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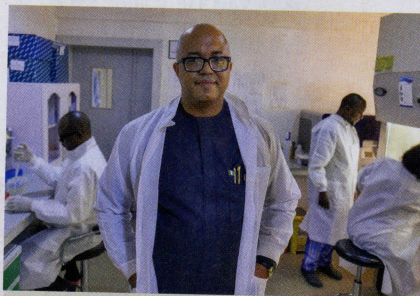
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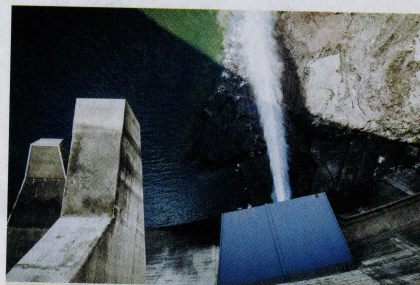


### PUBLIC HEALTH

## Disease detective

How the leader of Nigeria's infectious-disease agency plans to prevent the next deadly pandemic **PAGE 310**

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## Dams and climate

Reassess hydropower — it can help to slash emissions, urges Mike Muller **PAGE 315**

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Fund and reward cataloguing to find solutions in hidden viral diversity

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### NEWS & VIEWS

#### 328 PLANETARY SCIENCE

##### A new moon for Neptune

The discovery of Neptune's seventh inner moon

Anne J Verbiscer [SEE LETTER P.350](#)

#### 329 METABOLISM

##### How broken sleep harms blood vessels

Mechanisms linking sleep disruption and cardiovascular disease

Alan R Tall & Sanja Jelic [SEE LETTER P.383](#)

#### 330 CITATION METRICS

##### Small-team science is beautiful

The disruptive contributions of small teams to science

Pierre Azoulay [SEE LETTER P.378](#)

#### 332 NUCLEAR PHYSICS

##### Origin of neutron and proton changes in nuclei

A modification of the structure of nucleons in correlated pairs

Gerald Feldman [SEE LETTER P.354](#)

#### 333 CANCER

##### Tumours use a metabolic twist to make lipids

Cancer cells have a flexible system for making membrane lipids

Marteinn Thor Snaebjornsson

& Almut Schulze [SEE LETTER P.403](#)

#### 335 NEUROSCIENCE

##### Brains that learn not to fear

How fear responses to trauma-associated cues might be decreased

Andrew Holmes [SEE ARTICLE P.339](#)

#### 336 MEDICAL RESEARCH

##### Predicting progression of pre-invasive cancer

Genomic profiles can identify cancers that will form invasive tumours

Heidi Greulich & Andrew D Cherniack

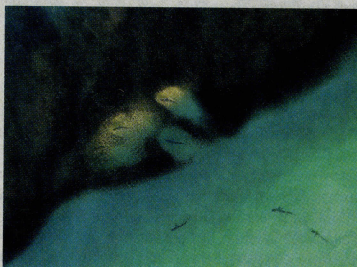
### ARTICLES

#### 339 NEUROSCIENCE Neural circuits underlying a psycho-therapeutic regimen for fear disorders

J Baek et al. [SEE N&V P.335](#)

#### 344 IMMUNOLOGY PU.1 controls fibroblast polarization and tissue fibrosis

T Wohlfahrt et al.



### ON THE COVER

## The ecology of research

The ecosystem of research is evolving, with large teams on the rise in many areas. James Evans and colleagues reveal that smaller teams (represented by the handful of sharks) are more likely to disrupt science and technology with new ideas, designs and approaches, whereas larger teams (the smaller fish) tend to school together, consolidating and developing existing ideas. [PAGES 330 & 378](#)

### LETTERS

#### 350 PLANETARY SCIENCE The seventh inner moon of Neptune

M R Showalter, I de Pater, J J Lissauer & R S French [SEE N&V P.328](#)

#### 354 NUCLEAR PHYSICS Modified structure of protons and neutrons in correlated pairs

The CLAS Collaboration [SEE N&V P.332](#)

#### 359 QUANTUM PHYSICS Waveguide-coupled single collective excitation of atomic arrays

N V Corzo et al.

#### 363 CONDENSED-MATTER PHYSICS Interacting multi-channel topological boundary modes in a quantum Hall valley system

M T Randeria et al.

#### 368 NANOSCALE DEVICES Two-dimensional MoS<sub>2</sub>-enabled flexible rectenna for Wi-Fi-band wireless energy harvesting

X Zhang et al.

#### 373 ATMOSPHERIC SCIENCE Complex networks reveal global pattern of

extreme-rainfall teleconnections  
N Boers et al.

#### 378 CITATION METRICS Large teams develop and small teams disrupt science and technology

L Wu, D Wang & J A Evans [SEE N&V P.330](#)

#### 383 METABOLISM Sleep modulates haematopoiesis and protects against atherosclerosis

C S McAlpine et al. [SEE N&V P.329](#)

#### 388 NEUROIMMUNOLOGY Spatial and temporal heterogeneity of mouse and human microglia at single-cell resolution

T Masuda et al.

#### 393 IMMUNOLOGY Commonality despite exceptional diversity in the baseline human antibody repertoire

B Briney, A Inderbitzin, C Joyce & D R Burton

#### 398 IMMUNOLOGY High frequency of shared clonotypes in human B cell receptor repertoires

C Soto et al.

#### 403 CANCER Evidence for an alternative fatty acid desaturation pathway increasing cancer plasticity

K Vriens et al. [SEE N&V P.333](#)

#### 407 BIOPHYSICS Directionality of dynein is controlled by the angle and length of its stalk

S Can, S Lacey, M Gur, A P Carter & A Yildiz

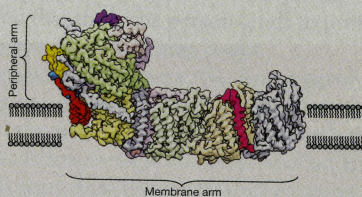
#### 411 STRUCTURAL BIOLOGY Structure of the complex I-like molecule NDH of oxygenic photosynthesis

T G Laughlin, A N Bayne, J-F Trempe, D F Savage & K M Davies

### STRUCTURAL BIOLOGY

## Many paths

NDH may provide multiple routes through photosystem I. [PAGE 411](#)



COVER IMAGE: VISUAL COLLECTIVE/SHUTTERSTOCK