RESEARCH ARTICLE

1290 A Neural Circuit for Memory Specificity and Generalization
W. Xu and T. C. Südhof
Projections to and from the nucleus reunions in the thalamus regulate the specificity of contextual fear memory.

REPORTS

1295 Spin Torque–Generated Magnetic Droplet Solitons
S. M. Mohseni et al.
Transport measurements reveal a self-reinforcing traveling wave in a magnetic system.

1298 Flexible Minerals: Self-Assembled Calcite Spicules with Extreme Bending Strength
F. Natali et al.
Spicules from aligned calcite nanocrystals and silicatein-α show enhanced bending strength linked to protein content. >> Perspective p. 1281

1302 Real-Time Observation of Surface Bond Breaking with an X-ray Laser
M. D’Horta et al.
Changes in x-ray absorption and emission features reveal a weakly interacting precursor state to the chemisorbed state.

1305 Evidence for Microbial Carbon and Sulfur Cycling in Deeply Buried Ridge Flank Basalt
M. A. Lever et al.
Active methane- and sulfur-cycling microbial communities exist in deep basaltic ocean crust.

1309 Hind Wings in Basal Birds and the Evolution of Leg Feathers
X. Zheng et al.
Fossils of basal birds have feathers on all four limbs, suggesting that the present two-winged condition is a derived state. >> News story p. 1261

1312 Adaptive Evolution of Multiple Traits Through Multiple Mutations at a Single Gene
C. R. Linne et al.
The light color of mice living in the Nebraska Sand Hills is not the result of a single large-effect mutation.

1316 Circadian Control of Chloroplast Transcription by a Nuclear-Encoded Timing Signal
Z. B. Noordt et al.
In plants, day/night information is communicated from a nuclear-encoded circadian oscillator to the chloroplast.

1320 Quantitative Phosphoproteomics Reveal mTORC1 Activates de Novo Pyrimidine Synthesis
A. M. Robitaille et al.
In addition to its role in stimulating protein and lipid synthesis, the kinase mammalian target of rapamycin stimulates nucleotide biosynthesis.

1323 Stimulation of de Novo Pyrimidine Synthesis by Growth Signaling Through mTOR and S6K1
I. Ben-Sahra et al.
Proteomic Mapping of Mitochondria in Living Cells via Spatially Restricted Enzymatic Tagging
H.-W. Rhee et al.
A modern update of a classic peroxidase-based anatomical methodology opens a window into mitochondria in live cells.

1328 The Genetic Basis for Bacterial Mercury Methylation
J. M. Parks et al.
A two-gene cluster encodes proteins required for the production of the neurotoxin methylmercury in bacteria. >> Perspective p. 1280

1332 The C9orf72 GGGGCC Repeat Is Translated into Aggregating Dipeptide-Repeat Proteins in FTLD/ALS
K. Mori et al.
A new class of proteins links a common genetic mutation to the predominant pathology in certain neurodegenerative diseases. >> Perspective p. 1282