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Trispecific antibody boosts T-cell responses targeting myeloma Alfred L Garfall & Carl H June

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Viral treatment tackles alcoholic hepatitis in a mouse model Martha R J Clokie See Article p.505

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Skin-integrated, wireless, touch-based interfaces Xiao-ming Tao See Article p.473

reality enhanced by touch



#### ON THE COVER

Waves of mutation. In this week's issue, Michael Desai and his colleagues demonstrate a barcoding strategy to visualize and track evolving mutations at high resolution in budding yeast. The result is a picture of the 'travelling wave' of adaptation, as seen on the cover, in which beneficial mutations compete for dominance (the lines represent separate lineages). The travelling wave shows how the distribution of fitness changes within the yeast population over time, and matches theoretical predictions. The researchers observe that clonal competition creates a dynamic 'therich-get-richer' effect, as fitness advantages acquired early in evolution drive a lineage to expand, increasing the chance of acquiring future mutations. The visualizations offer a fresh perspective on the factors that control the rate, predictability and molecular basis of adaptation. Cover image: Ivana Cvijovic, Artur Rego-Costa & Alex N Nguyen Ba. Page 494

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Teraelectronvolt emission from the y-ray burst GRB 190114C **MAGIC Collaboration** See N&V p.448

459 Astrophysics **Observation of inverse Compton** emission from a long y-ray burst MAGIC Collaboration et al. See N&V p.448

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A very-high-energy component deep in the y-ray burst afterglow HAbdalla et al. See N&V p.448

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Real-space charge-density imaging with sub-ångström resolution by four-dimensional electron microscopy W Gao et al.

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High-resolution lineage tracking reveals travelling wave of adaptation in laboratory yeast *ANNguyen Ba* et al.

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Marine Proteobacteria metabolize glycolate via the β-hydroxyaspartate cycle L Schada von Borzyskowski et al.

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Bacteriophage targeting of gut bacterium attenuates alcoholic liver disease *Y Duan* et al. See N&V p.451

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Resolving the fibrotic niche of human liver cirrhosis at single-cell level

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CDK phosphorylation of TRF2 controls t-loop dynamics during the cell cycle *G Sarek* et al.

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Quantifying secondary transport at single-molecule resolution *GA Fitzgerald* et al.

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Cryo-EM structure of the spinach cytochrome  $b_6 f$  complex at 3.6Å resolution

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CLiu, Y Yang & D G Schatz See N&V p.447

## 545 Structural biology

Architecture of autoinhibited and active BRAF-MEK1-14-3-3 complexes

EPark et al.

## **CORRECTIONS & CLARIFICATIONS**

#### Clarification

## Genes from the junkyard

After this story (*Nature* **574**, 314–316; 2019) was published, we learnt that a scientist had suggested the *de novo* origin of antifreeze protein genes before Helle Baalsrud's team. See https://doi.org/10.1038/d41586-019-03061-x

#### Correction

#### Scientism and the abuse of science

This article (*Nature* **575**, 51; 2019) erroneously described Friedrich Hayek as a philosopher and stated that his book was published in 1979. In fact, he is an economist and his book was first published in 1952.

See https://doi.org/10.1038/d41586-019-03387-6

#### **Author Correction**

Exome sequencing of Finnish isolates enhances rare-variant association power

A E Locke et al.

See https://doi.org/10.1038/s41586-019-1726-x

#### **Author Correction**

LKB1 loss links serine metabolism to DNA methylation and tumorigenesis

F Kottakis et al.

See https://doi.org/10.1038/s41586-019-1696-z