

## NEWS

### IN BRIEF

**1180** Roundup of the week's news

### IN DEPTH

#### **1183** AMID PANIC, A CHANCE TO LEARN ABOUT MERS

South Korea's explosive outbreak gives scientists fresh opportunities to study the virus *By K. Kupferschmidt*

#### **1184** SIGNS OF ANCIENT PROTEINS SEEN INSIDE DINOSAUR BONES

Can soft tissue survive 75 million years? *By R. F. Service*

#### **1185** DINOSAUR CLIMATE PROBED

Ancient lake sediments in China record epic temperature swings, biotic turnover before the mass extinction *By J. Qiu*

#### **1186** BRAIN IMPLANT TRIALS RAISE ETHICAL CONCERNS

NIH workshop delves into challenges of testing invasive neuromodulation technology *By E. Underwood*

#### **1187** THE SCIENTIST BEHIND THE 'PERSONHOOD' CHIMPS

Susan Larson defends her work with two research chimpanzees at the heart of a legal battle *By D. Grimm*

#### **1188** HIV FAMILY TREES REVEAL VIRAL SPREAD

New studies could aid public health efforts *By J. Cohen*

**1176** 12 JUNE 2015 • VOL 348 ISSUE 6240

## FEATURES

### **1190** BUSINESS DECISIONS

What does it take for an academic scientist to become an entrepreneur? Here are some of their stories *By J. Mervis*  
▶ EDITORIAL P. 1179; PERSPECTIVES P. 1200; QUIZ

### **1194** GIVE US YOUR BEST PITCH

Two venture capitalists explain the investor's mindset *By J. Cohen*  
▶ EDITORIAL P. 1179; PERSPECTIVES P. 1200

### **1196** GOT A STARTUP? RENT A BENCH

Biotech incubators such as LabCentral are lowering barriers to entrepreneurship *By T. Gura*  
▶ EDITORIAL P. 1179; PERSPECTIVES P. 1200

## INSIGHTS

### PERSPECTIVES

#### ENTREPRENEURSHIP

**1200** Financing experiments  
*By R. Nanda and M. Rhodes-Kropf*

**1200** Founders and joiners  
*By M. Roach and H. Sauermann*

**1201** Cash from the crowd  
*By M. G. Colombo et al.*

**1202** Intangible but bankable  
*By Y. V. Hochberg et al.*

**1202** Accelerators and ecosystems  
*By Y. V. Hochberg and D. C. Fehder*

**1203** Linking and leveraging  
*By F. Murray and S. Stern*  
▶ EDITORIAL P. 1179; NEWS STORIES PP. 1190, 1194, & 1196



### **1204** EARTHQUAKES INDUCED BY FLUID INJECTIONS

Controlling fluid injection may mitigate the extent of induced earthquakes  
*By F. H. Cornet*  
▶ REPORT P. 1224

### **1205** MAKING HEADS OR TAILS OF SHATTERED CHROMOSOMES

Isolation of lagging chromosomes in micronuclei causes catastrophic genome rearrangements *By W. P. Kloosterman*

### **1207** MICROBIAL METABOLITE TRIGGERS ANTIMICROBIAL DEFENSE

Bacteria can activate innate immune responses by releasing a metabolite that enters host cells *By S. W. Brubaker and D. M. Monack*  
▶ REPORT P. 1251

### **1208** BRINGING PGE<sub>2</sub> IN FROM THE COLD

A small molecule that prevents the breakdown of a prostaglandin promotes tissue regeneration *By G. A. FitzGerald*  
▶ RESEARCH ARTICLE P. 1223

### **1210** CAN CLIMATE FEEL THE PRESSURE?

Changes in atmospheric pressure may be an important long-term climate forcing mechanism *By D. J. Peppe and D. L. Royer*  
▶ REPORT P. 1238

### **1211** ECONOMICAL ROUTES TO COLLOIDAL NANOCRYSTALS

A new precursor library yields high-quality quantum dots for device applications *By Z. Hens*  
▶ REPORT P. 1226

### **1212** VISUAL TRACKING IN THE DEAD OF NIGHT

Even in dim light, hawkmoths can track the motions of wind-tossed flowers *By E. Warrant*  
▶ REPORT P. 1245

### BOOKS ET AL.

**1214** THE OUTSOURCER  
*By D. C. Sharma, reviewed by S. Banerjee*

**1215** THE END OF PLENTY  
*By J. K. Bourne Jr., reviewed by J. L. Steiner*

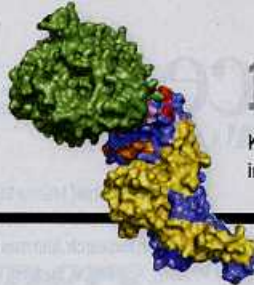
Science Staff .....1178  
New Products .....1274  
Science Careers .....1275





## 1208 & 1223

Accelerating tissue regeneration



## 1260 & 1264

Keeping the cell cycle in check

### LETTERS

#### 1216 DEFINING THE HAPPINESS GAP

By A. Van Hiel et al.

#### 1216 RESPONSE

By S. P. Wojcik et al.

#### 1216 PROTECT RESEARCHERS FROM HARASSMENT

By S. E. Hyman and M. E. Goldberg

#### 1217 TECHNICAL COMMENT ABSTRACTS

## RESEARCH

### IN BRIEF

1218 From *Science* and other journals

### REVIEWS

#### ECOLOGY

1221 Aquatic animal telemetry: A panoramic window into the underwater world *N. E. Hussey et al.*

REVIEW SUMMARY; FOR FULL TEXT: [dx.doi.org/10.1126/science.1255642](http://dx.doi.org/10.1126/science.1255642)

► PODCAST

1222 Terrestrial animal tracking as an eye on life and planet *R. Kays et al.*

REVIEW SUMMARY; FOR FULL TEXT: [dx.doi.org/10.1126/science.aaa2478](http://dx.doi.org/10.1126/science.aaa2478)

### RESEARCH ARTICLE

#### 1223 TISSUE REGENERATION

Inhibition of the prostaglandin-degrading enzyme 15-PGDH potentiates tissue regeneration *Y. Zhang et al.*

RESEARCH ARTICLE SUMMARY; FOR FULL TEXT:

[dx.doi.org/10.1126/science.aaa2340](http://dx.doi.org/10.1126/science.aaa2340)

► PERSPECTIVE P. 1208

### REPORTS

#### 1224 INDUCED SEISMICITY

Seismicity triggered by fluid injection-induced aseismic slip *Y. Guglielmi et al.*

► PERSPECTIVE P. 1204



## 1212 & 1245

#### 1226 NANOMATERIALS

A tunable library of substituted thiourea precursors to metal sulfide nanocrystals *M. P. Hendricks et al.*

► PERSPECTIVE P. 1211

#### 1230 ELECTROCHEMISTRY

High-performance transition metal-doped Pt<sub>3</sub>Ni octahedra for oxygen reduction reaction *X. Huang et al.*

#### 1234 SOLAR CELLS

High-performance photovoltaic perovskite layers fabricated through intramolecular exchange *W. S. Yang et al.*

#### 1238 CLIMATE CHANGE

Long-term climate forcing by atmospheric oxygen concentrations *C. J. Poulsen et al.*

► PERSPECTIVE P. 1210

#### 1241 BRAIN NETWORKS

Correlated gene expression supports synchronous activity in brain networks *J. Richiardi et al.*

#### 1245 INSECT FLIGHT

Luminance-dependent visual processing enables moth flight in low light *S. Sponberg et al.*

► PERSPECTIVE P. 1212

#### 1248 BIOGEOGRAPHY

The dispersal of alien species redefines biogeography in the Anthropocene *C. Capinha et al.*

#### 1251 INNATE IMMUNITY

Cytosolic detection of the bacterial metabolite HBP activates TIFA-dependent innate immunity *R. G. Gaudet et al.*

► PERSPECTIVE P. 1207

#### 1255 PHYSIOLOGY

Regulation of breathing by CO<sub>2</sub> requires the proton-activated receptor GPR4 in retrotapezoid nucleus neurons *N. N. Kumar et al.*

#### CELL DIVISION CYCLE

1260 Kinetochores attachment sensed by competitive Mps1 and microtubule binding to Ndc80C *Z. Ji et al.*

1264 Competition between MPS1 and microtubules at kinetochores regulates spindle checkpoint signaling *Y. Hiruma et al.*

#### 1268 SEX DETERMINATION

A male-determining factor in the mosquito *Aedes aegypti* *A. B. Hall et al.*

### DEPARTMENTS

#### 1179 EDITORIAL

The entrepreneurial gardeners *By Iqbal Qadir*

► NEWS STORIES PP. 1190, 1194, & 1196; PERSPECTIVES P. 1200

#### 1282 WORKING LIFE

You'll be OK *By Michelle E. Portman*

### ON THE COVER



With governments pushing for innovations to bolster economies and universities eager to make money off of technology transfer, academic scientists are increasingly considering how to commercialize

their research discoveries—and others are studying what makes such entrepreneurship flourish. See pages 1179, 1190, 1194, 1196, and 1200. *Illustration: Davide Bonazzi*

SCIENCE (ISSN 0036-8075) is published weekly on Friday, except the last week in December, by the American Association for the Advancement of Science, 1200 New York Avenue, NW, Washington, DC 20005. Periodicals mail postage (publication No. 484460) paid at Washington, DC, and additional mailing offices. Copyright © 2015 by the American Association for the Advancement of Science. The title SCIENCE is a registered trademark of the AAAS. Domestic individual membership and subscription (51 issues): \$153 (\$74 allocated to subscription). Domestic institutional subscription (51 issues): \$1282. Foreign postage extra: Mexico, Caribbean (surface mail) \$55; other countries (air assist delivery) \$85. First class, airmail, student, and emeritus rates on request. Canadian rates with GST available upon request. GST #R125488122. Publications Mail Agreement Number 1069624. Printed in the U.S.A. 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 96178, Washington, DC 20090-6178. Single-copy sales: \$10.00 current issue, \$15.00 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 \$30.00 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.