COVER
Pseudocolored scanning electron micrograph (magnification ~34,000x) of the surface of mouse airway epithelia showing cilia protruding from epithelial cells; short protrusions in the foreground are microvilli from a nonciliated cell. In human airway epithelia, these motile cilia bear receptors that detect bitter compounds and signal the cilia to increase their rhythmic beat frequency to help clear noxious substances from the lungs. See page 1131.

Image: Tom Moninger (epithelia generated by Phil Karp)
BREVIA

1094 Gene-for-Gene Resistance in Striga-Cowpea Associations
   J. Li and M. P. Timko
   A gene thought to defend plants against infectious bacterial pathogens also supplies defense against a parasitic plant.

RESEARCH ARTICLE

1095 On the Origin and Spread of an Adaptive Allele in Deer Mice
   C. R. Linnen et al.
   The light coat-color variant in deer mice is a mutation selected for its adaptive value for living in sand hills.

REPORTS

1099 Spectroscopic Fingerprint of Phase-Incoherent Superconductivity in the Underdoped $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$
   J. Lee et al.
   Scanning tunnelling spectroscopy reveals the pseudogap regime of the cuprates to be an incoherent d-wave superconductor.
   >> Perspective p. 1080

1103 Strong Coupling Between Single-Electron Tunneling and Nanomechanical Motion
   G. A. Steele et al.

1107 Coupling Mechanics to Charge Transport in Carbon Nanotube Mechanical Resonators
   B. Lassagne et al.
   Individual electrons tunneling onto and out of a carbon nanotube can be used to tune its oscillatory motion.
   >> Perspective p. 1084

1110 The Chemical Structure of a Molecule Resolved by Atomic Force Microscopy
   L. Gross et al.
   Derivitization of atomic force microscope tips with carbon monoxide molecules allows atoms to be resolved within adsorbed molecules.
   >> Perspective p. 1083

1114 Amplifying the Pacific Climate System Response to a Small 11-Year Solar Cycle Forcing
   G. A. Meehl
   A combination of mechanisms explains the large response of sea surface temperatures caused by the 11-year solar cycle.
   >> News story p. 1058

1118 Good Genes and Good Luck: Ammonoid Diversity and the End-Permian Mass Extinction
   A. Brayard et al.
   In contrast to other groups, ammonoid diversity recovered within 1 million years of the end-Permian extinction to levels higher than before.
   >> Perspective p. 1079

1121 Enhancement of Biodiversity and Ecosystem Services by Ecological Restoration: A Meta-Analysis
   J. M. Rey Benayas et al.
   Restoration, biodiversity, and ecosystem services are positively linked in a wide range of ecosystem types across the globe.

1124 Unprecedented Restoration of a Native Oyster Metapopulation
   D. M. Schulte et al.
   The height of oyster reefs above the river bed promotes their restoration in the Chesapeake Bay, USA.

1128 Functional Characterization of the Antibiotic Resistance Reservoir in the Human Microflora
   M. O. A. Sommer et al.
   Large numbers of previously unidentified antibiotic resistance genes occur in gut bacteria.

1131 Motile Cilia of Human Airway Epithelia Are Chemosensory
   A. S. Shah et al.
   Airway epithelia directly sense and respond to noxious substances.
   >> Perspective p. 1081

1134 The E3 Ligase TRAF6 Regulates Akt Ubiquitination and Activation
   W.-L. Yang et al.
   Localization and activation of signaling proteins in cancer cells are controlled by ubiquitin labeling.
   >> Perspective p. 1083

1139 SDH5, a Gene Required for Flavination of Succinate Dehydrogenase, Is Mutated in Paraganglioma
   H.-X. Hao et al.
   Analysis of a yeast mitochondrial protein reveals a human tumor susceptibility gene.

1142 Eos Mediates Foxp3-Dependent Gene Silencing in CD4+ Regulatory T Cells
   F. Pan et al.
   A transcription factor required for gene suppression in regulatory T cells is identified.
Huge variations in the coats of purebred dogs can be explained by the combinatorial effects of only three genes. 10.1126/science.1177808

Complete Resequencing of 40 Genomes Reveals Domestication Events and Genes in Silkworm (Bombyx) Q. Xia et al.
Silkworm genomes show signatures of selection associated with domestication. 10.1126/science.1176620 >> News story p. 1058

Nitrous Oxide (N₂O): The Dominant Ozone-Depleting Substance Emitted in the 21st Century A. R. Ravishankara et al.
Nitrous oxide causes more stratospheric ozone destruction than any other ozone-depleting substance. 10.1126/science.1176985 >> Science Podcast

Chiral Organic Ion Pair Catalysts Assembled Through a Hydrogen-Bonding Network D. Uraguchi et al.
A small cluster of hydrogen-bonded molecules acts as a highly selective asymmetric catalyst. 10.1126/science.1176758

Comment on “Floral Iridescence, Produced by Diffractive Optics, Acts as a Cue for Animal Pollinators” N. I. Morehouse and R. L. Rutowski
full text at www.sciencemag.org/cgi/content/full/325/5944/1072-d

Response to Comment on “Floral Iridescence, Produced by Diffractive Optics, Acts as a Cue for Animal Pollinators” H. M. Whitney et al.
full text at www.sciencemag.org/cgi/content/full/325/5944/1072-e

CHIRAL ORGANIC ION PAIR CATALYSTS ASSEMBLED THROUGH A HYDROGEN-BONDING NETWORK

Row upon row of shark teeth.