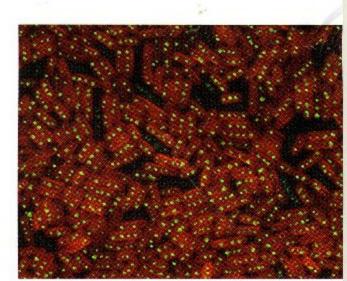
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