# CONTENTS

26 JUNE 2025 VOLUME 388 ISSUE 6754

# 1368 & 1389

# **EDITORIAL**

**1353 Ten times faster is not 10 times better** —A. Nelson

## **NEWS**

#### 1354 Japan wires up offshore trenches to warn of ruptures

Seafloor monitoring is revealing how "slow slip" earthquakes can lead to big ones —P. Voosen PERSPECTIVE p. 1369; RESEARCH ARTICLES pp. 1396 & 1401

#### 1356 National Academies adopts new business model amid financial storm

Realignment of major program units aims to improve efficiency and make up for loss of federal contracts —J. Mervis

#### **1357 Tumors may get** energy boost from nerve cells' mitochondria Study shows the organelles

traveling through "bridges" into nearby cancer cells —M. Leslie

# **1359** Order to restore NIH grants heartens scientists

Federal judge decries NIH's rationale for killing blacklisted grants as capricious and arbitrary —S. Reardon

#### 1360 U.S. researchers speak up in local newspapers

Through two grassroots efforts, approximately 200 op-eds showcasing federally funded science have been published across the country —K. Langin

#### FEATURES

#### **1362 Without a lifeline** The United States reneged on its

foreign aid commitments. Nepal's malnourished children and their families are paying the price --C. Offord

## COMMENTARY

#### PERSPECTIVES

**1368 Now you see me, now you don't** Nanostructured reflecting plates in squid cells enable a rapid switch between colored and neartransparent states —M. D. Shawkey **RESEARCH ARTICLE p. 1389** 

# 1369 Where slow and large earthquakes meet

Adjacent slow slip events affect megathrust earthquakes —K. Obara NEWS STORY p. 1354; RESEARCH ARTICLES pp. 1396 & 1401

#### 1371 A caged drug enables precision delivery

"GlycoCaging" uses gut bacteria to activate drugs for inflammatory bowel disease —Y. Xie and Z.-S. Chen RESEARCH ARTICLE p. 1410

#### 1372 Genomic insights into social life in Neolithic Anatolia

Matriarchs and foragers emerge as important players in early farming villages —B. S. Arbuckle RESEARCH SUMMARIES pp. 1385 & 1386

#### POLICY FORUM

1374 Climate adaptation finance: From paper commitments to climate risk reduction

Science can help to target climate finance at better-quality adaptation -J. Verschuur *et al.* 

#### CONTENTS





#### **BOOKS ET AL.**

#### 1378 Producing hunger

A scholar confronts how powerful groups use food as a means of control –L. Stark

# 1379 Facing life's wild unknowns

A field scientist candidly reflects on navigating personal and institutional challenges —A. F. Henderson

### REVIEWS

#### **REVIEW SUMMARY**

#### 1380 Natural hazards

Cascading land surface hazards as a nexus in the Earth system —B. J. Yanites *et al.* 

### RESEARCH

#### HIGHLIGHTS

**1381** From Science and other journals

#### **RESEARCH SUMMARIES**

#### 1384 Neuroscience

Event structure sculpts neural population dynamics in the lateral entorhinal cortex —B. R. Kanter *et al.* 

#### Ancient DNA

**1385** Out-of-Anatolia: Cultural and genetic interactions during the Neolithic expansion in the Aegean —D. Koptekin *et al.* 

**1386** Female lineages and changing kinship patterns in Neolithic Çatalhöyük —E. Yüncü *et al.* **PERSPECTIVE p. 1372** 

#### 1387 Organ regeneration

Reactivation of mammalian regeneration by turning on an evolutionarily disabled genetic switch –W. Lin *et al.* 

#### 1388 Structural biology

Structural basis of BAX pore formation —Y. Zhang *et al*.

#### **RESEARCH ARTICLES**

#### 1389 Optical materials

Gradient refractive indices enable squid structural color and inspire multispectral materials —G. Bogdanov *et al.* **PERSPECTIVE p. 1368**; **PODCAST** 

#### Earthquake cycle

**1396** Migrating shallow slow slip on the Nankai Trough megathrust captured by borehole observatories -J. R. Edgington *et al.* 

**14:01** Interplate slip before, during, and after the 2024 Mw 7 Hyuga-nada earthquake, southwest Japan –S. Ozawa *et al.* NEWS STORY p. 1354; PERSPECTIVE p. 1369

#### 1406 Paleontology

Origin and radiation of squids revealed by digital fossil-mining —S. Ikegami *et al.* 

#### 1410 Drug delivery

Bespoke plant glycoconjugates for gut microbiota-mediated drug targeting —W. J. Ma *et al.* **PERSPECTIVE p. 1371** 

#### 1417 Zeolites

Accelerated discovery of stable, extra-large-pore nano zeolites with micro-electron diffraction ---C. Ma *et al.* 

#### 1422 Adaptation

Rapid polygenic adaptation in a wild population of ash trees under a novel fungal epidemic –C. L. Metheringham *et al.* 

#### 1426 Physical chemistry

Spontaneous formation of urea from carbon dioxide and ammonia in aqueous droplets —M. A. Mohajer *et al.* 



Radha Maurya, a 10-monthold living in the village of Nausahara, Nepal, is being treated for severe wasting. More cases of malnutrition like hers may go overlooked or untreated now that the U.S. has withdrawn funding for a program that helped screen children for wasting, ensure a steady supply of the nutrientrich food paste used as treatment, and support staff at health posts in underserved Nepali communities. See page 1362. Photo: Uma Bista

#### 1431 Early earth

Evidence for Hadean mafic intrusions in the Nuvvuagittuq Greenstone Belt, Canada --C. Sole *et al.* 

#### 1436 Organic chemistry

Carbonyl-to-sulfur swap enabled by sequential double carbon-carbon bond activation --Z. Zhang and G. Dong

### WORKING LIFE

**1442** The power of reinvention -I. M. Moya

1350 Science Staff 1441 Science Careers

PHOTO: JONATHAN O'NEIL

Science serves as a forum for discussion of important issues related to the advancement of science by publishing material on which a consensus has been reached as well as including the presentation of minority or conflicting points of view. Accordingly, all articles published in Science—including editorials, news, commentary, and book reviews—are signed and reflect the individual views of the authors are affiliated. Science (ISSN 0036-8075) is published weekly on Thursday, except last week in becember, by the American Association for the Advancement of Science. To the dividual views of the Advancement of Science. To the title science (ISSN 0036-8075) is published weekly on Thursday, except last week in becember, by the American Association for the Advancement of Science. To the title Science (ISSN 0036-8075) is published weekly on Thursday, except last week in becember, by the American Association for the Advancement of Science. To the title Science (ISSN 0036-8075) is published weekly on Thursday, except last week in December, by the American Association for the Advancement of Science. To the title Science (ISSN 0036-8075) is published weekly on Thursday. except last week in December, by the American Association for the Advancement of Science. To the title Science (ISSN 0036-8075) is published weekly on Thursday. except last constraints and the Advancement of Science. To estimate the structure of the Advancement of Science. To estimate the structure of the Advancement of Science. To estimate the structure of the Advancement of Science. The title Science (ISSN 0036-8075) is published weekly on Thursday. Science is a registred trademark of the Advancement of Science. To estimate the structure of the Advancement of Science. To estimate the structure of the Advancement of Science (ISSN 0036-8075) is published weeks, giving old and new addresses and 8-digit account number. Postmaster: Send change of address to AAAS, PO. Box 96178, Washington, DC 20090–6178. Single-copy sales: \$15 each plus shipping and handling ava