

CONTENTS

8 October 2015 / Vol 526 / Issue No 7572

THIS WEEK

EDITORIALS

164 ENVIRONMENT

Time to get clean

Nations recognize the need for action on pharmaceutical pollution

164 FACILITIES

Optimistic outlook

Turkey's investment in research centres in difficult times should be applauded

WORLD VIEW

165 Make vaccine coverage a key UN health indicator

Seth Berkley

Countries need a wide-reaching intervention they can easily measure

RESEARCH HIGHLIGHTS

166 SELECTIONS FROM THE SCIENTIFIC LITERATURE

Chernobyl wildlife / Virus-induced neurodegeneration / Chromosome hyperclusters / Campaign makes researchers pretty angry / Snakes' phantom limb / Dung beetles deceived / Set-aside boosts crops



SEVEN DAYS

168 THE NEWS IN BRIEF

Chile unveils marine-protection plans / Forgery sentence for Danish neuroscientist / The rise of predatory open-access journals

CAREERS

281 RESEARCH PROFILES

A tag of one's own

Papers have digital identifiers, and now authors do too

283 TURNING POINT

When Hurricane Katrina destroyed his lab in Louisiana, René Anand returned to Ohio State University to create an organoid model of the developing brain

NATURE JOBS ADVERTISING FEATURE

Spotlight on Ireland

REPRODUCIBILITY

EDITORIAL

163 Let's think about cognitive bias

Scientists can make research more robust if they stop fooling themselves

FEATURES

178 The impenetrable proof

Shinichi Mochizuki solved the *abc* conjecture, but few can prove he's right

182 Fooling ourselves

Scientists seek ways to fight their brains' tendency for self-deception



A Nature special collection
go.nature.com/huhbyr

COMMENT

187 Hide results to seek the truth

Robert MacCoun & Saul Perlmutter
Disguising data in biology, psychology and social science would avoid bias

189 Many hands make tight work

Raphael Silberzahn & Eric L. Uhlmann
Crowdsource research to validate findings

KELLY KRAUSE/NATURE (ADAPTED FROM VICTORIA KALININA/SHUTTERSTOCK)

NEWS IN FOCUS

171 BASIC RESEARCH

Biomedicine hub sets sights on world-class science amid political turmoil



173 PHYSICS

CERN boosts plans to surf the plasma wave by funding mini-collider

174 MEDICINE

Award for discoverers of antiparasite drugs also marks China's first Nobel

175 NOBEL PRIZE

Committee honours physicists who showed that neutrinos have mass

176 ENVIRONMENT

India commits to clean energy and cuts in carbon intensity

176 SPACE

NASA shortlists explorations of Venus and asteroids for its next missions

COMMENT

BOOKS & ARTS

192 GEOLOGY

The continental conundrum

Ted Nield

193 SCIENCE FICTION

Crusoe on Mars

Elizabeth Gibney

194 ENVIRONMENT

Climate stalemate

Oliver Geden



CORRESPONDENCE

195 Global carbon prices to control rebound / Diesel emissions understated / Vulnerable juniors / Save our soils / Conserve biodiversity, not just area

OBITUARY

196 Eric H Davidson (1937–2015)

Andrew Cameron



FUTURES

286 The many media hypothesis
Marissa Lingen

CONTENTS

8 October 2015 / Vol 526 / Issue No 7572

RESEARCH

NEW ONLINE

197 Papers published this week at nature.com

NEWS & VIEWS

198 MALARIA

Fifteen years of interventions

Comparing the effectiveness of malaria-control measures in Africa
Janet Hemingway **SEE ARTICLE P.207**

199 MOLECULAR BIOLOGY

Mediating transcription and RNA export

Interactions between Mediator and TREX-2 boost nuclear export of mRNA
Jonathan D Rubin & Dylan J Taatjes

200 NEUROBIOLOGY

Individuality sniffed out in flies

Mushroom-body output neurons display individualized odour responses
Thomas Frank & Rainer W Friedrich
SEE LETTER P.258

202 HIV

Antiviral action countered by Nef

HIV's Nef protein inhibits the host proteins SERINC3 and SERINC5
Christopher Aiken
SEE ARTICLES P.212 & P.218

203 CONDENSED-MATTER PHYSICS

Quantum dots and the Kondo effect

Probing quantum phase transitions at ultra-low temperatures
Karyn Le Hur **SEE LETTERS P.233 & P.237**

204 ASTROPHYSICS

Surprisingly fast motions in a dust disk

Rapidly moving features in the debris disk around AU Microscopii
Marshall D Perrin **SEE LETTER P. 230**

ARTICLES

207 EPIDEMIOLOGY The effect of malaria control on *Plasmodium falciparum* in Africa between 2000 and 2015
S Bhatt et al. **SEE N&V P.198**

212 VIROLOGY HIV-1 Nef promotes infection by excluding SERINC5 from virion incorporation
A Rosa et al. **SEE N&V P.202**

218 VIROLOGY SERINC3 and SERINC5 restrict HIV-1 infectivity and are counteracted by Nef
Y Usami, Y Wu & H G Göttinger
SEE N&V P.202

EPIDEMIOLOGY

The long view

Reporting on the achievements of the 15-year campaign to beat malaria in sub-Saharan Africa. **PAGE 207**



224 STRUCTURAL BIOLOGY Glycine receptor mechanism elucidated by electron cryo-microscopy
J Du, W Lü, S Wu, Y Cheng & E Gouaux

LETTERS

230 PLANETARY SCIENCE Fast-moving features in the debris disk around AU Microscopii
A Boccaletti et al.
SEE N&V P.204

233 QUANTUM PHYSICS Two-channel Kondo effect and renormalization flow with macroscopic quantum charge states
Z Iftikhar et al. **SEE N&V P.203**

237 QUANTUM PHYSICS Universal Fermi-liquid crossover and quantum criticality in a mesoscopic system
A J Keller et al. **SEE N&V P.203**

241 ANALYTICAL CHEMISTRY Identification of carbohydrate anomers using ion mobility-mass spectrometry
J Hofmann, H S Hahm, P H Seeberger & K Pagel

245 SOLID EARTH SCIENCES Palaeomagnetic field intensity variations suggest Mesoproterozoic inner-core nucleation
A J Biggin et al.

249 EVOLUTIONARY THEORY Sex-specific demography and generalization of the Trivers-Willard theory
S Schindler et al.

253 PARASITOLOGY A novel locus of resistance to severe malaria in a region of ancient balancing selection
Malaria Genomic Epidemiology Network

258 NEUROSCIENCE Plasticity-driven individualization of olfactory coding in mushroom body output neurons
T Hige, Y Aso, G M Rubin & G C Turner
SEE N&V P.200

263 CANCER The genomic landscape of response to EGFR blockade in colorectal cancer
A Bertotti et al.

268 SYSTEMS BIOLOGY Dilution of the cell cycle inhibitor Whi5 controls budding-yeast cell size
K M Schmoller, J J Turner, M Kõivomägi & J M Skotheim

273 CANCER Mediator kinase inhibition further activates super-enhancer-associated genes in AML
H E Pelish et al.

277 STRUCTURAL BIOLOGY Crystal structure of human glycine receptor-α3 bound to antagonist strychnine
X Huang, H Chen, K Michelsen, S Schneider & P L Shaffer

PLANETARY SCIENCE

Fast show

Five mysterious moving objects in the AU Microscopii system. **PAGE 230**

