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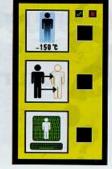
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## Now Publishing STATION

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#### **NEWS & VIEWS**

**426 ARTIFICIAL INTELLIGENCE** 

#### Robots with instincts

An evolutionary algorithm helps robots to adapt their behaviour Christoph Adami SEE LETTER P.503

#### 427 CELL BIOLOGY

#### Polarized transport in the Golgi apparatus

CDC42 protein mediates proteintransport directionality in the Golgi Akihiko Nakano SEE LETTER P.529

#### **428 OCEAN SCIENCE**

The origins of a climate oscillation

The effects of ocean circulation on the Atlantic Multidecadal Oscillation Sergey K Gulev & Mojib Latif SEE LETTER P.508

#### 430 CANCER METABOLISM

A waste of insulin interference

Inhibition of insulin signalling causes cachexia-like wasting in flies Erwin F Wagner & Michele Petruzzelli

#### 431 MICROBIOLOGY

Taking the bad with the good

A model of how antibiotic interactions allow microbial coexistence Carl T Bergstrom & Benjamin Kerr SEE LETTER P.516

#### 432 PALAEDANTHROPOLOGY

The middle Pliocene gets crowded A new hominin species from Ethiopia Fred Spoor SEE ARTICLE P.483

#### ARTICLES

- 483 PALAEOANTHROPOLOGY New species from Ethiopia further expands Middle Pliocene hominin diversity Y Haile-Selassie et al. SEE N&V P.432
- 489 CANCER GENOMICS Whole-genome characterization of chemoresistant ovarian cancer A-M Patch et al.

#### LETTERS

495 ASTRONOMY A kiloparsec-scale internal shock collision in the jet of a nearby radio galaxy ET Meyer et al.



its feet

A robot with a broken front-right leg. To keep walking despite that damage, it executes an 'Intelligent Trial and Error' algorithm that conducts experiments based on previous (simulated) experience to find a behaviour that still works. Jean-Baptiste Mouret and colleagues have developed a machine learning algorithm that enables damaged robots to quickly regain their ability to perform tasks. PAGES 426 & 503

- 498 OPTICS AND PHOTONICS Extreme ultraviolet high-harmonic spectroscopy of solids TT Luu et al.
- 503 TECHNOLOGY Robots that can adapt like animals A Cully, J Clune, D Tarapore & J-B Mouret SEE N&V P.426
- 508 CLIMATE SCIENCES Ocean impact on decadal Atlantic climate variability revealed by sea-level observations G D McCarthy, I D Haigh, J J-M Hirschi, JP Grist & D A Smeed SEE N&V P.428
- 511 NEUROSCIENCE Diverse coupling of neurons to populations in sensory cortex M Okun et al.
- 516 MICROBIOLOGY Counteraction of antibiotic production and degradation stabilizes microbial communities E D Kelsic, J Zhao, K Vetsigian & R Kishony SEE N&V P.431
- 520 SENETICS Global genetic analysis in mice unveils central role for cilia in congenital heart disease Y Li et al.

- 525 CELL BIOLOGY Coordination of mitophagy and mitochondrial biogenesis during ageing in C. elegans K Palikaras, E Lionaki & N Tavernarakis
- 529 CELL BIOLOGY Coordinated regulation of bidirectional COPI transport at

the Golgi by CDC42 S-Y Park, J-S Yang, A B Schmider, R.J.Soberman & V.W.Hsu.

**SEE N&V P.427** 

- 533 MOLECULAR BIOLOGY Defining fundamental steps in the assembly of the Drosophila RNAi enzyme complex S Iwasaki et al.
- 537 CANCER MAD2L2 controls DNA repair at telomeres and DNA breaks by inhibiting 5' end resection V Boersma et al.
- 541 CANCER REV7 counteracts DNA double-strand break resection and affects PARP inhibition G Xu et al.
- 545 STRUCTURAL BIOLOGY Atomic structure of anthrax protective antigen pore elucidates toxin translocation J Jiang, B L Pentelute, R J Collier & H Zhou

