CONTENTS CONTENTS OF STREET

10 April 2014 / Vol 508 / Issue No 7495

THIS WEEK

EDITORIALS

149 SPACE

Look back in wonder

Sentinel programme's policy on data access should be applauded

149 POLICY

Political science

Severing science links with Russia is no way to approach the Ukraine problem

150 RESEARCH

Copper rewired

Venerable element proves its mettle in both chemistry and medicine



WORLD VIEW

151 Society needs more than wonder to respect science Susan Watts
To put research into its societal context journalists must take a critical approach

RESEARCH HIGHLIGHTS

152 SELECTIONS FROM THE SCIENTIFIC LITERATURE

Bacterial pathogens in sequence / Hummingbirds take off / Phytoplasma transmission / Heat is on in Europe / Poplar biofuel / Molecular robots deliver

SEVEN DAYS

154 THE NEWS IN BRIEF

Japan cancels whale hunt / Chile hit by earthquake / World's most accurate clock unveiled / Dwarf planets spotted in the Solar System

CAREERS

275 COLUMN

A guide for the innovator

Peter Fiske

Innovating is one thing, making the most of your ideas is quite another

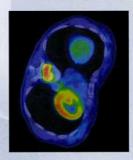
277 TURNING POINT

The Earth Science Women's Network has come a long way in ten years, says co-founder Tracey Holloway

277 CAREER BRIEFS

NEWS IN FOCUS

157 REGENERATIVE MEDICINE NIH shuts stem-cell centre



158 CANCER Metabolic pathways offer route to attack

tumour cells 159 HEALTH

Questions raised over safety of e-cigarettes

Children's Hospital

160 SPACE

Europe takes a global view with launch of first Sentinel satellite

161 POLICY

Funding agencies get tough over open access

162 POLICY

West starts to sever scientific ties with Russia over Crimean crisis

163 CONSERVATION

Researchers swing into action to save world's rarest primate

FEATURES



FLOODS

Turning the tide

The race to save Bangladesh from rising waters PAGE 164

168 EPIGENETICS

The clock-watcher

How Steve Horvath got to grips with human ageing

COMMENT

171 CLIMATE POLICY

Streamline IPCC reports

Dave Griggs
The process asks too much of the contributing researchers

173 CLIMATE POLICY

Improve economic models of climate change

Richard L Revesz et al.

The IPCC should refine estimates of the social cost of carbon

SPRING BOOKS

176 BIOTECHNOLOGY Recombinant gold

Nathaniel Comfort

178 ECOLOGY
Wilson in Africa

Stuart Pimm

178 NEW IN PAPERBACK 179 CLIMATE ECONOMICS

A strained relationship Scott Barrett

180 MEDICINE

Outside the fold Giovanna Mallucci

182 DRUGS Gut response

Maryn McKenna
183 EDUCATION

Digital locs

Digital lessons learned Robert Lue

185 ENERGY The new oil era

Chris Nelder

CORRESPONDENCE

186 Nobels out of sync / Livestock issues / The case for zoos / CYLD explained

OBITUARY

187 Alejandro Zaffaroni (1923–2014) Jane Shaw



FUTURES

280 How Kameron Layas rode out the crash Rahul Kanakia

10 APRIL 2014 | VOL 508 | NATURE | 145

CONTENTS

2014 / Vol 508 / Issue No 7495

RESEARCH

NEW ONLINE

189 Papers published this week at nature.com

NEWS & VIEWS

190 SOLAR SYSTEM

Cracking up on asteroids Temperature cycling as a source

of regolith formation on asteroids Heather A Viles SEE LETTER P.233

191 CANCER

Damage prevention targeted

Selective inhibition of the MTH1 enzyme suppresses tumour growth Dan Dominissini & Chuan He SEE ARTICLES P.215 & P.222

192 BIOGEOSCIENCE

Africa's greenhouse-gas budget is in the red

A full analysis of Africa's greenhouse-gas emissions Cheikh Mbow

194 METABOLISM

Targeting a fat-accumulation gene Inhibiting the metabolic-regulatory enzyme NNMT prevents obesity Charles Brenner SEE LETTER P.258

195 QUANTUM PHYSICS

A strong hybrid couple

Switching a photon's state using a single atom in an optical cavity Luming Duan SEE LETTERS P.237 & P.241

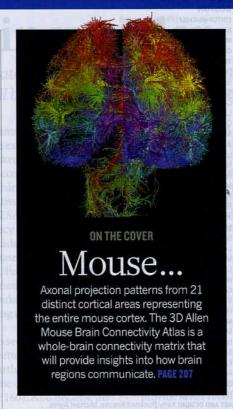
196 STRUCTURAL BIOLOGY

The purple heart of photosynthesis

High-resolution structure of part of a bacterial photosynthetic unit Richard J Cogdell & Aleksander W Roszak SEE ARTICLE P. 228

ARTICLES

- 199 NEUROSCIENCE Transcriptional landscape of the prenatal human brain J A Miller et al.
- 207 NEUROSCIENCE A mesoscale connectome of the mouse brain SW Oh et al.
- 215 CANCER MTH1 inhibition eradicates cancer by preventing sanitation of the dNTP pool H Gad et al. SEE N&V P.191
- 222 CANCER Stereospecific targeting of MTH1 by (S)-crizotinib as an



anticancer strategy KVM Huber et al. SEE N&V P.191

228 STRUCTURAL BIOLOGY Structure of the LH1-RC complex from Thermochromatium tepidum at 3.0 Å S Niwa et al. SEE N&V P.196

LETTERS

- 233 ASTRONOMY Thermal fatigue as the origin of regolith on small asteroids M Delbo et al. SEE N&V P.190
- 237 QUANTUM PHYSICS A quantum gate between a flying optical photon and a single trapped atom A Reiserer, N Kalb, G Rempe & S Ritter **SEE N&V P.195**
- 241 QUANTUM PHYSICS Nanophotonic quantum phase switch with a single atom TG Tiecke et al. SEE N&V P.195
- 245 GEODYNAMICS Dynamics of continental accretion L Moresi, P G Betts, M S Miller & R A Cayley
- 249 GENE EXPRESSION Detection and

replication of epistasis influencing transcription in humans G Hemani et al.

- 254 VIROLOGY A synchronized global sweep of the internal genes of modern avian influenza virus
 - M Worobey, G-Z Han & A Rambaut
- 258 TRANSLATIONAL RESEARCH Nicotinamide N-methyltransferase knockdown protects against diet-induced obesity D Kraus et al. SEE N&V P.194
- 263 CELL BIOLOGY ZMYND11 links histone H3.3K36me3 to transcription elongation and tumour suppression H Wen et al.
- 269 IMMUNOLOGY Direct measurement of local oxygen concentration in the bone marrow of live animals J A Spencer et al.
- 274 CORRIGENDUM Enhanced bacterial clearance and sepsis resistance in caspase-12-deficient mice M Saleh et al.
- 274 RETRACTION CLASP-mediated cortical microtubule organization guides PIN polarization axis K Kakar, H Zhang, B Scheres & P Dhonukshe

