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Volume 639 Issue 8014, 13 March 2025

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Good or bad?
Data scientists that shook up transcription online is followed up with request to ask how they should be used. Also in this issue: Nature Audio: Antarctic Ice Shelf and collapse; what the fat the inherent to standard the point sting scales can be united. Cover image: Sally Kuzma/Nature

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This Week

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Science diplomacy can help to heal global rifts – if research is protected
The universal language of science allows nations to reach a mutual understanding of shared problems. But that principle is under threat from political interference.

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Why are proponents of 'smart cities' neglecting research?
Despite the hype surrounding smart cities in urban planning, there's little data and funding for the evidence for what works, what doesn't — and why benefits.

World View

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'Silence is complicity' – universities must fight the anti-DEI backlash
Higher education establishments must not be bullied into abandoning their mission of diversity, equity and inclusion.

Rebecca Cobb-Rodriguez

Collection: How Trump 2.0 is reshaping science

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Public health experts should be more political – and less
Health has always been a political issue. Researchers must engage with politics and policy to make progress. Changing that is what's been telling us.

Eric Feigl-Ding

Research Highlights

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What likely to wake up from a coma? Brainwaves provide a clue
Electrical activity in the brain can reveal whether a person with a brain injury will wake from a comparable state.

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A super-gel tattoo needs from -321°C to 315 °C
A tattoo of the scientific world of the skin that is both super-sensitive to elasticity and softness at extreme temperatures.

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Ancient peasants that settle or scored bite at shared rituals
Clay figurines found on top of the remains of a pyramid in what is now El Salvador might have been used in public ceremonies.

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The unexciting culprit for the loss of huge numbers of coastal larvae
A decline in satellite images of the Pacific Northwest, the Great Barrier and New Guinea reefs in the last two decades' reefs data we estimated till.

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Exclusive: NIH to terminate hundreds of active research grants
Agency has told researchers they won't make 'good use of taxpayer dollars' with grants still active and funded, according to documents obtained by Nature.

Max Kozlov & Smriti Mallapaty

Collection: How Trump 2.0 is reshaping science

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Trump's nominee for NIH chief talks frozen grants and bruising 'scientific divorce'
Health economist Jay Bhattacharya, who does research for controversial views on COVID-19, vows to apply funding but is short on details.

Jonas Perrone-Gill

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Meet the 'woolly mouse' who scientists doubt it's a big step towards recreating mammoths
Colossal Biosciences claimed it had created woolly mice and mammoths in a lab study but is unclear if they're real mammoths.

Sara Cadavid

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China's supreme court calls for crack down on paper mills
Top court issues guidance to curb the role of local courts in protecting paper mills from pollution lawsuits.

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Why women's brains are more resilient: it could be their 'silent' X chromosome
Study in mice and human organoids suggests that a gene on the chromosome may protect women after a stroke.

Katarina Zimmer

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Private spacecraft nails Moon landing: first images of Blue Ghost on the lunar surface
The touchdown is a major success for NASA's partnership with commercial space companies.

Alexandra Witze

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'Gross, did Pythefish do that?' Blackout stokes fears about databases's future
A brief outage has focused attention on scientists' reliance on the US government-funded website.

Smriti Mallapaty

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Alcohol and cancer risk: what you need to know
Even small amounts of drinking can raise the risk of cancer — and most people would waive them.

Nidhi Subbaraman

Collection: Cancer at Nature Portfolio

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Four ways COVID changed virology's lessons from the most unsquenched virus of all time
After 70,000 years and 17 million genome sequences, what has science taught us about SARS-CoV-2?

Ewen Callaway

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Cutting the clinigence norms here to talk
Rapid monitoring, secure, and rapid researching clinics are saving. Click source. For access.

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The 'quantum' principle that says we why atoms are as they are
In a new book on physics, the 20-year-old Nobel winner prompts her doctors a gift that began in the young mathematician who aim to understand the workings of matter.

Khashi Hosni & Thiago Hosni

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Rock hunters, new hoppers and cool drivers: books in brief
Andrew Robinson looks at five new science books.

Andrew Robinson

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Are microfossils a tool for your health? More rigorous science is needed
Claims that microfossils are a threat to the human body have to be set out what findings can be tested and what they might mean.

Iain G.N. Stephenson Wright , Ana O. Thomaz

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How a vast digital twin of the Yangtze River could prevent flooding in China
Researchers are developing a digital twin of the Yangtze River basin to help to predict and control floods in the world's two most social-scientific researchers and others to protect.

Wanpeng Wang, Kuiping Wu, ... Zhongming Yang

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Similar chiral phenomena occur in cell cultures and human crowds
Kazuhiro Maeda & Takahiro Nemoto & Shoichi Toyabe & Yuichi Ishiwata

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For more reliable AI, academics should talk Wikipedia
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COP30 must deliver binding mechanisms to address climate change, not empty promises
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Fate of stimulus production in brain holds lessons for the world
Ulrich Hasenhaus

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How blowing the whistle on the Thrasonea scandal transformed Kyle Chrouch's career
Cheating in Antarctica ecosystem research, and the whistle-blower who risked everything to expose it, has become a career-defining moment for Kyle Chrouch.

Benjamin Plackett

Career Guide: Freedom and ability to achieve

Where I Work

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Lyrasis bulldozing from mushroom components
Rhona Hills makes alternative construction materials to reduce Europe's housing crisis.

Miles Gale

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Genetic data from Indigenous Greenlanders could help to narrow health-care gap
Whole-genome sequencing of Indigenous Greenlanders has revealed a wealth of genetic variation that is absent from current genomics data — which could reduce inequalities in genetic research and in access to medical care.

Laura Koivuo

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Metals squeezed in this battery of fast iron atoms
Ultrathin nickel–iron layered double hydroxide nanosheets grown — allowing the tweaking properties of the resulting 3D materials to be observed.

Jaime Sánchez Hernández

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Racial bias eliminated when ranking cells from five stars to chumbs up or down
Experimental evidence is provided that racial bias can be eliminated when ranking cells from five stars to chumbs up or down by a human racial perception and largely.

Leanne Nacca

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An operating system for networked quantum computers is a huge practical step forward
Quantum computers based on networked processors that allow programmers of classical computers to design and improve new apps and hardware, and connect quantum computers with other.

Claudia Cecconi

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Proteins from abnormal RNA processing in cancer offer an immunotherapy target
Tumour cells that carry a mutation in the gene SF3B1 produce RNA molecules that are unusual in containing unprotected proteins that can be recognized by immune cells offers a target for cancer treatments.

Ali Tazon-Vega

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A framework for neural organoids, assembloids and transplantation studies
As the field of organoid intelligence (OI) advances, a framework for experimental design for research using neural organoids and assembloids to study human development, evolution and disease.

Lena M. Kanton, Sara Wells, ... Tracy Young-Pearse

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An operating system for executing applications on quantum network nodes
Distributed quantum computing can enable large-scale quantum computation by connecting processors in quantum networks in high-level software, which is a step towards bringing quantum network technology to.

M. Caleffi, Daniel Cuomo, ... A. Nahmias

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Continuous-variable multiterminal entanglement in an integrated microcomb
Deterministic generation of a continuous variable quantum entanglement network in an integrated optical chip is important.

Mian Xie, Hongjing Zhai, ... Jianwei Wang

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Emerging superconductivity in phononic crystal nucleation condensates
Phononic crystals are artificial periodic structures that can control the propagation of sound waves. An equilibrium contact radiation in a phononic crystal waveguide, demonstrating the tuning of nonlinear symmetry with superconductivity.

Jiménez Rodríguez, Daniel Leykam

Article
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Superconductivity and quantized anomalous Hall effect in rhombohedral graphene
Rhombohedral multilayer graphene aligned to a hexagonal boron nitride substrate hosts gate-tunable superconductivity and quantized anomalous Hall states, and exhibits a rich phase diagram as a function of carrier density and magnetic field. Quantum oscillations reveal that the superconductivity emerges from a correlated insulator and displays high.

Youngjoon Choi, Nan Xin, ... Andrea F. Young

Article
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Magnetically and optically active edges in phosphorene nanoribbons
Edge magnetism in graphene nanoribbons is predicted to be robust, but it is difficult to fabricate them with atomically precise edges. Here, which can be coupled to phosphorene nanoribbons to form the magnetic edge of these ribbons.

Alejan Arriola, Adam I. Dance, ... Aji Rahimi

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Realization of 2D metals at the Ioppirino–Mele limit
Two-dimensional metals are expected to exhibit a fundamental conductivity that is independent of the material. Here we realize such a metal in a monolayer.

Andrew Zhe Liu, ... Xiaodong Zhang

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3D-DOD-X stable intermittent alkaline seawater electrolysis
Combination of corrosion-resistant membranes and electrocatalysts for long-term operation in alkaline seawater is proposed following understanding the mechanism behind the dynamic structure and degradation of cathode in intermittent operation.

Yifan Hu, Xiaoyan Wang, ... Bin Liu

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Methane oxidation co-ethanol to a molecular junction photocatalyst
Electronic insights into the photocatalytic activity of a molecular junction photocatalyst that can oxidize methane under mild conditions. Understanding the heterojunction' as the basis of selective and stable photocatalysis for C–H activation with O2 coupling.

Jie-Xin Cao, ... Xin-Hao Li

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Engineered enzymes for stereoselective nucleophilic aromatic substitutions
A biocatalytic approach to stereoselective nucleophilic aromatic substitution (SNAr) has achieved through laboratory evolution of highly efficient and stereo.

Thomas M. Linz, Hongyi Zhao, ... Rudi Fasan

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Community-engineered of global glacier mass changes from 2000 to 2023
An interconnection and two resources rises for from glaciers worldwide based on the main in. As and satellite methods from 2000 to 2023, the results are consistent and accurate and provide a reference for future glacier mass change projections and for assessing their contribution to global sea-level rise.

Michael Zemp, Inés Gómez-Ortiz, ... Shiyin Liu

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Global biodiversity recovery from nanosecond deforestation
An analysis of global deforestation from historical records of evidence to the supply chains of large proximity to estimate biodiversity species' range outside these countries that is there.

N. Ben Abdallah, R. David, T. Wilcox

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Scale dichotomization reduces customer racial discrimination and income inequality
Racial discrimination in customer service settings can reduce income and income inequality by ranking customers on a scale rather than race based on whether the task was good or bad. Here we show that.

Yishan L. Bradley, Sara Lee, ... Katherine A. Kay-Raley

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Genetic architecture in Greenland is shaped by demography, structure and selection
Ancient DNA from 229 individuals from Greenland reveals genetic structure and selection in Inuit and Saqqaq populations and their Indigenous Arctic ancestors.

Fredrik Filip Seiger, Mette K. Pedersen, ... Anders Albrechtsen

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Massively parallel characterization of transcriptional regulatory elements
Synthesis based massively parallel reporter assays examine how three cell lines coupled to sequence learning model back to roughly into the prediction of regulatory elements.

Jacob Schreiber, Ryan Lumpkin, ... William Stafford Noble

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Individual variability of neural computations underlying flexible decisions
Behavioural experiments in humans and computational modelling reveal substantial differences in neural circuits between individuals that are consistent with the heterogeneity in neural responses among rats that perform well in tasks.

Marino Pagan, Vincent D. Tang, ... Carlos D. Brody

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Experience-dependent dopamine modulation of male aggression
Dopaminergic neurons in the ventral part of the lateral hypothalamus control aggression, with a role in rewarding and the effect of dopamine depends strongly on the social experience of the.

Ryo Hoi, Shuyan Zhang, ... Dayu Lin

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Activation and inhibition mechanisms of a plant-helper NLR
In plant immunity, most NLR receptors are grouped functional complexes comprising the helper NLR NRC, and recombination of size CNV structures shows that NRC4 is a helper NLR.

Hiyan Sun, Xiaoxiao Wu, ... L. Bao

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Balanced plant-helper NLR activation by a modified host protein complex
Activation of the plant immune receptor NRC4 by pathogen effectors requires phosphorylation by MAPKKK18 in addition to MEK2 through sequestration of activated MEK2 by NRC4, and activation and movement of a small plasma membrane-localized.

Philip Pandy, Saif Beg, ... Qian Gao

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Multi-interface licensing of genomic imprints in a phage nucleus
Genomic imprinting in the phage nucleus is established by the interaction between the maternal genome and the nuclear matrix protein Phi92. The Phi92 matrix protein binds to the maternal genome to shield the bound of specific genes.

Claire Babenko, Timothy K. Blim, ... Joseph Bondy-Denomy

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Tumour-wide RNA splicing aberrations generate actionable public neoantigens
A study identifies public neoantigens derived from tumour-wide aberrant mRNA splicing across diverse cancer types.

Daniel W. Bailis, Richard C. Bruno, ... Matthe Zavolo

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A nonantigen vaccine generates antitumour immunity in central circulation
Vaccination with a nonantigen vaccine that activates the cGAS–STING pathway in conventional type 1 dendritic cells and enhances anti-PD-1 therapy in mouse models of cancer.

Sarah K. Bruce, George Mkrtichian, ... Sarah T. Chuang

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Tissue-resident memory CD8 T cell diversity is spatiotemporally imprinted
Profiling of the human immune system in multiple tissues and at different ages reveals that tissue-resident memory T cells undergo a dynamic tissue-specific maturation process.

Carlos Talavera-Lopez, Timothy R. Blim, ... Joseph Bondy-Denomy

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Targeting myeloid-derived suppressors with a spermidine-deoxyribose conjugate
A conjugated drug targeting agent is used to deliver an antitumor compound that reaches tumors formed by a protein ligand interaction, with application in a mouse model of pancreatic cancer.

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Weather anomalies cannot explain insect decline
Casper A. Hallmann, Eelke Jongejans, ... Hans de Kroon

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Reply to: Weather anomalies cannot explain insect decline
Jana Wäckers, Simon Vanbergen, ... Jeroen Minderhoud

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Author Correction: The genetic origin of the Indo-Europeans
Anonymous

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Author Correction: HIV-1 Env trimers asymmetrically engage CD4 receptors in membranes
Michael L. Dosey Del, ... Mathias Viard

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Author Correction: The Boston Ice Shelf survived the last interglacial
Nicholas R. Golledge, ... Andrew N. Mackintosh

Author Correction
13 Mar. 2025

Author Correction: A comprehensive genetic-cellular map of the human fronthalamus
Anonymous

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Author Correction: Neutralizing GDF-15 can overcome anti-PD-1 and anti-PD-L1 resistance in solid tumours
Lauren Wood, Yihua Bruhn-Wolf, ... Joseph Bondy-Denomy

Author Correction
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Author Correction: CTLA4 blockade abrogates KLRG1+NKG2C+ adaptive NK cells
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Focal Point on Ageing in Japan
Japan's rapidly ageing society has presented an opportunity for researchers to study how symptoms of ageing and improve the final decades of life.

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