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COVER

Skull of the theropod dinosaur *Velociraptor mongoliensis* (Mongolia) showing the eye socket (4 centimeters across). Analysis of the shape of the eye socket and scleral ring (a bone within the eye) of fossil and extant species suggests that Mesozoic archosaurs were active both day and night. See page 705.

Photo: Lars Schmitz, University of California, Davis

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S. C. Bendall et al.
 Simultaneous measurement of more than 30 properties in individual human cells is used to characterize signaling in the immune system.
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V. Scagnoli et al.
 Resonant x-ray scattering is used to detect microscopic loop currents within the plane of cupric oxide.

698 **Imaging Doped Holes in a Cuprate Superconductor with High-Resolution Compton Scattering**
Y. Sakurai et al.
 Inelastic x-ray scattering probed the doping dependence of the electronic environment within a cuprate superconductor.

702 **Photodetection with Active Optical Antennas**
M. W. Knight et al.
 An active optical antenna-diode combines the functions of light-harvesting and excited-electron injection.
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705 **Nocturnality in Dinosaurs Inferred from Scleral Ring and Orbit Morphology**
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 Comparison of eye structures between fossils and modern species suggests that Mesozoic archosaurs were active day and night.

708 **Saturn's Curiously Corrugated C Ring**
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711 **The Impact of Comet Shoemaker-Levy 9 Sends Ripples Through the Rings of Jupiter**
M. R. Showalter et al.
 Spacecraft observations show that Saturn's and Jupiter's rings preserve records of recent interplanetary debris collisions.
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714 **Single-Cell Genomics Reveals Organismal Interactions in Uncultivated Marine Protists**
H. S. Yoon et al.
 Marine protist cells from the wild environment contain DNA from several viruses and bacteria, but apparently lack plastids.

717 **A Family of IFN- γ -Inducible 65-kD GTPases Protects Against Bacterial Infection**
B.-H. Kim et al.
 Guanylate-binding proteins coordinately regulate oxidative and autophagic responses to intracellular bacteria.

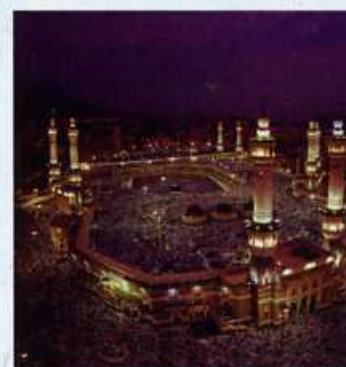
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 Livestock experiments provide precise parameters for incubation and infectious periods for foot-and-mouth disease virus.
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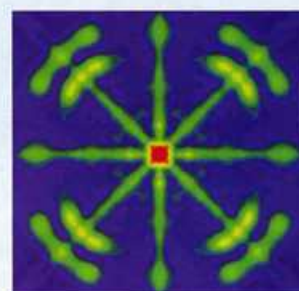
729 **Neuronal GPCR Controls Innate Immunity by Regulating Noncanonical Unfolded Protein Response Genes**
J. Sun et al.
 Two nematode worm neurons "smell" disease and promote resistance to pathogens.
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732 **Transient Activation of the HOG MAPK Pathway Regulates Bimodal Gene Expression**
S. Pelet et al.
 Bimodal expression of genes is activated in response to osmotic stress.

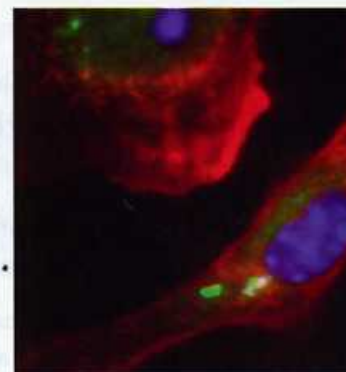
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