## EDITORIAL

1301  Peace Through Vaccine Diplomacy  
Peter J. Hotez  
[Science Podcast]

## NEWS OF THE WEEK

1308  Chile’s Earthquake May Set Back Research for Years  
1309  The Puzzling Rise and Fall of a Dark-Horse Alzheimer’s Drug  
1311  Severe Drought Puts Spotlight on Chinese Dams  
1312  From Science’s Online Daily News Site  
1312  New Tuberculosis Lab Hailed as Breakthrough in Health Diplomacy  
1313  From the Science Policy Blog  
1314  APA Seeks to Overhaul Personality Disorder Diagnoses  
1315  A Civil Conversation About Animals in Research  
1316  Elsevier to Editor: Change Controversial Journal or Resign  
1317  Matchmaking Is Part of the Party as ARPA-E Marks Its First Birthday

## NEWS FOCUS

1318  On Rarity and Richness  
[Science Podcast]  
1320  Ironing Out Consensus on the Iron-Based Superconductors  
1322  NASA Dives Into Its Past to Retrieve Vintage Satellite Data

## LETTERS

1325  Rebuilding Haiti Smarter  
T. Dixon et al.  
The Hidden Face of Haiti’s Tragedy  
M. Ben-Ezra et al.  
The Fate of Atlantic Bluefin Tuna  
J.-M. Fromentin  
Applying Privacy Guidelines  
S. Guo et al.  
Response  
T. Mitchell

## CORRECTIONS AND CLARIFICATIONS

## BOOKS ET AL.

1329  The Trauma Myth  
S. A. Clancy, reviewed by E. F. Loftus and S. J. Frenda

## POLICY FORUM

1331  Elephants, Ivory, and Trade  
S. Wasser et al.

## PERSPECTIVES

1333  Random Quantum Networks  
D. S. Wiersma  
[Report p. 1352]  
1334  Trees, Fast and Accurate  
E. S. Allman and J. A. Rhodes  
[Report p. 1376]  
1335  Enforcing Order on Signaling  
M. Paszek and V. Weaver  
[Report p. 1380]  
1337  Remote Enzyme Microsurgery  
J. M. Bollinger Jr. and M. L. Matthews  
[Report p. 1392]  
1338  Revealing Titan’s Interior  
F. Sohl  
[Report p. 1367]  
1339  Interesting Times for Marine N₂O  
L. A. Codispoti

## COVER

Substances deposited by a mother bird into her eggs influence how intensely her offspring beg for food after hatching. In canaries, these substances are effectively a prenatal signal of parental generosity. In contrast to the common assumption, they function primarily to serve the evolutionary interests of the offspring rather than the mother. See page 1373.  

*Photo: Fernando Trabanco*
REVIEW
1341  Altruism, Spite, and Greenbeards
      S. A. West and A. Gardner

RESEARCH ARTICLE
1345  Identification of a Primary Target of Thalidomide Teratogenicity
      T. Ito et al.
      Thalidomide exerts its damaging effects by binding to cereblon and blocking its activity in limb development.

REPORTS
1350  Variations in the Sun’s Meridional Flow over a Solar Cycle
      D. H. Hathaway and L. Rightmire
      Observed variations in the Sun’s poleward flow have consequences for models and predictions of the solar cycle.

1352  Cavity Quantum Electrodynamics with Anderson-Localized Modes
      L. Sapienza et al.
      Optical scattering is used to induce quantum coupling between light and an artificial atom.

1355  Light-Controlled Self-Assembly of Semiconductor Nanoparticles into Twisted Ribbons
      S. Srivastava et al.
      The photooxidation of cadmium sulfide nanoparticles within cadmium telluride nanoparticle ribbons causes surface stresses that lead to twisting.

1359  The Near-Tip Fields of Fast Cracks
      A. Livne et al.
      The linear and nonlinear elastic responses near a growing crack tip can reveal how materials fail.

1363  Imaging Local Electrochemical Current via Surface Plasmon Resonance
      X. Shan et al.
      The concentration of electrochemically active species on a gold electrode provides a local measurement of current density.

1367  Gravity Field, Shape, and Moment of Inertia of Titan
      L. Iess et al.
      Analysis of gravity data reveals that Saturn’s moon Titan has a partially differentiated internal structure.

1369  Plumage Color Patterns of an Extinct Dinosaur
      Q. Li et al.
      Comparison of melanosome shape and density between fossil feathers and modern ones reveals the appearance and color of a theropod.

1373  Parent-Offspring Conflict and Coadaptation
      C. A. Hinde et al.
      Prenatal hormonal signaling can match a mother bird’s capacity to provide food with her offsprings’ expectations.

1376  Toward Extracting All Phylogenetic Information from Matrices of Evolutionary Distances
      S. Roch
      Methods recently developed for taxonomic analysis are fast and do not compromise accuracy.

1380  Restriction of Receptor Movement Alters Cellular Response: Physical Force Sensing by EphA2
      K. Salaita et al.
      Mechanical forces acting on a cell-surface receptor affect the activation of a signaling pathway involved in breast cancer.

1385  Lgr6 Marks Stem Cells in the Hair Follicle That Generate All Cell Lineages of the Skin
      H. J. Snippert et al.
      Skin wounds can be repaired by primitive stem cells into fully differentiated tissue, complete with hairs and sebaceous glands.

1389  Structural Sources of Robustness in Biochemical Reaction Networks
      G. Shinar and M. Feinberg
      Models of metabolic regulation show how the stability of specific components is maintained within a varying environment.

1392  In Crystallo Posttranslational Modification Within a MauG/Pre–Methylamine Dehydrogenase Complex
      L. M. R. Jensen et al.
      Bacterial ammonia and formaldehyde production requires prior processing of a dehydrogenase to form a cofactor.

CONTENTS continued >>
A subtle genetic variant seems to dictate how much pain people feel. 

Pain's in the Genes

ARESCHE: Pin1 and PKMζ Sequentially Control Dendritic Protein Synthesis
P. R. Westmark et al.

PERSPECTIVE: PiNing for Things Past
I. C. Sacktor

Memory storage requires the inhibition of a peptidyl-prolyl isomerase to enable synthesis of the kinase PKMζ.

REVIEW: Stress-Activated Cap’n’Collar Transcription Factors in Aging and Human Disease
G. P. Sykiotis and D. Bohmann

The oxidative stress response is an attractive target for treating human diseases and extending the healthy life span.

NETWATCH: PhosphoSitePlus
Explore a database of posttranslational protein modifications; in Protein Databases.

NETWATCH: The Caspase Substrate dataBAse Homepage (CASBAH)
Search and browse a collection of caspase substrates; in Protein Databases.

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

Audacity, Part 4: Taking Liberties With Research Grants?
A. Sasso

Should you propose safe research and then use the money for riskier work?

New Opportunities and Jobs Coming in Comparative Effectiveness Research
K. Hede

Recovery Act funding will boost a field focused on health care costs and quality.

SCIENCECENTRANATIONAL MEDICINE
www.sciencemag.org/career_magazine
Integrating Medicine and Science

COMMENTARY: The Road We Must Take—Multidisciplinary Team Science
M. L. Disis and J. T. Slattery

Solutions to today’s complex health problems will require multidisciplinary innovative thinking and collaboration.

PERSPECTIVE: Bladder Cancer—Optimal Application of Preclinical Models to Suitable Translational Questions
D. Raghavan

New reagents tested in bladder cancer xenografts allow for better economy and focus in clinical cancer trials.