CONTENTS

EDITORIAL
983   Beyond the Stimulus
      Elias A. Zerhouni

NEWS OF THE WEEK
992   Science Wins $21 Billion Boost as
      Stimulus Package Becomes Law
993   LHC Delays Give Tevatron a Shot at
      Higgs Boson
995   No News Is Good News for Holdren,
      Lubchenco at Confirmation Hearing
996   HIV/AIDS Researchers Reach for
      High-Hanging Fruit
997   From the Science Policy Blog
998   AAAS Annual Meeting
      Al Gore to Scientists: ‘We Need You’
      Will Many Endangered Species Recover?
      Findings: Time Traveling at AAAS
      First Globetrotters Had Primitive Toolkits
999   Tree Rings Tell of Angkor’s Dying Days

NEWS FOCUS
1000  Is Silicon’s Reign Nearing Its End?
      >> Science Podcast
1003  New Facility Propels Korea to the
      Fusion Forefront
1004  Richard Richards: Making Every Drop
      Count in the Buildup to a Blue Revolution
1006  Rooting Around the Truffle Genome
      >> Science Online Feature, see p. 977

LETTERS
1009  For Teachers, All the Classroom’s a Stage
      M. Hadjijargyrou
      Earlier Treatment May Explain Diabetes Data
      D. M. Abbey
      The Vital Role of ORWH
      S. Hultgren et al.
      The Nonscientist Science Advisor
      R. A. Pielke

1011  CORRECTIONS AND CLARIFICATIONS

BOOKS ET AL.
1012  The Collectors of Lost Souls
      W. Anderson, reviewed by M. S. Lindee
1013  The Future of Education
      K. Egan, reviewed by J. V. Wertsch

POLICY FORUM
1014  Controlling Eutrophication:
      Nitrogen and Phosphorus
      D. J. Conley et al.

PERSPECTIVES
1016  Attractors and Democratic Dynamics
      Y. Bar-Yam et al.
1017  Making a Crust
      P. J. Michael and M. J. Cheadle
      >> Report p. 1048
1018  Atomically Engineered Oxide Interfaces
      J. W. Reiner et al.
      >> Research Article p. 1026
1020  A Matter of Humidity
      A. E. Dessler and S. C. Sherwood
1021  Stress Response and Aging
      L. R. Saunders and E. Verdin
      >> Report p. 1063
1022  Peter Principle Packs a Peck
      of Phytoplankton
      D. Grünbaum
      >> Report p. 1067

BREVIA
1025  Open Access and Global Participation
      in Science
      J. A. Evans and J. Reimer
      Making articles available free online increases
      the rate at which they are cited, especially by
      authors in poorer countries.

CONTENTS continued >>

COVER
Maltose binding protein (translucent), shown suspended in its
molten globule state with chaperone protein SecB (yellow),
destined for transport across the cellular membrane. The Gordon
Research Conference on Visualization in Science & Education
will be held 26 to 31 July 2009 at Magdalen College, Oxford, UK.
The schedules for the 2009 Gordon Research Conferences begin
on page 1084.

Image: Graham Johnson/www.fivth.com and Scripps Research
Institute; Sander Tans/AMOLF Institute

DEPARTMENTS
979   This Week in Science
984   Editors’ Choice
986   Science Staff
989   Random Samples
991   Newsmakers
1083  New Products
1084  Gordon Research Conferences
1110  Science Careers

www.sciencemag.org  SCIENCE VOL 323  20 FEBRUARY 2009
Published by AAAS
An atomic force microscope is used to pattern and fabricate devices created at the interface between different oxides.

A family of proteins is identified that binds to foreign cytoplasmic DNA in mammalian cells and regulates the immune response.

A strain of Arabidopsis provides a plant model for the harmful effects of repeat nucleotide expansions in populations.

The sawtooth topography of annealed sapphire wafers guides the phase separation of a block copolymer to create a nearly defect-free patterned film.

Injecting energy into a gold film can create a transient excited state with stronger bonds prior to melting.

Unwanted product hydrogenation was avoided by using a modified catalyst that had smaller gold-palladium nanoparticles.

Extensive sheets of photosynthetic algae accumulate in coastal waters when their upward swimming is disrupted by counter currents in lateral water flow.

A modern nitrogen cycle developed and microbial metabolisms evolved as soon as some free oxygen was present.

A host protein that recognizes invading viruses activates innate immunity defenses only when it senses both double-stranded RNA and a 5’ triphosphate.

A strain of Arabidopsis provides a plant model for the harmful effects of repeat nucleotide expansions in populations.

A family of proteins is identified that binds to foreign cytoplasmic DNA in mammalian cells and regulates the immune response.

A strain of Arabidopsis provides a plant model for the harmful effects of repeat nucleotide expansions in populations.

A strain of Arabidopsis provides a plant model for the harmful effects of repeat nucleotide expansions in populations.

A strain of Arabidopsis provides a plant model for the harmful effects of repeat nucleotide expansions in populations.
A Putative ABC Transporter Confers Durable Resistance to Multiple Fungal Pathogens in Wheat
S. G. Krattinger et al.
10.1126/science.1166453

A Kinase-START Gene Confers Temperature-Dependent Resistance to Wheat Stripe Rust
D. Fu et al.
10.1126/science.1166289

Several specific genes in wheat confer resistance to common fungal diseases.

Fermit Observations of High-Energy Gamma-Ray Emission from GRB 080916C
The Fermi LAT and Fermi GBM Collaborations
This highly luminous gamma-ray burst had the largest apparent energy release yet measured.
10.1126/science.1169101

Switchable Ferroelectric Diode and Photovoltaic Effect in BiFeO₃
T. Choi et al.
Single crystals of bismuth iron oxide contain a single ferroelectric domain that can be switched with an electric field.
10.1126/science.1168636

RESEARCH ARTICLE: The Precise Sequence of FGFR Receptor Autophosphorylation Is Kinetically Driven and Is Disrupted by Oncogenic Mutations
E. D. Lew et al.
The order of FGFR1 tyrosine autophosphorylation is kinetically controlled and determined by primary and tertiary structures.

PERSPECTIVE: Von Gierke’s Disease Adopts an Orphan (and Its Partner)
A. Cheng and A. R. Saltiel
The transcription of glucose-6-phosphatase is positively regulated by a nuclear receptor and coactivator.

PODCAST
T. Kino and A. M. VanHook
The guanine nucleotide exchange factor Brx is required in lymphocytes for the expression of nfatc in response to osmotic stress.

NETWATCH: The Cancer Genome Atlas
Clinical, cell biological, and genomic data from human tumors are available from the National Cancer Institute; in Bioinformatics Resources.

NETWATCH: CellBASE
Find online research and education resources for cell biologists at this site from the American Society for Cell Biology; in Technical Information.

SCIENCECAREERS
www.sciencecareers.org/career_magazine
Free Career Resources for Scientists

Perspective: Problem Finding and the Multidisciplinary Mind
L. Austin
Your choice of research problem may determine the course of your career as a physician-scientist.

Tooling Up: The Cold, Hard Truth About Finding a Job in 2009
D. Jensen
Finding a job now takes a plan, perseverance, and a positive attitude.

Faith and Science in Balance
E. Pain
Ph.D. student Imre Szilágyi strives to succeed in order to glorify God.

SCIENCEPODCAST
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Free Weekly Show
Download the 20 February Science Podcast to hear about open access and global participation in science,