

CONTENTS

26 July 2012 / Vol 487 / Issue No 7408

THIS WEEK

EDITORIALS

405 POLITICS

Secret disservice

Congress must act quickly to provide legal support for whistle-blowers

405 BIODIVERSITY

Protect and serve

Dedicated conservation areas are failing to prevent species decline

406 GENOMICS

Error prone

Big data sets require careful handling to avoid mistakes



WORLD VIEW

407 Writers should

not fear jargon

Trevor Quirk

Technical terms have their place in scientific communication

RESEARCH HIGHLIGHTS

408 SELECTIONS FROM THE

SCIENTIFIC LITERATURE

DVD-like petabyte storage / Rodent-powered silicone 'jellyfish' / Scant evidence for arsenic-based life / Cane toad versus cane toad / Flying squid

SEVEN DAYS

410 THE NEWS IN BRIEF

Police end climategate investigation / Obama seeks boost for science education / Gene therapy nears approval in Europe / First US woman in space, Sally Ride, dies

CAREERS

519 GERMANY

Excellence revisited

Germany's ambitious research initiative is a success, but what happens next?

521 TURNING POINT

Robert Gregg takes an electrical engineer's approach to the development of robot-assisted walking

NATUREJOBS ADVERTISING FEATURE

Spotlight on Germany

NEWS IN FOCUS

413 INFECTIOUS DISEASE

Influx of new drugs promises progress in fight against tuberculosis

414 FUNDING

Science braces for cuts as divided Congress battles to resolve budget

416 OCEANOGRAPHY

Funding cuts sink Aquarius underwater laboratory

417 GENOMICS

Competition to sequence genomes of 100 centenarians heats up

418 POLITICS

FDA under pressure for spying on employees

419 PHOTONICS

Intel makes \$1 billion bet on extreme etching technique

420 PHYSICS

Cost of ITER fusion project puts US facilities in jeopardy

FEATURES

GEOCHEMISTRY

A date with destiny

Scott Anderson wants to send his time machine to the Moon and Mars

PAGE 422

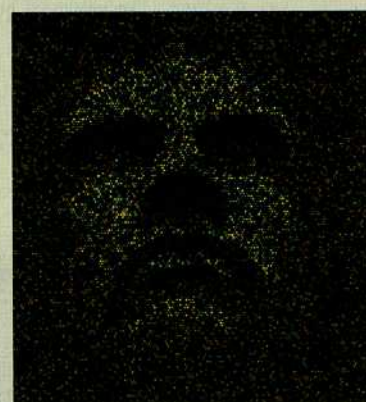


COMMENT

GENOMICS

False positives

Surprising results sometimes surprise because they are plain wrong, says Daniel MacArthur [PAGE 427](#)



BOOKS & ARTS

430 VISUALIZATION

Picturing science

Katy Börner

431 RENAISSANCE ART

Puzzles beneath Dürer's paint

Alison Abbott

CORRESPONDENCE

432 Ethics reviewed / Helping patients to influence research decisions / Cosmology in the *Anglo Saxon Chronicle* / How author charges can hinder open access

FUTURES

524 Lifeboat

David Carr



CONTENTS

26 July 2012 / Vol 487 / Issue No 7408

RESEARCH

NEW ONLINE

433 Papers published this week at nature.com

NEWS & VIEWS

434 ASTRONOMY

Planets on the spot

All planets of the Kepler-30 system align closely with a starspot

Drake Deming [SEE LETTER P. 449](#)

435 NEUROSCIENCE

The wrap that feeds neurons

Myelin supplies neurons with lactate to support their metabolism

Johanne E Rinholm & Linda H Bergersen
[SEE ARTICLE P. 443](#)

436 DEVICE PHYSICS

Put the pedal to the metal

Electronic switching based on an insulator-metal transition

Jochen Mannhart & Wilfried Haensch
[SEE LETTER P. 459](#)

437 IMMUNOLOGY

Malnutrition promotes rogue bacteria

Tryptophan deficiency causes inflammation by altering gut microbiota

Ana Izcue & Fiona Powrie
[SEE LETTER P. 477](#)

439 HIV

Shock and kill

Reactivating latent HIV in infected people might lead to a cure

Steven G Deeks [SEE LETTER P. 482](#)

440 MATERIALS SCIENCE

The abilities of instabilities

ON THE COVER

Hunger pangs

A famine victim in Ayot, South Sudan, March 1993. Diarrhoea and intestinal inflammation are common causes of morbidity and death in malnutrition. A new study identifies ACE2 (angiotensin converting enzyme 2) deficiency as a cause of increased susceptibility to intestinal inflammation in malnutrition. Dietary tryptophan or nicotinamide can alleviate symptoms

[PAGES 437 & 477](#)



A versatile method for synthesizing spherical particles

Ali Passian & Thomas Thundat

[SEE LETTER P. 463](#)

441 VISION

Looking to develop sight

Experience in pre-critical period guides development of visual cortex

Eileen Birch

ARTICLE

443 NEUROSCIENCE Oligodendroglia metabolically support axons and contribute to neurodegeneration

Y Lee et al. [SEE N&V P. 435](#)

LETTERS

449 ASTRONOMY Alignment of the stellar spin with the orbits of a three-planet system

R Sanchis-Ojeda et al. [SEE N&V P. 434](#)

454 PHYSICS The 'Higgs' amplitude mode at the two-dimensional superfluid/Mott insulator transition

M Endres et al.

459 MATERIALS Collective bulk carrier

delocalization driven by electrostatic surface charge accumulation

M Nakano et al. [SEE N&V P. 436](#)

463 PHYSICS Structured spheres generated by an in-fibre fluid instability

J J Kaufman et al. [SEE N&V P. 440](#)

468 CLIMATE SCIENCE Inland thinning of West Antarctic Ice Sheet steered along subglacial rifts

R G Bingham et al.

472 ECOLOGY Reconciling the temperature dependence of respiration across timescales and ecosystem types

G Yvon-Durocher et al.

477 IMMUNOLOGY ACE2 links amino acid malnutrition to microbial ecology and intestinal inflammation

T Hashimoto et al. [SEE N&V P. 437](#)

482 VIROLOGY Administration of vorinostat disrupts HIV-1 latency in patients on antiretroviral therapy

N M Archin et al. [SEE N&V P. 439](#)

486 IMMUNOLOGY Viral immune modulator perturb the human molecular network by common and unique strategies

A Pichlmair et al.

491 CANCER Interpreting cancer genomes using systematic host network perturbations by tumour virus protein

O Rozenblatt-Rosen et al.

496 STEM CELLS Live imaging of stem cell and progeny behaviour in physiological hair-follicle regeneration

P Rompolas et al.

500 CANCER Tumour micro-environment elicits innate resistance to RAF inhibitors through HGF secretion

R Straussman et al.

505 CANCER Widespread potential for growth-factor-driven resistance to anticancer kinase inhibitors

T R Wilson et al.

510 CANCER RNA sequencing of pancreatic circulating tumour cells implicates WNT signalling in metastasis

M Yu et al.

514 BIOCHEMISTRY Structural insights into electron transfer in *caa*₃-type cytochrome oxidase

J A Lyons et al.

STEM CELLS

Hair triggers

Live fluorescence microscopy of stem cells during hair regeneration. [PAGE 496](#)

