BREVIA

993  Adaptive Evolution of an sRNA That Controls Myxococcus Development
Y.-T. N. Yu et al.
Mutation of a small noncoding RNA drives adaptive evolution in a social bacterium.

RESEARCH ARTICLE

994  A Catalog of Reference Genomes from the Human Microbiome
The Human Microbiome Jumpstart Reference Strains Consortium
Standardized protocols and methods are being established for large-scale sequencing of the microorganisms living on humans.

REPORTS

999  Observation of Plasmarons in Quasi-Freestanding Doped Graphene
A. Bostwick et al.
Doping of graphene introduces two new crossing points of the conduction and valence-electron bands.

1003  Large Angular Jump Mechanism Observed for Hydrogen Bond Exchange in Aqueous Perchlorate Solution
M. Ji et al.
Water molecules shift orientation between dissolved ions and the surrounding liquid by taking large, sudden steps.

1006  Cooperativity in Ion Hydration
K. J. Tielrooij et al.
When salts dissolve in water, the separated cations and anions can still collectively impact the liquid structure.

1009  Self-Assembly of Janus Dendrimers into Uniform Dendrimersomes and Other Complex Architectures
V. Percec et al.
Amphiphilic, spherically shaped polymers self-assemble into larger hollow complexes that could be used for drug delivery.

1014  Lopsided Growth of Earth’s Inner Core
M. Monnereau et al.
The asymmetry of the inner core is explained by iron crystallization on one side and melting on the other.

Regional Variation of Inner Core Anisotropy from Seismic Normal Mode Observations
A. Deuss et al.
Seismic data from the inner core reveal that anisotropic regions overlap with gravitational anomalies.

1021  The Onset of Collective Behavior in Social Amoebae
T. Gregor et al.
Stochastic pulsing of individual cells plays a critical role in initiating cyclic adenosine monophosphate pulses.

1025  Structural Insights into the Assembly and Function of the SAGA Deubiquitinating Module
N. L. Samara et al.
Structures give insight into how a regulator of eukaryotic gene expression achieves one of its chromatin-modifying functions.

1029  Network Diversity and Economic Development
N. Eagle et al.
Social diversity is associated with economic development.

1031  Coadministration of a Tumor-Penetrating Peptide Enhances the Efficacy of Cancer Drugs
K. N. Sugahara et al.
Anticancer drugs are more effective in mice when they are injected with a peptide that helps the drugs penetrate the tumor.

1036  Five-Vertebrate ChIP-seq Reveals the Evolutionary Dynamics of Transcription Factor Binding
D. Schmidt et al.
Binding of two liver-specific transcription factors in several vertebrate species reveals complex regulatory evolution.

1040  pH Sensing by Intracellular Salmonella Induces Effector Translocation
X.-J. Yu et al.
Intravacuolar Salmonella sense host cytosolic pH, resulting in degradation of a regulatory complex and effector translocation.

1043  A Global Proten Kinase and Phosphatase Interaction Network in Yeast
A. Breitkreutz et al.
Phosphorylation reactions in budding yeast reveal the regulatory architecture of a fundamental cellular control system.
SCIENCEONLINE

SCIENCEEXPRESS
www.scienceexpress.org

Creation of a Bacterial Cell Controlled by a Chemically Synthesized Genome
D. G. Gibson et al.
A synthetic Mycoplasma mycoides genome transplanted into M. capricolum was able to control the host cell.
10.1126/science.1189731
>> News story p. 958; Science Podcast

ATP-Binding Cassette Transporters and HDL Suppress Hematopoietic Stem Cell Proliferation
L. Yuan-Chan et al.
Pathways that reduce cholesterol in atherosclerosis also suppress increased immune cell numbers associated with the disease.
10.1126/science.1189413

Golden Years Truly Are Golden
S. Flothmann
Aging mice are happier after age 50.
10.1126/science.1190245

SCIENCE SIGNALING
www.sciencesignaling.org

The Signal Transduction Knowledge Environment
RESEARCH ARTICLE: TREM2- and DAP12-Dependent Activation of PI3K Requires DAP10 and Is Inhibited by SHIP1
Q. Peng et al.
The inositol phosphatase SHIP1 binds to a receptor-adaptor complex on osteoclasts to prevent recruitment of PI3K and inhibit receptor signaling.
RESEARCH ARTICLE: c-mip Impairs Podocyte Proximal Signaling and Induces Heavy Proteinuria
S. Zhang et al.
Overexpression of the protein c-mip in mice produces phenotypes similar to various idiopathic kidney disorders.
PERSPECTIVE: Gyrate—CCM3 Dances with a Different Angiogenic Partner
L. A. Dyer et al.
CCM3 is a key regulator of a major signaling pathway involved in vascular development.

SCIENCE CAREERS
www.scienccareers.org/career_magazine

Free Career Resources for Scientists
Hard Work and Drive Propels a Scientist From China to the United States
R. Mejia
A passion for learning led virologist Fenyong Liu into top American labs.

SCIENCE TRANSLATIONAL MEDICINE
www.sciencetranslationalmedicine.org

Integrating Medicine and Science
EDITORIAL: On Board with the Cures Acceleration Network
E. G. Nabel
The new U.S. health care legislation includes funding mechanisms to accelerate the development of “high-need cures.”
REVIEW: Deciphering Genetic Disease in the Genomic Era—The Model of GnRH Deficiency
G. P. Sykiotis et al.
Elucidation of the genetic causes of human disease requires unbiased, patient-oriented investigations.

SCIENCEPODCAST
www.sciencemag.org/multimedia/podcast

Free Weekly Show
Download the 21 May Science Podcast to hear about bacterial cells controlled by a synthetic genome, instantaneous Brownian velocity, the evolution of language, and more.

SCIENCEINSIDER
news.sciencemag.org/scienceinsider
Science Policy News and Analysis

RESEARCH ARTICLE: Androgen Receptor Promotes Hepatitis B Virus–Induced Hepatocarcinogenesis Through Modulation of Hepatitis B Virus RNA Transcription
M.-H. Wu et al.
Targeting the androgen receptor may prevent hepatitis B virus–induced liver cancer.
RESEARCH ARTICLE: Tryptophan Catabolism by Indoleamine 2,3-Dioxygenase 1 Alters the Balance of Th17 to Regulatory T Cells in HIV Disease
D. Favre et al.
PERSPECTIVE: Insights into Therapy—Indoleamine 2,3-Dioxygenase 1 Alters the Balance of Th17 to Regulatory T Cells in HIV Disease
M. F. Murray
New findings link tryptophan breakdown to immune cell imbalance and chronic inflammation associated with HIV/AIDS.

Adobe PDF
Published by AAAS
www.sciencemag.org SCIENCE VOL 328 21 MAY 2010 947

Change of address: Allow 4 weeks, giving old and new addresses and 8-digit account number. Postmaster: Send change of address to AAAS, P.O. Box 96179, Washington, DC 20090-6178. Single-copy sales: $10.00 current issue, $25.00 back issue prepaid includes surface postage; bulk rates on request. Authorization to photocopy material for internal or personal use under circumstances not falling within the fair use provisions of the Copyright Act is granted by AAAS to libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that $20.00 per article is paid directly to CCC, 222 Rosewood Drive, Danvers, MA 01923. The identification code for Science is 0036-8075. Science is indexed in the Reader’s Guide to Periodical Literature and in several specialized indexes.