

## NEWS

### IN BRIEF

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

### IN DEPTH

#### **495 CURE SETBACKS FORCE HIV RESEARCHERS TO RESET SIGHTS**

Remission seen as more realistic goal  
*By J. Cohen*

#### **496 WARMING MAY NOT SWAMP ISLANDS**

Studies suggest that atoll islands will rise in step with a rising sea  
*By C. Pala*

#### **498 KEY NARCOLEPSY-INFLUENZA VACCINE FINDINGS RETRACTED**

Stanford researchers unable to replicate results  
*By E. Underwood*

#### **499 VENEZUELA'S PUBLIC HEALTH PAIN**

Lacking vital medical supplies, doctors struggle to treat resurgent diseases  
*By L. Wade*

#### **500 DECISION LOOMS ON FUTURE OF E.U. SCIENCE ADVICE**

Green groups criticize adviser—and her office  
*By K. Kupferschmidt*

#### **501 ITALY QUAKE DIVIDE EXPERTS**

Industry report dismisses link to oil production  
*By E. Cartlidge*

### FEATURES

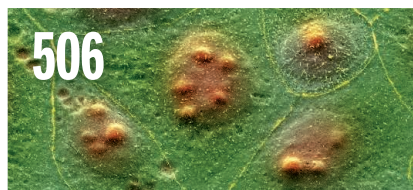
#### **502 COMET CATCHER**

The Rosetta spacecraft encounters one of the solar system's most mysterious objects  
*By E. Hand*

**504 Touch and go**  
*By E. Hand*

#### **506 CENTRAL COMMAND**

More capable than once thought, the nucleolus may be a target for treating diseases  
*By M. Leslie*



## INSIGHTS



### PERSPECTIVES

#### **508 HOW BIRDS BECAME BIRDS**

Sustained size reduction was essential for the origin of birds and avian flight  
*By M. J. Benton*

► REPORT P. 562

#### **510 A GEM OF A QUANTUM TELEPORTER**

Diamond-based quantum teleportation works every time

*By M. Atatüre and J. J. L. Morton*

► RESEARCH ARTICLE P. 532

#### **511 AN EPIGENETIC WINDOW INTO THE PAST?**

DNA damage in ancient genomes may provide insight into past regulatory changes in humans and other species

*By L. Orlando and E. Willerslev*

#### **513 MORE PAIN; LESS GAIN**

Persistent pain changes a neural circuit and reduces willingness to work for food  
*By H. L. Fields*

► RESEARCH ARTICLE P. 535

#### **514 THE BEAT OF YOUNG STARS**

Pulsations from young stars provide a new chronometer for stellar evolution  
*By S. Stahler and F. Palla*

► REPORT P. 550

#### **516 IN TURING'S HANDS—THE MAKING OF DIGITS**

A Turing network controls the periodic pattern of fingers and toes during development  
*By A. Zuniga and R. Zeller*

► REPORT P. 566

#### **517 HOW HELMINTHS GO VIRAL**

Cellular signals during helminth infections can skew the immune response to favor viral spreading  
*By R. M. Maizels and W. C. Gause*

► REPORTS PP. 573 & 578

#### **519 GLOBAL MANUFACTURING AND THE FUTURE OF TECHNOLOGY**

Where you manufacture changes what you get  
*By E. R. H. Fuchs*

### BOOKS ET AL.

#### **521 BIOHACKERS**

*By A. Delfanti,*

*reviewed by S. Golinelli and L. Henry*

#### **522 CONNECTED**

*By S. Cassidy, reviewed by B. C. Keegan*

### LETTERS

#### **523 CHINA'S ROBOTICS SUCCESSES ABOUND**

*By Y. Gao and J. Liu*

#### **523 SEMANTIC PRIMING WELL ESTABLISHED**

*By D. E. Meyer*

#### **524 EYEING VISUAL PATHWAYS IN DYSLEXIA**

*By T. R. Vidyasagar*

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*By B. Boets*

#### **524 TECHINCAL COMMENT ABSTRACTS**

### DEPARTMENTS

#### **491 EDITORIAL**

Zero hunger

*By M. S. Swaminathan*

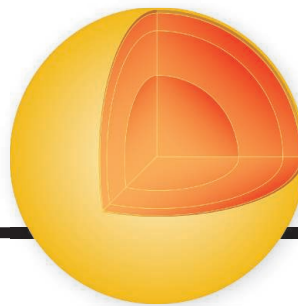
#### **594 WORKING LIFE**

The stressed-out postdoc

*By Carrie Arnold*

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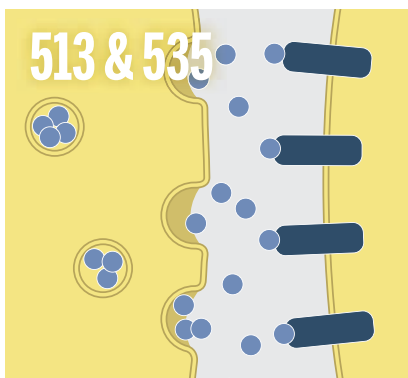


## 514 & 550

A glimpse into the development of young stars

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## RESEARCH



### IN BRIEF

**526** From *Science* and other journals

### REVIEW

#### 529 INTERNEURONS

Fast-spiking, parvalbumin<sup>+</sup> GABAergic interneurons: From cellular design to microcircuit function *H. Hu et al.*

REVIEW SUMMARY; FOR FULL TEXT:  
[dx.doi.org/10.1126/science.1255263](http://dx.doi.org/10.1126/science.1255263)

### RESEARCH ARTICLES

#### 531 MOBILE DNA IN CANCER

Extensive transduction of nonrepetitive DNA mediated by L1 retrotransposition in cancer genomes *J. M. C. Tubio et al.*

RESEARCH ARTICLE SUMMARY; FOR FULL TEXT:  
[dx.doi.org/10.1126/science.1251343](http://dx.doi.org/10.1126/science.1251343)

#### 532 QUANTUM INFORMATION

Unconditional quantum teleportation between distant solid-state quantum bits *W. Pfaff et al.*

► PERSPECTIVE P. 510

#### 535 CHRONIC PAIN

Decreased motivation during chronic pain requires long-term depression in the nucleus accumbens *N. Schwartz et al.*

► PERSPECTIVE P. 513

### REPORTS

#### 542 PHOTOVOLTAICS

Interface engineering of highly efficient perovskite solar cells *H. Zhou et al.*

#### 546 CATALYSIS

Highly active copper-ceria and copper-ceria-titania catalysts for methanol synthesis from CO<sub>2</sub> *J. Graciani et al.*

#### 550 ASTEROSEISMOLOGY

Echography of young stars reveals their evolution *K. Zwintz et al.*

► PERSPECTIVE P. 514

#### 554 NOVAE

Fermi establishes classical novae as a distinct class of gamma-ray sources *The Fermi-LAT Collaboration*

► PODCAST

#### 558 QUANTITATIVE SOCIAL SCIENCE

A network framework of cultural history *M. Schich et al.*

#### 562 DINOSAUR EVOLUTION

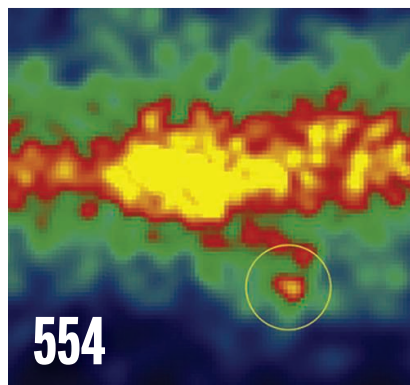
Sustained miniaturization and anatomical innovation in the dinosaurian ancestors of birds *M. S. Y. Lee et al.*

► PERSPECTIVE P. 508

#### 566 MODELING DIGITS

Digit patterning is controlled by a Bmp-Sox9-Wnt Turing network modulated by morphogen gradients *J. Raspopovic et al.*

► PERSPECTIVE P. 516



#### 570 HIV LATENCY

Proliferation of cells with HIV integrated into cancer genes contributes to persistent infection *T. A. Wagner et al.*

#### COINFECTION

**573** Helminth infection reactivates latent  $\gamma$ -herpesvirus via cytokine competition at a viral promoter *T. A. Reese et al.*

**578** Virus-helminth coinfection reveals a microbiota-independent mechanism of immunomodulation *L. C. Osborne et al.*

► PERSPECTIVE P. 517



### ON THE COVER



Colorized scanning electron micrograph of a dog roundworm (*Toxocara canis*). Intestinal parasites infect more than 1 billion people worldwide and cause serious morbidity, particularly in the developing world. In mice, intestinal parasites also dampen their host's immunity to viruses, causing latent viruses to reactivate and impeding antiviral defenses. See pages 517, 573, and 578.

Image: © Eye of Science/Science Source



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Editor's Summary

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