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Optical laser scan of early hominin footprints at Ileret, Kenya, color-rendered to illustrate depth; reds indicate areas of high elevation, blues lower elevation. The footprints are 1.5 million years old and were probably made by Homo ergaster/erectus. Two right footprints and a partial left are visible along with a range of animal prints. See page 1197.
Image processing in Rapidform™: Matthew Bennett/Bournemouth University

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1187 Global Cooling During the Eocene-Oligocene Climate Transition
Z. Liu et al.
When a permanent Antarctic ice sheet formed about 34 million years ago, high-latitude surface oceans cooled by about 5°C.

1190 Seeing the Fermi Surface in Real Space by Nanoscale Electron Focusing
A. Weismann et al.
Scanning tunneling microscopy can reveal the bulk Fermi surface of copper when buried cobalt atoms are present.

1193 Conductance of a Single Conjugated Polymer as a Continuous Function of Its Length
L. Lafferentz et al.
The conductance of a polyfluorene oligomer is measured as it is pulled off a gold surface.

1197 Early Hominin Foot Morphology Based on 1.5-Million-Year-Old Footprints from Ileret, Kenya
M. R. Bennett et al.
Footprints found near Lake Turkana show that human foot shape and gait had been achieved 1.5 million years ago.

1201 RNA Polymerase IV Functions in Paramutation in Zea mays
K. F. Erhard Jr. et al.
In maize, a derivative RNA polymerase is responsible for passing on epigenetic changes to the next generation.

1205 Mutations in the FUS/TLS Gene on Chromosome 16 Cause Familial Amyotrophic Lateral Sclerosis
T. J. Kwiatkowski Jr. et al.
A pair of transcription factors controls sites of tooth formation in mice by regulating the distribution of signals.

1211 Synchronous Hyperactivity and Intercellular Calcium Waves in Astrocytes in Alzheimer Mice
K. V. Kuchibhotla et al.
In a mouse model of Alzheimer’s disease, astrocytes respond globally to plague formation.

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1218 Analysis of Drosophila Segmentation Network Identifies a JNK Pathway Factor Overexpressed in Kidney Cancer
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1232 Antagonistic Actions of Msx1 and Osr2 Pattern Mammalian Teeth into a Single Row
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Missing matter has been spotted in a supersized wall of galaxies.

A Transposon-Based Genetic Screen in Mice Identifies Genes Altered in Colorectal Cancer
T. K. Starr et al.
A functional screen in mice uncovers genes that are likely to drive the growth of gut-specific tumors.
10.1126/science.1163040

Antibody Recognition of a Highly Conserved Influenza Virus Epitope
D. C. Ebert et al.
A broadly neutralizing antibody binds the hemagglutinin stalk of pathogenic influenza viruses to block membrane fusion.
10.1126/science.1171491

ABSTRACT

Many people are immunized against seasonal flu each year, but some viruses are still widely spread and cause severe disease. It is unknown why some influenza strains are more capable of evading the immune system than others. Here, we identify a broadly neutralizing antibody that binds the hemagglutinin (HA) stalk of pathogenic influenza strains. The epitope targeted by the antibody is highly conserved across HA stalks from many different influenza strains, suggesting that it could be a target for a vaccine that would provide protection against a broad range of influenza viruses.

The IL-17 receptor triggers dual, sequential phosphorylation of the transcription factor C/EBPβ, which represses the expression of target genes.

REVIEW: Positive and Negative Modulation of Angiogenesis by VEGF Ligands
Y. Cao
PGF and VEGF-B exhibit dual effects on angiogenesis mediated by VEGF-A.

PERCEPTION: Jasmonate—Preventing the Maize Tassel from Getting in Touch with His Feminine Side
J. Browse
Male identity in the maize tassel is controlled by jasmonate signaling.

PERCEPTION: Chemoattractant Receptors and Leukocyte Recruitment—More Than Cell Migration
E. M. Borroni et al.
Atypical "chemoattractant receptors" that do not signal through G proteins contribute to leukocyte recruitment through indirect mechanisms.

MEETING REPORT: Signal Transduction Molecules as Targets for Cancer Prevention
A. M. Bode and Z. Dong
Two conferences at The Hormel Institute highlight early intervention and chemoprevention in targeting cancer.

Innervating diaphragm muscle.

When Ironies Make Perfect Sense
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Gina Wingood, a black Catholic girl raised in a white suburb, found love and her calling in San Francisco’s ghettos.

A Double Bind—Minority Women in Science in Europe
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Minority women in European science confront an issue that remains taboo.
Science 323 (5918), 1143-1235.