# THIS WEEK

# **EDITORIALS**

371 ECOLOGY

#### Spoils of war

By-products of warfare are damaging the environment — and human health

#### 371 WATER

#### Go with the flow

The Raindrop app for smart phones is a step towards making us appreciate our environment

#### **WORLD VIEW**



373 Stand up against the anti-technology terrorists

Gerardo Herrera Corral Anarchist groups use absurd rhetoric to justify terrorist attacks on scientists

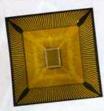
# **RESEARCH HIGHLIGHTS**

# 374 SELECTIONS FROM THE SCIENTIFIC LITERATURE

Coral killer / Active nanotubes / Penguins beat aerobic dive limit / Salmonella's beta version / Trout in decline / RNA regulators

#### **SEVEN DAYS**

376 THE NEWS IN BRIEF



NIH reacts to suggestions of racial bias / Higgs stays hidden / Amazon deforestation on the rise / Computer chip

mimics the brain / August proves a tough month for biotech stocks

#### CAREERS

# 477 COMMERCIAL SPACEFLIGHT

# Scientists in space

Ironically, NASA's departure could be a boost to the manned spaceflight sector

# 478 CAREER BRIEFS

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# **Courting connections**

Peter J Feibelman

A good list of contacts can be invaluable when it comes to job hunting

# **NEWS IN FOCUS**



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Cash-strapped space-telescope project could tap NASA's human spaceflight funds

#### 380 DRUG DEVELOPMENT

Approval of toxic antibody for market signals new era for cancer therapy

#### 382 FERTILITY

Concerns raised over use of eggfreezing in older women

# 385 FUNDING

National Academy panel to call for efficiency savings in US universities

### 386 POLICY

New blood and new ideas at Italy's public research institutes

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#### 391 GEOPHYSICS

## Danger zones

A growing network of offshore sensors is helping seismologists track unstable ocean-floor faults

# CELL SIGNALLING

# **Gwhizz**

Brian Kobilka's painstaking project to capture the structure of cell receptors PAGE 387



# COMMENT

#### 393 MICROBIOLOGY

# Stop the killing of beneficial bacteria Martin Blaser

Antibiotics cause long-term damage to gut flora

# **BOOKS & ARTS**

395 PALAEOANTHROPOLOGY

# African origins

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# MATHEMATICS

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Biology is beyond mathematics, says Marc Feldman PAGE 396

# 397 PSYCHOLOGY

Giants on coke

George Rousseau

# 398 CLIMATE CHANGE Notes from a cold climate

Notes from a cold climate Deborah Dixon

# CORRESPONDENCE

399 The ultimate DNA bank / Ireland's stalled knowledge economy / Defining nanomaterials / Track the impact of your paper

# **OBITUARY**

400 Jonathan Widom (1955–2011) Rob Phillips



FUTURES 482 Out of the blue Mohamad Atif Slim 401 Papers published this week at nature.com

# **NEWS & VIEWS**

**402 CHEMICAL ENGINEERING** 

Forum: Fuel for debate

The pros and cons of biochemical and thermochemical biofuel production Stephen Mayfield & P K Wong

403 NANOTECHNOLOGY

Smart connections

Inorganic artificial synapses for computing applications Dmitri B Strukov

405 ASTROPHYSICS

The awakening of a cosmic monster Onset of tidal disruption of star by

black hole witnessed

Davide Lazzati SEE LETTERS P.421 & P.425

**406 ENVIRONMENTAL SCIENCE** 

Climate for conflict

Correlation between rate of outbreak of civil conflicts and global climate

Andrew R Solow SEE LETTER P.438

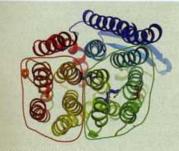
**407 DENGUE FEVER** 

Mosquitoes attacked from within

Strategy for replacing the mosquito population that carries dengue virus Jason L Rasgon SEE LETTERS P.450 & P.454

# ARTICLES

409 STEM CELLS Germ-layer and lineagerestricted stem/progenitors regenerate the mouse digit tip Y Rinkevich et al.



STRUCTURAL BIOLOGY

Complex 1

The structure of a key player in cellular energy production. PAGE 414

ON THE COVER Hot Analysis of data collected in tropical countries between 1950 and 2004 shows that the probability of civil conflict breaking out in El Niño years is double that seen in cooler La Niña years. The graphic shows the number of months per year (blue for zero, red for 12) that surface temperatures rise in response to El Niño. PAGES 406 & 438

414 STRUCTURAL BIOLOGY Structure of the membrane domain of respiratory complex I

R G Efremov & L A Sazanov

# **LETTERS**

- 421 ASTRONOMY Relativistic jet activity from the tidal disruption of a star by a massive black hole D N Burrows et al. SEE N&V P.405
- 425 ASTRONOMY Birth of a relativistic outflow in the unusual γ-ray transient Swift J164449.3+573451

  B A Zauderer et al. SEE N&V P.405
- 429 CLIMATE SCIENCE Role of sulphuric acid, ammonia and galactic cosmic rays in atmospheric aerosol nucleation J Kirkby et al.
- 434 EARTH SCIENCE A young source for the Hawaiian plume A V Sobolev et al.
- 438 CLIMATE SCIENCE Civil conflicts are associated with the global climate S M Hsiang, K C Meng & M A Cane SEE N&V P.406
- 442 PALAEONTOLOGY A Jurassic eutherian mammal and divergence of marsupials and placentals Z-X Luo, C-X Yuan, Q-J Meng & Q Ji

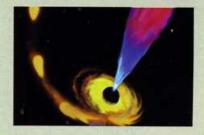
- 446 PALAEONTOLOGY A chronological framework for the British Quaternary based on Bithynia opercula

  KEH Renkman et al.
- 450 MICROBIOLOGY The wMel Wolbachia strain blocks dengue and invades caged Aedes aegypti populations T Walker et al. SEE N&V P.407
- 454 MICROBIOLOGY Successful establishment of Wolbachia in Aedes populations to suppress dengue transmission A A Hoffmann et al. SEE N&V P.407
- 458 NEUROSCIENCE Adult hippocampal neurogenesis buffers stress responses and depressive behaviour JS Snyder, A Soumier, M Brewer, J Pickel & H A Cameron
- 462 CELL BIOLOGY Polar actomyosin contractility destabilizes the position of the cytokinetic furrow J Sedzinski et al.
- 467 IMMUNOLOGY A role for cohesin in T-cell-receptor rearrangement and thymocyte differentiation V C Seitan et al.
- 472 PLANT SČIENCES A plastidial sodiumdependent pyruvate transporter T Furumoto et al.
- 476 ADDENDUM The thermodynamic meaning of negative entropy L del Rio, J Åberg, R Renner, O Dahlsten & V Vedral

ASTRONOMY

# Jet power

An explosive X-ray and radio source is a relativistic jet developing around a supermassive black hole. PAGE 425



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