Ants live together in highly complex societies, often sacrificing individual gain to achieve common goals such as forming a living bridge. Such cooperation makes evolutionary sense because the ants are all related, as detailed in this month’s Origins essay on page 1196. The essay and two Reports on pages 1269 and 1272 address how cooperation evolves in unrelated individuals and even between species.

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X-ray observations show that a white dwarf has a mass near the limit above which these stars become gravitationally unstable.

1224 Realization of an Excited, Strongly Correlated Quantum Gas Phase
E. Haller et al.
Confinement of a cloud of ultracold atoms along one dimension creates tunable metastable excited states.

1227 Complete Methods Set for Scalable Ion Trap Quantum Information Processing
J. P. Home et al.
Coupling of different ion creates states that are insensitive to stray magnetic fields and more robust for quantum computing.

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R. Vanacore et al.
An unusual sulfilimine bond provides reinforcing cross-link of an extracellular matrix protein, collagen IV.

1234 Reassessing the Source of Long-Period Comets
N. A. Kaib and T. Quinn
Numerical simulations show that the inner Oort Cloud is a major source of long-period comets that cross Earth’s orbit.

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A 2000-year-long Arctic cooling trend seen in surface air temperature reconstruction was reversed during the last century.

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D. Ahel et al.
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V. Kellermann et al.
The evolutionary potential of key traits may be restricted by limited genetic variation.

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A. S. Dimas et al.
Genetic variation in regulatory elements among humans affects gene expression in a tissue-specific manner.

**1250** Rab35 Controls Actin Bundling by Recruiting Fascin as an Effector Protein
J. Zhang et al.
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**1254** Regulation of Histone Acetylation in the Nucleus by Sphingosine-1-Phosphate
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A phospholipid that binds to nuclear enzymes modifies gene transcription in response to external stimuli.

**1258** Perineuronal Nets Protect Fear Memories from Erasure
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**1261** Activation of the PI3K Pathway in Cancer Through Inhibition of PTEN by Exchange Factor P-REX2a
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Cancer cell growth is stimulated by the inhibition of a previously unknown step in cell signaling for tumor suppression.

**1265** Recruitment of Antigen-Specific CD8⁺ T Cells in Response to Infection Is Markedly Efficient
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Lymphocyte proliferation, more than recruitment to the site of an infection, determines the success of the immune response.

**1269** Differential Sensitivity to Human Communication in Dogs, Wolves, and Human Infants
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A mutation that prevents binding of a promising drug lead to its target protein confers resistance in a human brain tumor.
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T. J. Jerde and W. Bushman
A classically inflammatory mediator, interleukin-1, also functions during development in the prostate.

PERSPECTIVE: Tumor Suppression by LKB1—SiK-ness Prevents Metastasis
R. J. Shaw
Salt-inducible kinase 1 is activated by LKB1 to promote anoikis, thereby blocking metastasis.

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