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QuteMol-rendered image of human rhinovirus 3 (Protein Data Bank ID: 1rhi) illustrating virion topography. Red, blue, and yellow denote the three major surface capsid proteins; examples of RNA regional motifs are colored according to predicted base-pairing fidelity. Sequence diversity within the major surface proteins contributes to the wide range of immunogenic serotypes characteristic of the “common cold.” See page 55.

*Image: H. Adam Steinberg and Jean-Yves Sgro/
University of Wisconsin–Madison*
RESEARCH ARTICLE
55 Sequencing and Analyses of All Known Human Rhinovirus Genomes Reveal Structure and Evolution
A. C. Palmenberg et al.
Rhinoviruses, which are a common cause of colds, fall into three or possibly four major clades and can undergo strain recombination.

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In Drosophila, neural connection proteins increase their expression after wakefulness and decrease it after sleep.
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Y. Takei
Extracellular phosphorylation of Nogo receptors by casein kinase II blocks agonist binding.

PERSPECTIVE: Reversing DNA Methylation: New Insights from Neuronal Activity–Induced Gadd45b in Adult Neurogenesis
H. Wu and Y. E. Sun
Gadd45b causes epigenetic modification of promoters for Bdnf and Fag genes in postmitotic neurons in response to neuronal activity.

PERSPECTIVE: Syndecans Shed Their Reputation as Inert Molecules
M. D. Bass et al.
The shedding of the extracellular domain of a transmembrane proteoglycan can be controlled by its cytoplasmic domain.

SCIENCEEXPRESS
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Extinction-Reconsolidation Boundaries: Key to Persistent Attenuation of Fear Memories
M.-H. Monfils et al.
Behavioral manipulations can reverse a learned fearful association in rats.
10.1126/science.1167975

Understanding the Spreading Patterns of Mobile Phone Viruses
P. Wang et al.
Current mobile phone usage prevents major mobile virus outbreaks, but conditions could arise leading to a phone epidemic.
10.1126/science.1167053

Apicomplexan Parasites Co-Opt Host Calpains to Facilitate Their Escape from Infected Cells
R. Chandramohanadas et al.
A host protease helps newly replicated microbial parasites escape from incubator cells.
10.1126/science.1171085

Size and Shape of Saturn’s Moon Titan
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Titan’s poles lie at lower elevations than the equator, perhaps explaining its high-latitude hydrocarbon lakes.
10.1126/science.1168905

Fabricating Genetically Engineered High-Power Lithium Ion Batteries Using Multiple Virus Genes
Y. J. Lee et al.
A genetically modified virus is used to form an efficient cathodic battery material.
10.1126/science.1171541

Apicomplexan Parasites Co-Opt Host Calpains to Facilitate Their Escape from Infected Cells
R. Chandramohanadas et al.
A host protease helps newly replicated microbial parasites escape from incubator cells.
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