Three Neandertal bone fragments, approximately 40,000 years old, from Vindija Cave, Croatia (shown to scale). DNA extracted from these bones was used to generate a draft sequence of the Neandertal genome, which was then compared to the genomes of five present-day humans. See page 710 and www.sciencemag.org/special/neandertal/.

Photo: Christine Verna/Department of Human Evolution, Max Planck Institute for Evolutionary Anthropology
### Research Article

**710** *A Draft Sequence of the Neandertal Genome*

R. E. Green et al.

Gene flow has occurred from Neandertals to humans of Eurasian descent, but not to Africans.

**>> News story p. 680; Report p. 723**

### Reports

**723** *Targeted Investigation of the Neandertal Genome by Array-Based Sequence Capture*

H. A. Burbano et al.

Array capture of Neandertal DNA identifies amino acid substitutions that occurred after the split between humans and Neandertals.

**>> News story p. 680; Research Article p. 710**

**725** *Fermi Gamma-Ray Imaging of a Radio Galaxy*

The Fermi-LAT Collaboration

Gamma rays from a radio galaxy are relic cosmic microwave background radiation that underwent inverse Compton scattering.

**729** *The Equation of State of a Low-Temperature Fermi Gas with Tunable Interactions*

N. Navon et al.

A Fermi gas is characterized along the crossover regime between its weak and strongly interacting limits.

**732** *Nanoscale Three-Dimensional Patterning of Molecular Resists by Scanning Probes*

D. Pires et al.

A molecular glass can be patterned to dimensions of tens of nanometers with a heated scanning probe tip.

**736** *Visualizing the Electron Scattering Force in Nanostructures*

C. Tao et al.

Effects of particular surface features on electron-induced atomic motion in metal structures are revealed.

**740** *Viscosity of MgSiO\textsubscript{3} Liquid at Earth’s Mantle Conditions: Implications for an Early Magma Ocean*

B. B. Karki and L. P. Stixrude

The behavior of the liquid mantle during Earth’s earliest stages was controlled by the viscosity of silicate melts.

**742** *Extreme Deuterium Excesses in Ultracarbonaceous Micrometeorites from Central Antarctic Snow*

J. Duprat et al.

Interplanetary dust particles recovered from Antarctic snow may provide a sample of the early solar system.

**>> Perspective p. 698; Science Podcast**

**745** *Cross-Reacting Antibodies Enhance Dengue Virus Infection in Humans*

W. Dejnirattisai et al.

Variable maturation of a dengue viral antigen results in incomplete neutralization and promotes secondary pathology.

**749** *Induction of Lymphoidlike Stroma and Immune Escape by Tumors That Express the Chemokine CCL21*

J. D. Shields et al.

An immunotolerant microenvironment driven by chemokine expression contributes to tumor growth and spread.

**>> Perspective p. 697**

**753** *Altered Histone Acetylation Is Associated with Age-Dependent Memory Impairment in Mice*

S. Peleg et al.

Deregulated histone acetylation may represent an early biomarker of age-dependent cognitive decline.

**>> Perspective p. 701**

**757** *Sequential Checkpoints Govern Substrate Selection During Cotranslational Protein Targeting*

X. Zhang et al.

Protein cargo is monitored at several points during membrane translocation to improve targeting fidelity.

**760** *Dynamic Ca\textsuperscript{2+}-Dependent Stimulation of Vesicle Fusion by Membrane-Anchored Synaptotagmin 1*

H.-K. Lee et al.

A synaptic vesicle protein must be membrane-anchored to stimulate fusion in vitro at physiological Ca\textsuperscript{2+} concentrations.

*CONTENTS continued*