CONTENTS

27 September 2012 / Vol 489 / Issue No 7417

THIS WEEK

EDITORIALS

473 MENTAL HEALTH

Therapy deficit

Work to improve psychological therapies deserves greater support

474 GM CROPS

Poison postures

Public debates about the safety of GM crops are undermined by researchers' generalizations

WORLD VIEW



475 It is time for full disclosure of author contributions

Sebastian Frische
Online databases
could increase
fairness and
transparency for
scientific publications

RESEARCH HIGHLIGHTS



476 SELECTIONS FROM THE SCIENTIFIC LITERATURE

Artificial salt marshes
disappoint / Cells turn back
time in diabetes / Flexible
nanotubules / Reprogrammed
cells in the axolotl /
Cancer inspires enzyme
design for nylon production

SEVEN DAYS

478 THE NEWS IN BRIEF

Deforestation on the rise in Brazil / NSF launches ethics hub / NIH cuts back on chimp research / Shell halts Arctic drilling / Drug companies join together to improve clinical trials / Dark Energy Survey takes first pictures

CAREERS

591 PUBLICATIONS

Who's on first?

Solving the prickly question of who authors a paper — and in what order

593 CAREER BRIEFS

NATUREJOBS ADVERTISING FEATURE

Spotlight on Sweden

US ELECTION 2012

EDITORIAL

473 A second wind for the president

Climate change will be a major issue for Obama if he wins a second term

FEATURES

487 Political science

The uneasy relationship between science and politics

488 The Obama experiment

Has he kept his promise and restored science to its rightful place?

COMMENT

493 Politicians should think like scientists

Rush Holt

The art of politics would benefit from a more detached, analytical approach

494 Know your representatives

Lawrence Goldstein

Why researchers need to make the time to talk about science with lawmakers

NEWS IN FOCUS



482 INTELLECTUAL PROPERTY

American Chemical Society faces criticism over legal action against start-up firm

484 TOXICOLOGY

Rat study sparks backlash against GM crops

485 GENOMICS

BGI comes to the rescue of ailing sequencing firm

486 PUBLISHING

High-energy physics prepares for an open-access future

COMMENT

496 RESEARCH

Honour the helpful

Alexander Oettl
Evidence that helping others boosts
their publication quality

BOOKS & ARTS

498 BIOGRAPHY

The scientist within Richard Holmes

500 FOOD SCIENCE

Digestive tracts

Barbara Ketcham Wheaton

501 STATISTICS

Forecasting with finesse

Paul Ormerod

CORRESPONDENCE

502 Controlling the coffee-berry borer / Climate controversy / The greening of China / Rational suggestions



596 Solidarity George Zebrowski

27 SEPTEMBER 2012 | VOI. 489 | NATURE | 467

CONTENTS

27 September 2012 / Vol 489 / Issue No 7417

RESEARCH

NEW ONLINE

503 Papers published this week at nature.com

NEWS & VIEWS

504 EVOLUTION

How the unicorn got its horn

Microevolutionary processes give rise to a phenotypic innovation Heather Hendrickson & Paul B Rainey SEE ARTICLE P.513

505 QUANTUM COMPUTATION

Spinning towards scalable circuits
Electron-spin qubit based on a single
donor atom in a silicon device
Lee C Bassett & David D Awschalom
SEE LETTER P.541

507 NETWORK SCIENCE

Luck or reason

The origin of preferential attachment in networks

Albert-László Barabási SEE LETTER P.537

508 REGENERATIVE BIOLOGY

Skin, heal thyself

Dramatic skin shedding and rapid tissue repair in African spiny mice Elly M Tanaka SEE LETTER P.561

510 ELECTRONICS

'Cut and stick' ion gels

Rubber-like ion gels as gate insulators in transistors Masashi Kawasaki & Yoshihiro lwasa

511 CANCER METABOLISM

When more is less

PKM2 activators shift glycolytic balance and suppress tumour growth Lei Jiang & Ralph J DeBerardinis

ARTICLES

- 513 EVOLUTION Genomic analysis of a key innovation in an experimental Escherichia coli population Z D Blount, J E Barrick, C J Davidson & R E Lenski SEE N&V P.504
- 519 CANCER GENOMICS Comprehensive genomic characterization of squamous cell lung cancers The Cancer Genome Atlas Research Network
- 526 IMMUNOLOGY Cross-neutralization of influenza A viruses mediated by a single antibody loop D C Ekiert et al.



LETTERS

- 533 ASTRONOMY No surviving evolved companions of the progenitor of SN 1006
 - J I González Hernández et al.
- 537 PHYSICS Popularity versus similarity in growing networks F Papadopoulos, M Kitsak, M Á Serrano,

F Papadopoulos, M Kitsak, M A Serrano, M Boguñá & D Krioukov SEE N&V P.507

- 541 PHYSICS A single-atom electron spin qubit in silicon JJ Pla et al. SEE N&V P.505
- 546 EARTH SCIENCES Ocean oxygenation in the wake of the Marinoan glaciation S K Sahoo et al.
- 550 EARTH SCIENCES Response of salt-marsh carbon accumulation to climate change M L Kirwan & S M Mudd
- 554 ECOLOGY Delayed phenology and reduced fitness associated with climate change in a wild hibernator J E Lane, L E B Kruuk, A Charmantier, J O Murie & F S Dobson
- 558 PALAEOANTHROPOLOGY Evidence for dietary change but not landscape use in South African early hominins V Balter, J Braga, P Télouk & J F Thackeray
- 561 DEVELOPMENT Skin shedding and

tissue regeneration in African spiny mice (Acomys)

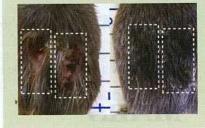
A W Seifert et al. SEE N&V P.508

- 566 IMMUNOLOGY Structural and genetic basis for development of broadly neutralizing influenza antibodies D Lingwood et al.
- 571 STEM CELLS Genotoxic consequences of endogenous aldehydes on mouse haematopoietic stem cell function J / Garaycoechea et al.
- 576 MOLECULAR BIOLOGY The Fun30 nucleosome remodeller promotes resection of DNA double-strand break ends X Chen et al.
- 581 MOLECULAR BIOLOGY The yeast Fun30 and human SMARCAD1 chromatin remodellers promote DNA end resection T Costelloe et al.
- 585 BIOCHEMISTRY Interaction landscape of membrane-protein complexes in Saccharomyces cerevisiae M Babu et al.
- 590 CORRIGENDUM Peroxiredoxins are conserved markers of circadian rhythms R S Edgar et al.
- 590 CORRIGENDUM Constraints on future changes in climate and the hydrologic cycle MR Allen & WJ Ingram
- 590 ERRATUM Stereospecific binding of a disordered peptide segment mediates
 BK channel inactivation
 V Gonzalez-Perez et al.

DEVELOPMENT

Skin repair

Spiny mice set the standard for tissue regeneration in mammals. PAGE 561



CHANDRA, HARVARD, EDU/PHOTO/2008/SN1005C/