EDITORIAL
1147 The Next Innovation Revolution
Susan Hockfield

NEWS OF THE WEEK
1154 NASA, ESA Choose King of Planets for Flagship Missions in 2020
1155 Forensic Science Needs a Major Overhaul, Panel Says
1156 Tangled Patent Dispute Over 'Free' Drug-Resistance Database
1157 Harvard Puts Science Campus on Slow Track
1158 Stimulus Gives DOE Billions for Carbon-Capture Projects
1159 Creationist Beliefs Persist in Europe
1160 Flu Antibodies Stir New Hope for Treatment, Vaccine
1161 NSF Restores Data on Minority Ph.D.’s
1161 From the Science Policy Blog

NEWS FOCUS
1162 A 'Wimpy' Flu Strain Mysteriously Turns Scary
>> Science Podcast
1164 Making Every Baby Girl Count
Chinese Men: A Rising Tide of Troublemakers?
1167 Will Monju's Resurrection Give Breeders a Second Lease on Life?

LETTERS
1168 Neuroscience and the Soul
M. J. Farah and N. Murphy
An Optimistic Read on Digital Libraries
J. Fellows
Developing Psychomotor Skills the Wii Way
C. S. Hill
Explaining the Reasoning-Fact Gap
S. M. Carlson

BOOKS ET AL.
1170 The Tragic Sense of Life
R. J. Richards, reviewed by L. K. Nyhart
H. G. Bronn, Ernst Haeckel, and the Origins of German Darwinism
S. Gilboff, reviewed by L. K. Nyhart

EDUCATION FORUM
1172 A National Ecological Network for Research and Education
M. Lowman et al.

PERSPECTIVES
1174 Stepping Out
R. H. Crompton and T. C. Pataky
>> Report p. 1197
1175 Tipping Pointedly Colder
L. R. Kump
>> Report p. 1187
1176 Harvesting Ocean Wave Energy
J. Scruggs and P. Jacob
1178 Looking Below the Surface
A. J. Heinrich
>> Report p. 1190
1179 From Oral to Moral
P. Rozin et al.
>> Report p. 1222
1181 Retrospective: Frederic M. Richards (1925–2009)
T. A. Steitz

BREVIA
1183 Predicting Elections: Child's Play!
J. Antonakis and O. Dalgas
Children’s choices of a ship’s captain reflect adults’ choices of a parliamentarian.
>> Science Podcast

CONTENTS continued >>
REPORTS

1184 Inducing a Magnetic Monopole with Topological Surface States
X.-L. Qi et al.
A magnetic monopole is theoretically predicted to be induced at the surface of a topological insulator.

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.

1208 Mutations in FUS, an RNA Processing Protein, Cause Familial Amyotrophic Lateral Sclerosis Type 6
C. Vance et al.
Mutations in an RNA processing protein, the second implicated, suggest that a common mechanism promotes Lou Gehrig’s disease.

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 plaque formation.

1215 Meropenem-Clavulanate Is Effective Against Extensively Drug-Resistant Mycobacterium tuberculosis
J.-E. Hugonnet et al.
Together, two FDA-approved drugs inhibit the growth of 13 antibiotic-resistant strains of the tuberculosis pathogen.

1218 Analysis of Drosophila Segmentation Network Identifies a JNK Pathway Factor Overexpressed in Kidney Cancer
J. Liu et al.
A developmental marker in fruit flies also acts as a marker of renal cell cancer in humans.

1222 In Bad Taste: Evidence for the Oral Origins of Moral Disgust
H. A. Chapman et al.
Responses to bad-tasting foods and morally repugnant actions are processed in overlapping regions of the brain.

1226 Blue or Red? Exploring the Effect of Color on Cognitive Task Performances
R. Mehta and R. (J.) Zhu
Blue favors creativity in humans, whereas red improves attention to detail.

1229 Self-Sustained Replication of an RNA Enzyme
T. A. Lincoln and G. F. Joyce
Two ribozymes synthesize each other from oligonucleotide substrates to give a self-replicating system.

1232 Antagonistic Actions of Msx1 and Osr2 Pattern Mammalian Teeth into a Single Row
Z. Zhang et al.
A pair of transcription factors controls sites of tooth formation in mice by regulating the distribution of signals.

CONTENTS continued >>
RNA Pol II Accumulates at Promoters of Growth Genes During Developmental Arrest

L. R. Baugh et al.

Growth and development genes, poised for expression during developmental arrest in nematodes, respond rapidly to feeding.
10.1126/science.1169628

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. Eikert et al.

A broadly neutralizing antibody binds the hemagglutinin stalk of pathogenic influenza viruses to block membrane fusion.
10.1126/science.1171491

RESEARCH ARTICLE: Dok-7 Activates the Muscle Receptor Kinase MuSK and Shapes Synapse Formation

A. Inoue et al.

The cytoplasmic protein Dok-7 is required for the full activation of the receptor tyrosine kinase MuSK.

RESEARCH ARTICLE: IL-17 Receptor Signaling Inhibits C/EBPβ by SequentialPhosphorylation of the Regulatory 2 Domain

F. Shen et al.

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

SCIENCE SIGNALING

The Signal Transduction Knowledge Environment

Il-17 receptor signaling

SCIENCE ONLINE

Greatly Expanded Tropical Warm Pool and Weakened Hadley Circulation in the Early Pliocene

C. M. Brierley et al.

The warm tropics of the Early Pliocene, about 4 million years ago, extended much farther toward the poles than they do today.
10.1126/science.1167625

Weakened Hadley Circulation in the Early Pliocene Greatly Expanded Tropical Warm Pool and

C. M. Brierley et al.

4 million years ago, extended much farther toward the poles than they do today.
10.1126/science.1167625

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. Eikert et al.

A broadly neutralizing antibody binds the hemagglutinin stalk of pathogenic influenza viruses to block membrane fusion.
10.1126/science.1171491

RESEARCH ARTICLE: Dok-7 Activates the Muscle Receptor Kinase MuSK and Shapes Synapse Formation

A. Inoue et al.

The cytoplasmic protein Dok-7 is required for the full activation of the receptor tyrosine kinase MuSK.

RESEARCH ARTICLE: IL-17 Receptor Signaling Inhibits C/EBPβ by SequentialPhosphorylation of the Regulatory 2 Domain

F. Shen et al.

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.

PERSPECTIVE: 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.

PERSPECTIVE: 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.

SCIENCE PODCAST

www.sciencemag.org/multimedia/podcast

Free Weekly Show

Download the 27 February Science Podcast to hear about predicting election outcomes, drug-resistant influenza, your letters to Science, and more.

ORIGINS BLOG

blogs.sciencemag.org/origins

A History of Beginnings

SCIENCE INSIDER

blogs.sciencemag.org/scienceinsider

Science Policy News and Analysis

Minority women in European science confront an issue that remains taboo.

SCIENCE CAREERS

www.sciencemag.org/career_magazine

Free Career Resources for Scientists

Our sample of African-American women reveals brilliance, scientific ambition, and progress against discrimination.

When Ironies Make Perfect Sense

A. Sasso

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

The Bigger Questions

S. Gaidos

Chemical engineer Kristala Jones Prather’s career has taken her from academia to industry and back again.

A Double Bind—Minority Women in Science in Europe

E. Pain

Minority women in European science confront an issue that remains taboo.