## CONTENTS

29 March 2012 / Vol 483 / Issue No 7391

#### THIS WEEK

#### **EDITORIALS**

509 RESEARCH

#### Must try harder

Too many errors are creeping into scientific articles

#### **509 VIROLOGY**

#### Under surveillance

The world needs to get serious about flu surveillance

#### 510 AFRICA

#### Food for thought

Access to fertilizer is crucial for African farmers

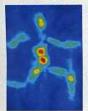
#### **WORLD VIEW**

511 Scientists must be taught to manage

Jessica C Seeliger

Formal management training can pay dividends in the lab

#### **RESEARCH HIGHLIGHTS**



512 SELECTIONS FROM THE SCIENTIFIC LITERATURE

Shoot first, focus later / Immunity begins early / A new angle on Venice / Mercury as you've never seen it / Stirrings in Santorini

#### **SEVEN DAYS**

#### 514 THE NEWS IN BRIEF

Oversight of research called into question / Einstein's personal papers go digital / Vatican cancels stem-cell meeting

#### CAREERS

#### **637 EPIGENETICS**

#### Marked for success

In a depressed funding landscape, there are still opportunities in cancer genetics

#### 638 CAREER BRIEFS

#### 639 COLUMN

#### A tough climb

Andrew Peterman

The benefits of a trip outside your comfort zone

#### NATUREJOBS ADVERTISING FEATURE

Spotlight on cancer research

#### **NEWS IN FOCUS**

#### 517 ENVIRONMENT

Roundtable talks aim to make inroads on deforestation

#### 519 CANCER

Misidentification of potential cancer treatment highlights flaws in drug development

#### 520 VIROLOGY

Global flu surveillance found to be sorely lacking



522 SPACE HARPS-North prepares to vet candidate exoplanets

#### **524 INFORMATICS**

Chemists get boost as drug-candidate details go public

#### **FEATURES**

525 AGRICULTURE

#### Dirt poor

Finding ways to improve the quality of Africa's soil is key to reducing hunger



### LIFE SCIENCES

## Biological Higgs

Biologists hunt for their equivalent of the Higgs boson PAGE 528

### COMMENT

#### 531 MEDICAL RESEARCH

### Raise standards for preclinical cancer research

C Glenn Begley & Lee M Ellis Clinical trials might be based on findings that cannot be replicated

#### 534 EPIDEMIOLOGY

#### Shift expertise to where it matters

Jeremy Farrar

Train local scientists to monitor flu virus mutations and infections

#### 535 EPIDEMIOLOGY

#### How to track a flu virus

Yi Guan, Richard Webby, Ilaria Capua & Jonas Waldenström Steps for more effective tracking of avian flu virus

#### **BOOKS & ARTS**



#### 537 CLIMATE SCIENCE

#### A delicate balance

James F Kasting

### 538 LINGUISTICS

Sound sculptor John A Goldsmith

539 BOOKS IN BRIEF

#### 540 Q&A

#### Descartes' decipherer

How philosopher Erik-Jan Bos used' Google to track down a missing letter

#### CORRESPONDENCE

541 Peak oil is in sight / Turing's place in computer science / Neuroimaging in court / Sustainable development

#### OBITUAR)

542 Wylie Walker Vale Jr (1941–2012) Ronald Evans

#### **FUTURES**

642 Invisible

João Ramalho-Santos

# CONTENTS

29 March 2012 / Vol 483 / Issue No 7391

#### RESEARCH

#### **NEW ONLINE**

543 Papers published this week at nature.com

#### **NEWS & VIEWS**

**544 DRUG DISCOVERY** 

#### Cell lines battle cancer

Molecular and pharmacological profiles of myriad cancer cell lines John N Weinstein

#### SEE ARTICLE P.570 & LETTER P.603

#### 545 PHOTONICS

#### Terahertz collisions

Electron-hole recollisions in thin semiconductor layers Rupert Huber SEE LETTER P.580

#### 546 CANCER

#### Clinical trials unite mice and humans

Concurrent tests in mice and humans to improve clinical success rates Leisa Johnson SEE LETTER P.613

#### 549 PALAEOCLIMATE

#### Tahitian record suggests Antarctic collapse

Origin, timing and amplitude of meltwater pulse 1A Robert E Kopp SEE ARTICLE P.559

#### 550 HUMAN EVOLUTION

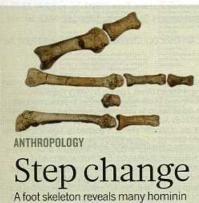
#### Those feet in ancient times

Hominin bipedalism and arboreality 3.4 million years ago Daniel E Lieberman SEE ARTICLE P.565

#### PERSPECTIVE

#### 553 EARTH SCIENCE Evidence against a chondritic Earth

1 H Campbell & H St C O'Neill.



species in the Pliocene. PAGE 565

#### ON THE COVER

## Cell option

Large-scale pharmacologic and genetic characterization of hundreds of cancer cell lines identifieds novel markers of drug sensitivity, and suggests a new therapy for Ewing's sarcoma. PAGES 544, 570 & 603



#### ARTICLES

- 559 CLIMATE SCIENCE Ice-sheet collapse and sea-level rise at the Bølling warming 14,600 years ago P Deschamps et al. SEE N&V P.549
- 565 ANTHROPOLOGY A new hominin foot from Ethiopia shows multiple Pliocene bipedal adaptations Y Haile-Selassie et al. SEE N&V P.550
- 570 CANCER Systematic identification of genomic markers of drug sensitivity in cancer cells M J Garnett et al. SEE N&V P.544

- 576 MATERIALS SCIENCE Observation of a roton collective mode in a two-dimensional Fermi liquid H Godfrin et al.
- 580 PHYSICS Experimental observation of electron-hole recollisions B Zaks, R B Liu & M S Sherwin **SEE N&V P.545**
- 584 PHYSICS Spontaneous coherence in a cold exciton gas A A High et al.
- 589 GENOMICS Sequencing of neuroblastoma identifies chromothripsis and defects in neuritogenesis genes J J Molenaar et al.

- 594 NEUROSCIENCE Deciphering a neuronal circuit that mediates appetite Q Wu, M S Clark & R D Palmiter

  598 STEM\*CELLS Chromatin-modifying enzymes as modulators of reprogramming T T Onder et al.

  603 CANCER The Cancer Cell Line
- 603 CANCER The Cancer Cell Line Encyclopedia enables predictive modelling of anticancer drug sensitivity J Barretina et al. SEE N&V P.544
- 608 CANCER Deregulated MYC expression induces dependence upon AMPK-related kinase 5 L Liu et al.
- 613 CANCER A murine lung cancer co-clinical trial identifies genetic modifiers of therapeutic response Z Chen et al. SEE N&V P.546
- 618 BIOCHEMISTRY The mechanism of OTUB1-mediated inhibition of ubiquitination R Wiener, X Zhang, T Wang & C Wolberger
- 623 MICROBIOLOGY The Shigella flexneri effector Ospl deamidates UBC13 to dampen the inflammatory response T Sanada et al.
- 627 CELL BIOLOGY Tissue factor and PAR1 promote microbiota-induced intestinal vascular remodelling C Reinhardt et al.
- 632 STRUCTURAL BIOLOGY

Structure and mechanism of a glutamate-GABA antiporter D Ma et al.

