

***NATIONAL INSTITUTE OF OCCUPATIONAL HEALTH
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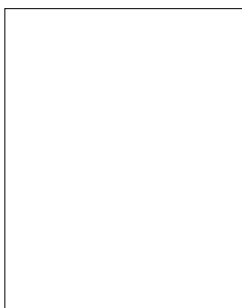
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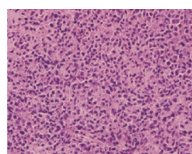
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Journal of Occupational and Environmental Medicine. 62(3):179-184, March 2020.

Development and Validation of a Questionnaire to Measure Psychosocial Work Stressors in Modern Working Environments

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Occupational Differences in C-Reactive Protein Among Working-Age Adults in South Korea

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Professional Recognition at Work: The Protective Role of Esteem, Respect, and Care for Burnout Among Employees

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The Effect of Body Composition and Energy Expenditure on Permethrin Biomarker Concentrations Among US Army National Guard Members

Scarpaci, Matthew M.; Haven, Caitlin C.; Maule, Alexis L.; More

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Assessment of Work Loss Associated With Prescription-Related Opioid Use Disorder: A Retrospective Analysis of Claims Data

White, Alan G.; Spittle, Tim; Fernan, Catherine; More

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Influence of Demographic Characteristics and Muscle Strength on the Occupational Fatigue Exhaustion Recovery Scale in Career Firefighters

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The Prevalence of Chronic Diseases Among Current and Ex-Miners in the United States

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Employee Health and Blood Pressure Outcomes by Job Family

Rosemberg, Marie-Anne S.; Jun, Jin; Jones, Lenette M.

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The Pre-Registry Commercial Driver Medical Examination: Screening Sensitivity and Certification Lengths for Two Safety-Related Medical Conditions

Burks, Stephen Vincent; Anderson, Jon Eugene; Panda, Bibhudutta; More

Journal of Occupational and Environmental Medicine. 62(3):237-245, March 2020.

Efficacy of a Mobile Behavioral Intervention for Workers With Insomnia

Omeogu, Chinyere; Shofer, Frances; Gehrman, Philip; More

Journal of Occupational and Environmental Medicine. 62(3):246-250, March 2020.

Is Higher Work Engagement Associated With Healthy Behaviors? A Longitudinal Study

Amano, Hoichi; Fukuda, Yoshiharu; Kawachi, Ichiro

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Improvements in Workplace Productivity in Working Patients With Major Depressive Disorder: Results From the AtWoRC Study

Chokka, Pratap; Tvistholm, Anders Holmegaard; Bougie, Joanna; More

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Retrospective Examination of Class Attendance on Corporately Sponsored Weight Loss Programming: The Naturally Slim Experience

Earnest, Conrad P.; Church, Timothy S.

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Editorial

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[Coronavirus response: a focus on containment is still apt](#)

Despite COVID-19's spread to new countries, the evidence suggests it is yet possible to curb the virus.

- Editorial | 04 March 2020

[Warning from the tropics: rainforests are losing their ability to help humanity](#)

New analysis of carbon from tropical forests suggests the need for yet faster emissions reductions.

- Editorial | 04 March 2020

[China's research-evaluation revamp should not mean fewer international collaborations](#)

An end to narrow metrics-based evaluation is welcome — but China's researchers must continue to publish with colleagues from around the world.

Research

News & Views

- News & Views | 26 February 2020

[Ahead of the curve in the evolution of human feet](#)

The longitudinal arch has long been considered a crucial structure that provides stiffness to the human foot. Now the transverse arch is stepping into the spotlight, with a proposed central role in the evolution of human foot stiffness.

- Glen A. Lichtwark & Luke A. Kelly

- News & Views | 04 March 2020

[In-sensor computing for machine vision](#)

An image-sensor array has been developed that acts as its own artificial neural network to capture and identify optical images simultaneously, processing the information rapidly without needing to convert it to a digital format.

- Yang Chai

- News & Views | 02 March 2020
[One gene to rule them all in a chronic brain infection](#)
 A gene has been found that controls the conversion of the parasite *Toxoplasma gondii* into a form that chronically infects the human brain. The discovery could aid the design of therapies to eliminate this currently untreatable infection.
 - Eva-Maria Frickel

- News & Views | 19 February 2020
[A self-activating orphan receptor](#)
 The first 3D structure of a full-length G-protein-coupled receptor whose natural activator is unknown has been determined, providing insights into an unusual mode of activation and a basis for discovering therapeutics.
 - Brian Krumm & Bryan L. Roth

- News & Views | 19 February 2020
[Biodiversity theory backed by island bird data](#)
 Analysis of a unique global data set reveals how the species diversity of birds is affected by the properties of archipelagos and offers a way to test an influential theory. Has this improved our understanding of island biodiversity patterns?
 - Kostas A. Triantis & Thomas J. Matthews

- News & Views | 04 March 2020
[Tropical carbon sinks are saturating at different times on different continents](#)
 A survey of tree establishment, growth and mortality shows that the rate at which Amazonian tropical forests take up carbon dioxide has slowed since the 1990s, whereas signs of a potential slowdown in Africa appeared only in 2010.
 - Anja Rammig

Articles

- Article | 04 March 2020
[Strange-metal behaviour in a pure ferromagnetic Kondo lattice](#)
 The ferromagnet CeRh_6Ge_4 is found to exhibit strange-metal behaviour at a quantum critical point, suggesting that changes in the pattern of quantum entanglement, not antiferromagnetism, underlie the development of strange metals.
 - Bin Shen, Yongjun Zhang & Huiqiu Yuan

- Article | 04 March 2020
[Tunable correlated Chern insulator and ferromagnetism in a moiré superlattice](#)
 A topological Chern insulating state is reported to emerge from strong correlations in flat moiré bands in a graphene superlattice and by applying a vertical electric field the Chern number is switched.
 - Guorui Chen, Aaron L. Sharpe & Feng Wang

- Article | 04 March 2020
[Ultrafast machine vision with 2D material neural network image sensors](#)
 A two-dimensional semiconductor photodiode array senses and processes optical images simultaneously without latency, and is trained to classify and encode images with high throughput, acting as an artificial neural network.
 - Lukas Mennel, Joanna Symonowicz & Thomas Mueller

- Article | 24 February 2020
[High-pressure strengthening in ultrafine-grained metals](#)
 High-pressure diamond anvil cell experiments reveal that compression strengthening of nanocrystalline nickel increases as its grain sizes decrease to 3 nanometres, owing to dislocation hardening and suppression of grain boundary plasticity.
 - Xiaoling Zhou, Zongqiang Feng & Bin Chen

- Article | 04 March 2020
[Enhancing crystal growth using polyelectrolyte solutions and shear flow](#)
 A method of growing crystals that does not require undisturbed solutions involves adding polyelectrolytes to the starter solution and shearing (that is, stirring).
 - Jian-Ke Sun, Yaroslav I. Sobolev & Bartosz A. Grzybowski

- Article | 04 March 2020
[Asynchronous carbon sink saturation in African and Amazonian tropical forests](#)
 Unlike Amazonian forests, African forests have maintained their carbon sink until recently but by 2030 the African carbon sink will have shrunk by 14 per cent and the Amazonian sink will reach almost zero.
 - Wannes Hubau, Simon L. Lewis & Lise Zemagho

- Article | 26 February 2020
[Intraplate volcanism originating from upwelling hydrous mantle transition zone](#)
 The widespread intraplate volcanism in northeast China and the unusual ‘petit-spot’ volcanoes offshore Japan could have resulted from the

interaction of the subducting Pacific slab with a hydrous mantle transition zone.

- Jianfeng Yang & Manuele Faccenda

- Article | 19 February 2020
[A simple dynamic model explains the diversity of island birds worldwide](#)
Using a global molecular phylogenetic dataset of birds on islands, the sensitivity of island-specific rates of colonization, speciation and extinction to island features (area and isolation) is estimated.
- Luis Valente, Albert B. Phillimore & Rampal S. Etienne

- Article | 26 February 2020
[Stiffness of the human foot and evolution of the transverse arch](#)
The transverse tarsal arch, acting through the inter-metatarsal tissues, is important for the longitudinal stiffness of the foot and its appearance is a key step in the evolution of human bipedalism.
- Madhusudhan Venkadesan, Ali Yawar & Shreyas Mandre

- Article | 26 February 2020
[Neural circuitry linking mating and egg laying in *Drosophila* females](#)
Neuron-tracing and labelling experiments in *Drosophila* females reveal the neural circuitry that coordinates mating and egg laying, and the role of sex peptide from male seminal fluid in triggering these neurons.
- Fei Wang, Kaiyu Wang & Barry J. Dickson

- Article | 19 February 2020
[Caveolae in CNS arterioles mediate neurovascular coupling](#)
Caveolae in arteriolar endothelial cells—but not those in neighbouring smooth muscle cells—have a key role in neurovascular coupling, an essential function for meeting acute brain energy demand.
- Brian W. Chow, Vicente Nuñez & Chenghua Gu

- Article | 26 February 2020
[Lipid availability determines fate of skeletal progenitor cells via SOX9](#)
Lipid starvation results in skeletal progenitors favouring commitment to chondrogenic over osteogenic fate, a process mediated by FOXO transcription factors and SOX9.
- Nick van Gestel, Steve Stegen & Geert Carmeliet

- Article | 26 February 2020
[Two conserved epigenetic regulators prevent healthy ageing](#)
 Two epigenetic regulators—identified in an RNA interference screen in *Caenorhabditis elegans*, and conserved in mammals—diminish mitochondrial function and accelerate the age-related deterioration of behaviour.
 - Jie Yuan, Si-Yuan Chang & Shi-Qing Cai

- Article | 26 February 2020
[Global chemical effects of the microbiome include new bile-acid conjugations](#)
 Metabolomics data from germ-free and specific-pathogen-free mice reveal effects of the microbiome on host chemistry, identifying conjugations of bile acids that are also enriched in patients with inflammatory bowel disease or cystic fibrosis.
 - Robert A. Quinn, Alexey V. Melnik & Pieter C. Dorrestein

- Article | 19 February 2020
[ILC2s amplify PD-1 blockade by activating tissue-specific cancer immunity](#)
 Tumour-infiltrating group 2 innate lymphoid cells prime CD8⁺ T cells and amplify the anti-tumour effects of PD-1 blockade in pancreatic ductal adenocarcinoma.
 - John Alec Moral, Joanne Leung & Vinod P. Balachandran

- Article | 19 February 2020
[Gene expression and cell identity controlled by anaphase-promoting complex](#)
 WDR5 and TBP recruit anaphase-promoting complex to specific transcription start sites in mitosis, initiating a ubiquitin-dependent mechanism that preserves cell identity by linking gene expression and cell division.
 - Eugene Oh, Kevin G. Mark & Michael Rape

- Article | 19 February 2020
[Selective loading and processing of prespacers for precise CRISPR adaptation](#)
 Cas1–Cas2 selects precursor prespacers from DNA fragments in a length- and PAM-sequence-dependent manner, and these precursors are trimmed by DnaQ exonucleases to enable integration into the CRISPR locus in the correct orientation.
 - Sungchul Kim, Luuk Loeff & Chirlmin Joo

- Article | 19 February 2020
[Structural basis of energy transfer in *Porphyridium purpureum* phycobilisome](#)
The cryo-electron microscopy structure of a phycobilisome from the red alga *Porphyridium purpureum* reveals how aromatic interactions between the linker proteins and the chromophores drive a unidirectional transfer of energy.
 - Jianfei Ma, Xin You & Sen-Fang Sui
- Article | 19 February 2020
[Structural basis of ligand recognition and self-activation of orphan GPR52](#)
Structures of the orphan G-protein-coupled receptor GPR52 in ligand-free, G-protein-coupled and ligand-bound states reveal that extracellular loop 2 occupies the orthosteric binding pocket and functions as a built-in agonist to activate the receptor.
 - Xi Lin, Mingyue Li & Fei Xu

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[End chronic kidney disease neglect](#)
It is unacceptable that kidney dialysis technology has changed little in the past five decades.
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[DARPA 'lookalikes' must ground their dreams in reality](#)
Some countries want to replicate the 'high-risk, high-reward' US Defense Advanced Research Projects Agency. But freedom comes with responsibility.
- Editorial | 11 March 2020
[A lack of locust preparedness will cost lives](#)
Locusts are causing a food crisis that can no longer be ignored.

Research

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[Ancient rock bears isotopic fingerprints of Earth's origins](#)
Identifying Earth's building blocks from terrestrial rocks is challenging because these ingredients have become mixed as the planet evolved. Evidence of an unknown building block in ancient rocks provides fresh insight.
Katherine R. Bermingham
- News & Views | 26 February 2020
[Tweaking the DNA of myeloid cells curbs cancer spread](#)
Blood cells called myeloid cells can facilitate metastasis — the spread of a tumour to distant organs. Taming these cells with drugs that alter the chemical structure of their DNA limits metastasis in mice.
 - Ali Ghasemi & Michele De Palma
- News & Views | 26 February 2020
[DNA-repair enzyme turns to translation](#)
A key DNA-repair enzyme has a surprising role during the early steps in the assembly of ribosomes — the molecular machines that translate the genetic code into protein.
Alan J. Warren
- News & Views | 11 March 2020
[Tiny bird fossil might be the world's smallest dinosaur](#)
A tiny skull trapped in 99-million-year-old amber suggests that some of the earliest birds evolved to become miniature. The fossil illustrates how ancient amber can act as a window into the distant past.
 - Roger B. J. Benson
- News & Views | 11 March 2020
[An all-electrical magnetic logic gate that harnesses chirality between domains](#)
Bits of a logic gate can be encoded by differently magnetized regions. A method has been developed in which the walls between these domains are manipulated electrically, rather than magnetically, to produce a logic gate.
 - See-Hun Yang

- News & Views | 09 March 2020
[Research on the cerebellum yields rewards](#)
A brain structure called the cerebellum has mostly been associated with learning from errors. The discovery that the cerebellum is also involved in reward-driven learning in monkeys implies a previously unappreciated role in cognition.
- Jennifer L. Raymond

Articles

- Article | 11 March 2020
[Coherent electrical control of a single high-spin nucleus in silicon](#)
Coherent quantum control of a single ^{123}Sb nucleus using electric fields produced within a silicon nanoelectronic device is demonstrated experimentally, validating a concept predicted theoretically in 1961.
- Serwan Asaad, Vincent Mourik & Andrea Morello

- Article | 11 March 2020
[Observation of the Kondo screening cloud](#)
The existence of the Kondo cloud is revealed by the spatially resolved characterization of the oscillations of the Kondo temperature in a Fabry–Pérot interferometer and its extent is shown to be several micrometres.
- Ivan V. Borzenets, Jeongmin Shim & Michihisa Yamamoto

- Article | 11 March 2020
[Current-driven magnetic domain-wall logic](#)
Chiral coupling between neighbouring magnetic domains is used in domain-wall racetracks to realize various all-electric logic operations by cascading the gates.
- Zhaochu Luo, Aleš Hrabec & Laura J. Heyderman

- Article | 04 March 2020
[Wafer-scale single-crystal hexagonal boron nitride monolayers on Cu \(111\)](#)
The epitaxial growth of single-crystal hexagonal boron nitride monolayers on a copper (111) thin film across a sapphire wafer suggests a route to the broad adoption of two-dimensional layered semiconductor materials in industry.
- Tse-An Chen, Chih-Piao Chuu & Lain-Jong Li

- Article | 02 March 2020
[In situ NMR metrology reveals reaction mechanisms in redox flow batteries](#)
 Real-time nuclear magnetic resonance studies of electrolyte decomposition and self-discharge in redox flow batteries provide insights into the underlying mechanisms of the reactions, such as radical formation and electron transfer.
 - Evan Wenbo Zhao, Tao Liu & Clare P. Grey

- Article | 11 March 2020
[Limits on gas impermeability of graphene](#)
 Graphene is shown to be impermeable to helium and several other gases, except for hydrogen, which is attributed to the strong catalytic activity of ripples in the graphene sheet.
 - P. Z. Sun, Q. Yang & A. K. Geim

- Article | 10 December 2019
[Mass balance of the Greenland Ice Sheet from 1992 to 2018](#)
 Three techniques for estimating mass losses from the Greenland Ice Sheet produce comparable results for the period 1992–2018 that approach the trajectory of the highest rates of sea-level rise projected by the IPCC.
 - Andrew Shepherd, Erik Ivins & Jan Wuite

- Article | 11 March 2020
[Ruthenium isotope vestige of Earth's pre-late-veener mantle preserved in Archaean rocks](#)
 Ruthenium isotope compositions of the oldest preserved mantle rocks from Greenland imply that volatile-rich outer Solar System material was not delivered to Earth until very late in the planet's formation.
 - Mario Fischer-Gödde, Bo-Magnus Elfers & Hugh Smithies

- Article | 11 March 2020
[Hummingbird-sized dinosaur from the Cretaceous period of Myanmar](#)
Oculudentavis khaungrae—a newly discovered theropod from the Cretaceous period of Myanmar—reveals a previously unknown bauplan and ecology associated with miniaturization, highlighting the potential for recovering small-bodied vertebrates from amber deposits.
 - Lida Xing, Jingmai K. O'Connor & Gang Li

- Article | 11 March 2020
[Recycling and metabolic flexibility dictate life in the lower oceanic crust](#)
 Analyses of microbial communities that live 10–750 m below the seafloor at Atlantis Bank, Indian Ocean, provide insights into how these microorganisms survive by coupling energy sources to organic and inorganic carbon resources.
 - Jiangtao Li, Paraskevi Mara & Virginia P. Edgcomb

- Article | 04 March 2020
[Recurrent interactions in local cortical circuits](#)
 Computational modelling, imaging and single-cell ablation in layer 2/3 of the mouse vibrissal somatosensory cortex reveals that recurrent activity in cortical neurons can drive input-specific amplification during behaviour.
 - Simon Peron, Ravi Pancholi & Karel Svoboda

- Article | 04 March 2020
[Decoy exosomes provide protection against bacterial toxins](#)
 In response to infection with *Staphylococcus aureus* in vitro and in vivo, host cells increase their secretion of exosomes containing ADAM10—vesicular structures that can provide protection by sequestering bacterial toxins.
 - Matthew D. Keller, Krystal L. Ching & Ken Cadwell

- Article | 03 February 2020 | Open Access
[A new coronavirus associated with human respiratory disease in China](#)
 Phylogenetic and metagenomic analyses of the complete viral genome of a new coronavirus from the family *Coronaviridae* reveal that the virus is closely related to a group of SARS-like coronaviruses found in bats in China.
 - Fan Wu, Su Zhao & Yong-Zhen Zhang

- Article | 03 February 2020 | Open Access
[A pneumonia outbreak associated with a new coronavirus of probable bat origin](#)
 Characterization of full-length genome sequences from patients infected with a new coronavirus (2019-nCoV) shows that the sequences are nearly identical and indicates that the virus is related to a bat coronavirus.
 - Peng Zhou, Xing-Lou Yang & Zheng-Li Shi

- Article | 26 February 2020
[Peripheral T cell expansion predicts tumour infiltration and clinical response](#)
 Large-scale single-cell sequencing of RNA and T cell receptors in samples from patients with cancer shows clonotypic expansion of effector-like T cells not only in tumour tissue but also in normal adjacent tissues and peripheral blood, which associates with clinical response to cancer immunotherapy.
 - Thomas D. Wu, Shravan Madireddi & Jane L. Grogan

- Article | 04 March 2020
[Glucagon stimulates gluconeogenesis by INSP3R1-mediated hepatic lipolysis](#)
 A role and mechanism of action are identified for INSP3R1 in the stimulation of hepatic gluconeogenesis and mitochondrial oxidation by glucagon, suggesting that INSP3R1 may be a target for ameliorating dysregulation of hepatic glucose metabolism.
 - Rachel J. Perry, Dongyan Zhang & Gerald I. Shulman

- Article | 26 February 2020
[Epigenetic therapy inhibits metastases by disrupting premetastatic niches](#)
 In mouse models of pulmonary metastasis, adjuvant epigenetic therapy targeting myeloid-derived suppressor cells disrupts the premetastatic microenvironment after resection of primary tumours and inhibits the dissemination of residual tumour cells.
 - Zhihao Lu, Jianling Zou & Malcolm V. Brock

- Article | 26 February 2020
[DNA-PKcs has KU-dependent function in rRNA processing and haematopoiesis](#)
 The catalytic subunit of DNA-PK autophosphorylates and contributes to ribosome biogenesis and haematopoiesis by binding to the U3 small nucleolar RNA.
 - Zhengping Shao, Ryan A. Flynn & Eliezer Calo

- Article | 16 January 2020
[Structure of the M2 muscarinic receptor-β-arrestin complex in a lipid nanodisc](#)
 A cryo-electron microscopy structure of β-arrestin 1 in complex with the M2 muscarinic receptor reconstituted in lipid nanodiscs is reported.
 - Dean P. Staus, Hongli Hu & Georgios Skiniotis

- Article | 16 January 2020
[Structure of the neurotensin receptor 1 in complex with \$\beta\$ -arrestin 1](#)
A cryo-electron microscopy structure of the neurotensin receptor 1 in complex with β -arrestin 1 is reported.
- Weijiao Huang, Matthieu Masureel & Brian K. Kobilka

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[Coronavirus: three things all governments and their science advisers must do now](#)
Follow World Health Organization advice, end secrecy in decision-making and cooperate globally.
- Editorial | 18 March 2020
[The price of Russia–China research collaborations](#)
Vladimir Putin’s government is strengthening research ties with China. That should not be at the expense of other global links.

Research

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- News & Views | 04 March 2020
[How a fly came to love the vomit fruit](#)
Neurogenetic tools commonly used in model organisms have now been adapted to investigate feeding behaviour in the fly *Drosophila sechellia*. The experiments shed light on why this fly is such a fussy eater.
- Jessica L. Zung & Carolyn S. McBride

- News & Views | 18 March 2020
Radial flow system decouples reactions in automated synthesis of organic molecules
 Organic compounds can be synthesized in a continuous flow of solutions, but the need to balance mass flow across multiple reactors complicates the development of such systems. A new platform for flow chemistry addresses this issue.
 - Klavs F. Jensen

- News & Views | 04 March 2020
Mitochondrial distress call moves to the cytosol to trigger a response to stress
 Cellular stress can result in dysfunction and disease, and mechanisms exist to combat this. Previously unknown steps have been uncovered in a pathway that signals when mitochondrial organelles are dysfunctional.
 - Bradford P. Tremblay & Cole M. Haynes

- News & Views | 18 March 2020
Phase transformations observed at the interfaces between crystalline grains in pure metals
 Interfaces between the tiny crystal grains that make up solid copper have been shown to change from one ordered phase to another, independently of the phase adopted by the crystals, opening up prospects for materials development.
 - Eugen Rabkin

- News & Views | 18 March 2020
Poultry through time
 A newly discovered 66.7-million-year-old fossil bird excavated in Belgium provides us with the best evidence so far for understanding when the living groups of birds first evolved and began to diverge.
 - Kevin Padian

Articles

- Article | 18 March 2020
Simulation of Hubbard model physics in WSe₂/WS₂ moiré superlattices
 Study of WSe₂/WS₂ moiré superlattices reveals the phase diagram of the triangular-lattice Hubbard model, including a Mott insulating state at half-filling and a possible magnetic quantum phase transition near 0.6 filling.
 - Yanhao Tang, Lizhong Li & Kin Fai Mak

- Article | 18 March 2020
Mott and generalized Wigner crystal states in WSe₂/WS₂ moiré superlattices
 Strongly correlated insulating Mott and generalized Wigner phases are detected in WSe₂/WS₂ moiré superlattices, and their electrical properties and excited spin states are studied using an optical technique.
 - Emma C. Regan, Danqing Wang & Feng Wang

- Article | 18 March 2020
Loopy Lévy flights enhance tracer diffusion in active suspensions
 A theoretical framework describing the hydrodynamic interactions between a passive particle and an active medium in out-of-equilibrium systems predicts long-range Lévy flights for the diffusing particle driven by the density of the active component.
 - Kiyoshi Kanazawa, Tomohiko G. Sano & Adrian Baule

- Article | 11 March 2020
General synthesis of two-dimensional van der Waals heterostructure arrays
 A general strategy for the synthesis of two-dimensional van der Waals heterostructure arrays is used to produce high-performance electronic devices, showing the potential of this scalable approach for practical technologies.
 - Jia Li, Xiangdong Yang & Xiangfeng Duan

- Article | 18 March 2020
Observations of grain-boundary phase transformations in an elemental metal
 Atomic-resolution observations combined with simulations show that grain boundaries within elemental copper undergo temperature-induced solid-state phase transformation to different structures; grain boundary phases can also coexist and are kinetically trapped structures.
 - Thorsten Meiners, Timofey Frolov & Christian H. Liebscher

- Article | 18 March 2020
Automated radial synthesis of organic molecules
 An automated synthesis instrument comprising a series of continuous flow modules that are radially arranged around a central switching station can achieve both linear and convergent syntheses.
 - Sourav Chatterjee, Mara Guidi & Kerry Gilmore

- Article | 09 March 2020
Coupling of Indo-Pacific climate variability over the last millennium
 Coral records indicate that the variability of the Indian Ocean Dipole over the last millennium is strongly coupled to variability in the El Niño/Southern Oscillation and that recent extremes are unusual but not unprecedented.
 - Nerilie J. Abram, Nicky M. Wright & David Heslop

- Article | 18 March 2020
Intensive farming drives long-term shifts in avian community composition
 Variation in vegetation and climate affects the long-term changes in bird communities in intensive-agriculture habitats, but not in diversified-agriculture or natural-forest habitats, by changing the local colonization and extinction rates.
 - J. Nicholas Hendershot, Jeffrey R. Smith & Gretchen C. Daily

- Article | 18 March 2020
Late Cretaceous neornithine from Europe illuminates the origins of crown birds
 A newly discovered fossil from the Cretaceous of Belgium is the oldest modern bird ever found, showing a unique combination of features and suggesting attributes shared by avian survivors of the end-Cretaceous extinction.
 - Daniel J. Field, Juan Benito & Daniel T. Ksepka

- Article | 04 March 2020
Olfactory receptor and circuit evolution promote host specialization
 A neurogenetic model, *Drosophila sechellia*—a relative of *Drosophila melanogaster* that has developed an extreme specialization for a single host plant—sheds light on the evolution of interspecific differences in behaviour.
 - Thomas O. Auer, Mohammed A. Khallaf & Richard Benton

- Article | 11 March 2020
Mass-spectrometry-based draft of the *Arabidopsis* proteome
 A quantitative atlas of the transcriptomes, proteomes and phosphoproteomes of 30 tissues of the model plant *Arabidopsis thaliana* provides a valuable resource for plant research.
 - Julia Mergner, Martin Frejno & Bernhard Kuster

- Article | 11 March 2020
Gasdermin E suppresses tumour growth by activating anti-tumour immunity
 The gasdermin E protein is shown to act as a tumour suppressor: it is cleaved by caspase 3 and granzyme B and leads to pyroptosis of cancer cells, provoking an immune response to the tumour.
 - Zhibin Zhang, Ying Zhang & Judy Lieberman

- Article | 11 March 2020
A bioorthogonal system reveals antitumour immune function of pyroptosis
 In mouse models of cancer, a bioorthogonal chemical system based on desilylation catalysed by phenylalanine trifluoroborate enables the controlled release of gasdermin to induce pyroptosis selectively in tumour cells
 - Qinyang Wang, Yupeng Wang & Zhibo Liu

- Article | 04 March 2020
Mitochondrial stress is relayed to the cytosol by an OMA1–DELE1–HRI pathway
 A genome-wide CRISPR interference screen shows that a signalling pathway involving OMA1, DELE1 and the eIF2 α kinase HRI relays mitochondrial stress to the cytosol to trigger the integrated stress response.
 - Xiaoyan Guo, Giovanni Aviles & Martin Kampmann

- Article | 04 March 2020
A pathway coordinated by DELE1 relays mitochondrial stress to the cytosol
 Haploid genetic screening of cells under different types of mitochondrial perturbation shows that a pathway involving OMA1, DELE1 and the eIF2 α kinase HRI communicates mitochondrial stress to the cytosol to trigger the integrated stress response.
 - Evelyn Fessler, Eva-Maria Eckl & Lucas T. Jae

- Article | 04 March 2020
DNA-loop extruding condensin complexes can traverse one another
 Single-molecule visualization shows that condensin—a motor protein that extrudes DNA in one direction only—can encounter and pass a second condensin molecule to form a new type of DNA loop that gathers DNA from both sides.
 - Eugene Kim, Jacob Kerssemakers & Cees Dekker

- Article | 26 February 2020
Structure and mechanism of the ER-based glucosyltransferase ALG6
Analyses reveal a previously undescribed transmembrane protein fold in the endoplasmic reticulum-based glucosyltransferase ALG6 and provide a structural basis for understanding the glucose transfer mechanism.
 - Joël S. Bloch, Giorgio Pesciullesi & Kaspar P. Locher
- Article | 11 March 2020
Structure of SWI/SNF chromatin remodeller RSC bound to a nucleosome
The cryo-electron microscopy structure of the 16-subunit yeast SWI/SNF complex RSC in complex with a nucleosome substrate provides insights into the chromatin-remodelling function of this family of protein complexes.
 - Felix R. Wagner, Christian Dienemann & Patrick Cramer
- Article | 11 March 2020
Cryo-EM structure of SWI/SNF complex bound to a nucleosome
The cryo-electron microscopy structure of the yeast SWI/SNF complex bound to a nucleosome substrate provides insights into the chromatin-remodelling function of this family of protein complexes and suggests mechanisms by which the mutated proteins may cause cancer.
 - Yan Han, Alexis A Reyes & Yuan He

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This Week

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Coronavirus pandemic: *Nature's* pledge to you
Research will offer the best exit strategy, and we will do everything we can to help researchers and clinicians realize that goal.

- Editorial | 25 March 2020

Decades-old refrigerators and insulation from buildings are leaking ozone-destroying chemicals: nations must act

The international community underestimated the volume of chlorofluorocarbons locked up in old cooling units. They must be disposed of safely.

Research

News & Views

- News & Views | 04 March 2020

A safe fix for alcohol-derived DNA damage

A by-product of alcohol metabolism can damage the genome by crosslinking opposing DNA strands. The discovery of a safe mechanism that reverses such damage might open up avenues of research for drug discovery.

- Irene Gallina & Julien P. Duxin

- News & Views | 25 March 2020

International regulations have paused a jet-stream shift in the Southern Hemisphere

The Antarctic ozone hole shifted the jet stream in the Southern Hemisphere poleward, leading to hemisphere-wide climatic changes. But the Montreal Protocol, which banned ozone-depleting substances, has halted the shift.

- Alexey Yu. Karpechko

- News & Views | 11 March 2020

AI finds microbial signatures in tumours and blood across cancer types

Analysis of nucleic-acid sequences from human cancers, along with samples from adjacent tissue and blood, reveals the presence of microorganisms in tumours and blood across cancers.

- Nadim J. Ajami & Jennifer A. Wargo

- News & Views | 11 March 2020

Chromatin modified in a molecular reaction chamber

Chromatin, the complex of DNA and protein in cell nuclei, can be modified by ubiquitin molecules. It emerges that this modification occurs in a molecular reaction chamber formed from an enzyme and a scaffold protein.

- Nick Gilbert & Fred van Leeuwen

- News & Views | 23 March 2020

Forty years of ice-core records of CO₂

In 1980, a method was found to determine the amount of carbon dioxide in ancient air trapped in polar ice — providing direct evidence that CO₂ is coupled to climate, and affects global temperatures in the past, present and future.

- Jean-Robert Petit & Dominique Raynaud

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Highly porous nature of a primitive asteroid revealed by thermal imaging

Thermal imaging data obtained from the spacecraft Hayabusa2 reveal that the carbonaceous asteroid 162173 Ryugu is an object of unusually high porosity.

- Tatsuaki Okada, Tetsuya Fukuhara & Yuichi Tsuda

- Article | 25 March 2020

Chiral superconductivity in heavy-fermion metal UTe₂

Scanning tunnelling microscopy and spectroscopy measurements show chiral edge states inside the superconducting gap of the heavy-fermion superconductor UTe₂, indicating the presence of chiral spin-triplet superconductivity.

- Lin Jiao, Sean Howard & Vidya Madhavan

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Nagaoka ferromagnetism observed in a quantum dot plaquette

A quantum dot device designed to host four electrons is used to demonstrate Nagaoka ferromagnetism—a model of itinerant magnetism that has so far been limited to theoretical investigation.

- J. P. Dehollain, U. Mukhopadhyay & L. M. K. Vandersypen

- Article | 25 March 2020

Nanoplasma-enabled picosecond switches for ultrafast electronics

An on-chip, all-electronic device based on the formation of a nanoplasma provides ultrafast electron transfer, enabling picosecond switching of electric signals and the generation of high-power terahertz pulses.

- Mohammad Samizadeh Nikoo, Armin Jafari & Alison Matioli

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[A mechanism of ferritin crystallization revealed by cryo-STEM tomography](#)
 Cryo-STEM tomography of ferritin crystallization is used to reveal nonclassical evolution of crystalline order, indicating that it may be desolvation that drives the continuous evolution of order in crystallization.
 - Lothar Houben, Haim Weissman & Boris Rybtchinski

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[A pause in Southern Hemisphere circulation trends due to the Montreal Protocol](#)
 The recovery of stratospheric ozone in the Southern Hemisphere in the wake of the Montreal Protocol is driving a pause in atmospheric circulation trends that warrants closer scrutiny across the Earth system.
 - Antara Banerjee, John C. Fyfe & Kai-Lan Chang

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[Elpistostege and the origin of the vertebrate hand](#)
 The pectoral fin of an *Elpistostege watsoni* specimen from the Upper Devonian period of Canada combines digits and fin rays, blurring the line between the appendages of fish and land vertebrates.
 - Richard Cloutier, Alice M. Clement & John A. Long

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[Dopamine D2 receptors in discrimination learning and spine enlargement](#)
 Detection of dopamine dips by neurons that express dopamine D2 receptors in the striatum is used to refine generalized reward conditioning mediated by dopamine D1 receptors.
 - Yusuke Iino, Takeshi Sawada & Sho Yagishita

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[FERONIA controls pectin- and nitric oxide-mediated male–female interaction](#)
 FERONIA prevents polyspermy in *Arabidopsis* by enabling pectin-stimulated nitric oxide accumulation at the filiform apparatus after the first pollen tube arrives, which disengages LURE1 chemoattraction to prevent late-arriving pollen tubes from entering the ovule.
 - Qiaohong Duan, Ming-Che James Liu & Alice Y. Cheung

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[Microbiome analyses of blood and tissues suggest cancer diagnostic approach](#)
 Microbial nucleic acids are detected in samples of tissues and blood from more than 10,000 patients with cancer, and machine learning is used to

- show that these can be used to discriminate between and among different types of cancer, suggesting a new microbiome-based diagnostic approach.
- Gregory D. Poore, Evguenia Kopylova & Rob Knight

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 - Jhimmy Talbot, Paul Hahn & Dan R. Littman

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Visceral adipose tissue contains populations of regulatory T cells that exhibit sexual dimorphism, determined by the surrounding niche, and differ between male and female mice in terms of cell number, phenotype, transcriptional landscape and chromatin accessibility.
 - Ajithkumar Vasanthakumar, David Chisanga & Axel Kallies

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A genetic mouse model is used to reveal a two-pronged mechanism of fructose-induced de novo lipogenesis in the liver, in which fructose catabolism in hepatocytes provides a signal to promote lipogenesis, whereas fructose metabolism by the gut microbiota provides acetate as a substrate to feed lipogenesis.
 - Steven Zhao, Cholsoon Jang & Kathryn E. Wellen

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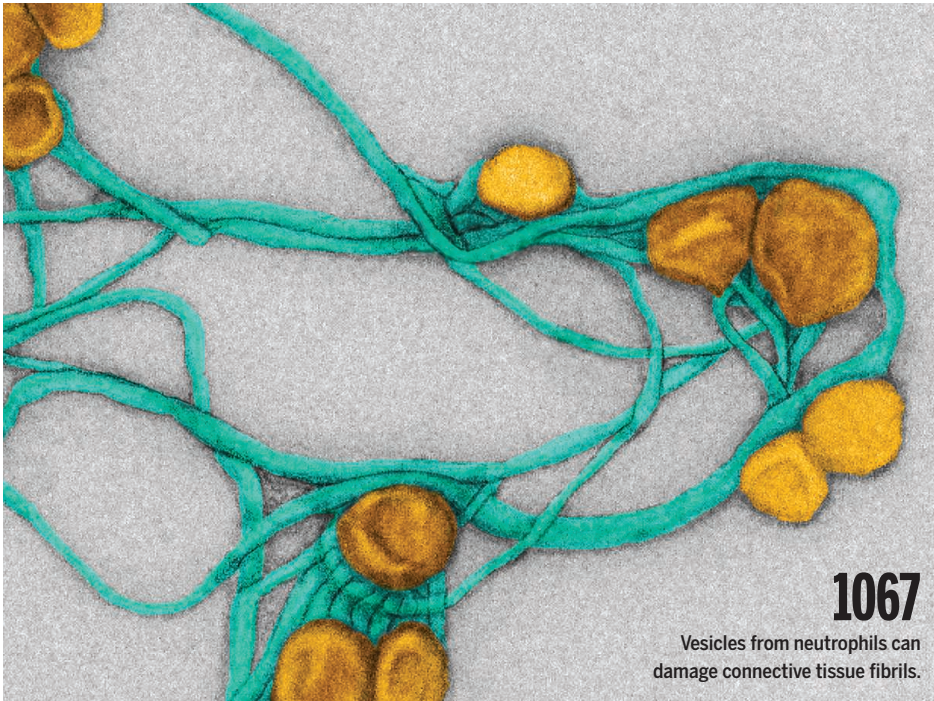
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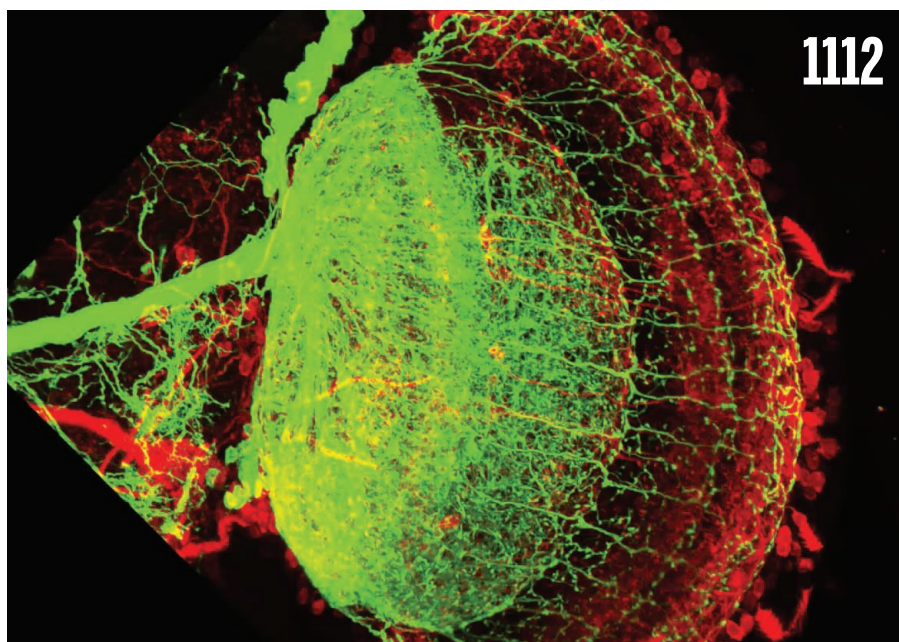
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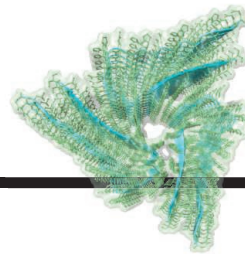
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The spire of Notre Dame cathedral collapses in a cloud of smoke. The Paris landmark was nearly destroyed on 15 April 2019, after a fire swept through attic timbers, melted its lead roof, and damaged stone walls. Scientists are now guiding its restoration. By opening the cathedral up to inspection, the fire is also enabling new historical research. See page 1182.
Photo: Geoffroy Van Der Hasselt/AFP/Getty Images

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The novel coronavirus (SARS-CoV-2; blue) approaches a human cell (pale pink). The viral spike protein (gray) binds to a receptor (ACE2; dark pink) on the cell surface. This allows SARS-CoV-2, the virus

responsible for the COVID-19 pandemic, to infect human cells. The structures of the viral spike protein, the full-length ACE2, and the complex of ACE2 with the receptor binding domain of SARS-CoV-2 have been elucidated, providing structural basis for development of antiviral drugs and vaccines. See page 1444 and www.sciencemag.org/coronavirus-research-commentary-and-news.Illustration: *V. Altounian/Science*; Data: PDB ID 6VSB (viral spike protein), PDB ID 6M17 (ACE2)

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N Engl J Med 2020;382:937-950

IMAGES IN CLINICAL MEDICINE

Nasal Deformity in Granulomatosis with Polyangiitis

F. Bello and F. Fagni

N Engl J Med 2020;382:951

Hepatopulmonary Syndrome

P. Kumar and P.N. Rao

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Under Our Very Eyes

A. Koff and Others

N Engl J Med 2020;382:952-957

EDITORIALS

Triumph and Tragedy of 21st Century Tuberculosis Drug

G. Thwaites and P. Nahid
N Engl J Med 2020;382:959-960

Vaping-Induced Acute Lung Injury

D.C. Christiani
N Engl J Med 2020;382:960-962 | Preliminary Version Published Online
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Covid-19 — Navigating the Uncharted

A.S. Fauci, H.C. Lane, and R.R. Redfield
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Audio Interview: What Clinicians Need to Know in Diagnosing and Treating Covid-19

E.J. Rubin, L.R. Baden, and S. Morrissey
N Engl J Med 2020;382:e19

Monthly Injectable Antiretroviral Therapy — Version 1.0 of a New Treatment Approach

J.S. Currier
DOI: 10.1056/NEJMe2002199 | March 4, 2020

HEALTH POLICY REPORT

The Affordable Care Act at 10 Years — Its Coverage and Access Provisions

D. Blumenthal, S.R. Collins, and E.J. Fowler
N Engl J Med 2020;382:963-969 | Published Online February 26, 2020

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[Transmission of 2019-nCoV Infection from an Asymptomatic Contact in Germany](#)

Published Online January 30, 2020

[Dapagliflozin in Patients with Heart Failure and Reduced Ejection Fraction](#)

[A Smartwatch to Identify Atrial Fibrillation](#)

[Focused Cardiac Ultrasonography for Left Ventricular Systolic Function](#)

CORRECTIONS

[Effects of Intermittent Fasting on Health, Aging, and Disease](#)

[Patent Foramen Ovale Closure or Antiplatelet Therapy for Cryptogenic Stroke](#)



March 12, 2020

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Data Citizenship under the 21st Century Cures Act

K.D. Mandl and I.S. Kohane

DOI: 10.1056/NEJMp1917640 | March 11, 2020

Implementing the Cures Act — Bringing Consumer Computing to Health Care

D.W. Rucker

DOI: 10.1056/NEJMp2003890 | March 11, 2020

Interchangeable Insulins — New Pathways for Safe, Effective, Affordable Diabetes Therapy

M.P. Socal and J.A. Greene

N Engl J Med 2020;382:981-983

Freedom, Measles, and Freedom from Measles

A.A. Gershon, K. Edwards, W. Orenstein, and W. Schaffner

N Engl J Med 2020;382:983-985

Against Medical Advice

A. Sievert

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Conservative Oxygen Therapy during Mechanical Ventilation in

the ICU

The ICU-ROX Investigators and the Australian and New Zealand Intensive Care Society Clinical Trials Group

N Engl J Med 2020;382:989-998 | Published Online October 14, 2019

Liberal or Conservative Oxygen Therapy for Acute Respiratory Distress Syndrome

L. Barrot and Others

N Engl J Med 2020;382:999-1008

Consequences of Undervaccination — Measles Outbreak, New York City, 2018–2019

J.R. Zucker and Others

N Engl J Med 2020;382:1009-1017

Association of Aspirin with Hepatocellular Carcinoma and Liver-Related Mortality

T.G. Simon and Others

N Engl J Med 2020;382:1018-1028

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Complications of Unsafe and Self-Managed Abortion

L.H. Harris and D. Grossman

N Engl J Med 2020;382:1029-1040

IMAGES IN CLINICAL MEDICINE

Massive Splenomegaly from Disseminated *Mycobacterium avium–intracellulare* Infection

L.R. Massoth and A. Louissaint, Jr.

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Osteitis Fibrosa Cystica

A. Ramon and P.-E. Berthod
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CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

Case 8-2020: An 89-Year-Old Man with Recurrent Abdominal Pain and Bloody Stools

H.B. Bohossian and Others
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Oxygen Therapy for the Critically Ill

D.C. Angus
N Engl J Med 2020;382:1054-1056

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The Affordable Care Act at 10 Years — Payment and Delivery System Reforms

D. Blumenthal and M. Abrams
N Engl J Med 2020;382:1057-1063 | Published Online February 26, 2020

CLINICAL IMPLICATIONS OF BASIC RESEARCH

Enterococcus in Graft-versus-Host Disease

W.S. Garrett
N Engl J Med 2020;382:1064-1066

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Reversal of TGF β 1-Driven Profibrotic State in Patients with Pulmonary Fibrosis

Total Hip Arthroplasty or Hemiarthroplasty for Hip Fracture

Diagnosis of Pulmonary Embolism with D-Dimer Testing

Ticagrelor with or without Aspirin after PCI

Immune Thrombocytopenia

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Suicide

Five-Year Outcomes after PCI or CABG for Left Main Coronary Disease



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COVID-19

A Trial of Lopinavir–Ritonavir in Adults Hospitalized with Severe Covid-19

B. Cao and Others

DOI: 10.1056/NEJMoa2001282 | March 18, 2020

Covid-19 — The Search for Effective Therapy

L.R. Baden and E.J. Rubin

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SARS-CoV-2 Infection in Children

X. Lu and Others

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SARS-CoV-2 Viral Load in Upper Respiratory Specimens of Infected Patients

Published Online February 19, 2020

Am I Part of the Cure or Am I Part of the Disease? Keeping Coronavirus Out When a Doctor Comes Home

C. Rose

DOI: 10.1056/NEJMp2004768 | March 18, 2020

Covid-19 — The Law and Limits of Quarantine

W.E. Parmet and M.S. Sinha

DOI: 10.1056/NEJMp2004211 | March 18, 2020

Facing Covid-19 in Italy — Ethics, Logistics, and Therapeutics on the Epidemic's Front Line

L. Rosenbaum

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Audio Interview: New Research on Possible Treatments for Covid-19

E.J. Rubin, L.R. Baden, and S. Morrissey

N Engl J Med 2020;382:e30

PERSPECTIVE

Universal Disease Screening and Treatment — The Egyptian Example

W.A. Haseltine

N Engl J Med 2020;382:1081-1083

Misdiagnosis, Mistreatment, and Harm — When Medical Care Ignores Social Forces

S.M. Holmes and Others

N Engl J Med 2020;382:1083-1086

Opioid Prescribing in the Midst of Crisis — Myths and Realities

M.L. Barnett

N Engl J Med 2020;382:1086-1088

The Dishonesty of Informed Consent Rituals

M. Bivens

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ORIGINAL ARTICLES

Surgery versus Conservative Care for Persistent Sciatica Lasting 4 to 12 Months

C.S. Bailey and Others

N Engl J Med 2020;382:1093-1102

Nonsedation or Light Sedation in Critically Ill, Mechanically Ventilated Patients

H.T. Olsen and Others

N Engl J Med 2020;382:1103-1111 | Published Online February 16, 2020

Long-Acting Cabotegravir and Rilpivirine for Maintenance of HIV-1 Suppression

S. Swindells and Others

N Engl J Med 2020;382:1112-1123 | Published Online March 4, 2020

Long-Acting Cabotegravir and Rilpivirine after Oral Induction for HIV-1 Infection

C. Orkin and Others

N Engl J Med 2020;382:1124-1135 | Published Online March 4, 2020

Two Phase 3 Trials of Inclisiran in Patients with Elevated LDL Cholesterol

K.K. Ray and Others

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F.J. Raal and Others

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Selumetinib in Children with Inoperable Plexiform Neurofibromas

A.M. Gross and Others

DOI: 10.1056/NEJMoa1912735 | March 18, 2020

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Hereditary Angioedema

P.J. Busse and S.C. Christiansen

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IMAGES IN CLINICAL MEDICINE

Retinal Detachment in X-Linked Retinoschisis

Y. Lee and B.-L. Oh

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Penile Kaposi's Sarcoma

V. Grandi and I. De Francesco

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CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

Case 9-2020: A 64-Year-Old Man with Shortness of Breath, Cough, and Hypoxemia

K.L. Reynolds and Others
N Engl J Med 2020;382:1150-1159

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Decision Making for Treatment of Persistent Sciatica

A.J. Schoenfeld and J.D. Kang
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Calming Down about Sedation in Critically Ill Patients

C. Guérin
N Engl J Med 2020;382:1162-1164 | Published Online February 16, 2020

Monthly Injectable Antiretroviral Therapy — Version 1.0 of a New Treatment Approach

J.S. Currier
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SPECIAL REPORT

Screening and Treatment Program to Eliminate Hepatitis C in Egypt

I. Waked and Others
N Engl J Med 2020;382:1166-1174

CORRESPONDENCE

An Animal Model of Inhaled Vitamin E Acetate and EVALI-like Lung Injury

Angiotensin–Neprilysin Inhibition in Heart Failure with Preserved Ejection Fraction

HIV, Pregnancy, and Isoniazid Preventive Therapy

Community-wide Screening for Tuberculosis

Essential Thrombocythemia



March 26, 2020

INTERACTIVE MEDICAL CASE

Missing the Target

C. Iriarte and Others | N Engl J Med 2020;382:e23

This interactive features describes a patient who presents with pain and numbness in the lower abdomen, lower back, and groin.

[Test your diagnostic and therapeutic skills at NEJM.org.](https://www.nejm.org)



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Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus–Infected Pneumonia

Q. Li and Others

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Evidence of SARS-CoV-2 Infection in Returning Travelers from Wuhan, China

Published Online February 18, 2020

Novel Coronavirus and Old Lessons — Preparing the Health System for the Pandemic

J.L. Hick and P.D. Biddinger

DOI: 10.1056/NEJMp2005118 | March 25, 2020

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M.L. Ranney, V. Griffeth, and A.K. Jha

DOI: 10.1056/NEJMp2006141 | March 25, 2020

The Toughest Triage — Allocating Ventilators in a Pandemic

R.D. Truog, C. Mitchell, and G.Q. Daley

DOI: 10.1056/NEJMp2005689 | March 23, 2020

Covid-19 and the Stiff Upper Lip — The Pandemic Response in the United Kingdom

D.J. Hunter

DOI: 10.1056/NEJMp2005755 | March 20, 2020

Defining the Epidemiology of Covid-19 — Studies Needed

M. Lipsitch, D.L. Swerdlow, and L. Finelli

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Fair Allocation of Scarce Medical Resources in the Time of Covid-19

E.J. Emanuel and Others

DOI: 10.1056/NEJMp2003539 | March 23, 2020

Audio Interview: Practical Measures to Help Prevent Covid-19

E.J. Rubin, L.R. Baden, and S. Morrissey

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PERSPECTIVE

Regulating Vaping — Policies, Possibilities, and Perils

J.L. Sindelar

DOI: 10.1056/NEJMp1917065 | March 25, 2020

Stalled Federal Efforts to End Surprise Billing — The Role of Private Equity

E.C. Fuse Brown

N Engl J Med 2020;382:1189-1191 | Published Online February 19, 2020

Misguided Changes to SNAP — Defending a Public Health Intervention for the Poor

A. Richterman and L.C. Ivers

N Engl J Med 2020;382:1191-1193 | Published Online March 4, 2020

Suicide — Rewriting My Story

J.L. Bullock

N Engl J Med 2020;382:1196-1197

ORIGINAL ARTICLES

Polymer-based or Polymer-free Stents in Patients at High Bleeding Risk

S. Windecker and Others

N Engl J Med 2020;382:1208-1218 | Published Online February 12, 2020

A Phase 3 Trial of Luspatercept in Patients with Transfusion-Dependent β -Thalassemia

M.D. Cappellini and Others

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Fostemsavir in Adults with Multidrug-Resistant HIV-1 Infection

M. Kozal and Others

REVIEW ARTICLE

Endometriosis

K.T. Zondervan, C.M. Becker, and S.A. Missmer

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IMAGES IN CLINICAL MEDICINE

“Coat Hanger” Appearance of the Ribs

F. Al-Mudares and C.J. Fernandes

N Engl J Med 2020;382:1257

Preexcited Atrial Fibrillation after a Blood Draw

D.A. McNamara and N. Patel

N Engl J Med 2020;382:e22

INTERACTIVE MEDICAL CASE

Missing the Target

C. Iriarte and Others

N Engl J Med 2020;382:e23

CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

Case 10-2020: An 83-Year-Old Man with Pancytopenia and

Acute Renal Failure

D.B. Sykes and Others

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Activating Immunity to Fight a Foe — A New Path

R.S. Hotchkiss and S.M. Opal

N Engl J Med 2020;382:1270-1272

MEDICINE AND SOCIETY

From Ariadne's Thread to the Labyrinth Itself — Nosology and the Infrastructure of Modern Medicine

A. Kveim Lie and J.A. Greene

N Engl J Med 2020;382:1273-1277

CORRESPONDENCE

Telacebec (Q203), a New Antituberculosis Agent

MRI Screening in Women with Dense Breasts

A Modified Vaccine against Smallpox

Cabazitaxel in Metastatic Prostate Cancer

Lay Responder Care for the Adult Victim of Out-of-Hospital Cardiac Arrest