

FREE BIORIYAD BiWeekly Newsletter

1 October 2026 (Issue 54)

***SELECTION
FROM THE PAST
TWO WEEKS***



***Hottest News In Biotech, BioResearch, Pharma, BioHealth
Highly Selected Research Papers & Patents
Best Recommended Events and Studentship.***



ALGERIAN BIOTECH NEWS

The poster features a dark header with logos on the left (NCSRT and a circular emblem with a red star and crescent) and the official text of the Algerian state in Arabic and French on the right. The main body of the poster is a wide-angle photograph of Algiers, showing the city's coastline, the sea, and the prominent Martyrs' Memorial (Martyrs' Square) in the foreground. Overlaid on the left side of the image is the event title in large, bold, yellow and white capital letters. Below the title, the location and dates are specified in green and white text. The bottom of the poster is a dark blue bar containing a QR code, social media icons for LinkedIn and Facebook, the website URL, and four icons representing key themes: Sovereignty, Ecosystems, Governance, and Strategic Partnership.

الجمهورية الجزائرية الديمقراطية الشعبية
People's Democratic Republic of Algeria
رئاسة الجمهورية
Presidency of the Republic
المجلس الوطني للبحث العلمي والتكنولوجيات
National Council for Scientific Research and Technologies

AFRICAN DIALOGUE
ON NATIONAL POLICIES FOR RESEARCH AND INNOVATION
TOWARDS A KNOWLEDGE ECONOMY
ALGIERS, ALGERIA 19–20 DECEMBER 2026

QR Code
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www.cnrst.dz

• Sovereignty • Ecosystems • Governance • Strategic Partnership

BIOTECH-PHARMA NEWS



GSK Chimagen Biosciences Deal

GSK today announced it has entered an agreement to acquire a potential best-in-class trispecific T cell-engager (TCE) from Chimagen Biosciences (Chimagen), a privately held biotechnology company. GSK plans to develop and commercialise the asset for multiple myeloma, with the programme expected to enter phase I trials in 2027.

<https://www.gsk.com/en-gb/media/press-releases/gsk-to-acquire-potential-best-in-class-t-cell-engager-tce-for-multiple-myeloma-from-chimagen-biosciences/>

AstraZeneca stock falls after FDA panel votes against new cancer drug

An FDA advisory committee voted against AstraZeneca's new breast cancer drug. It was approved anyway.

- ***What is unusual, FDA also cleared the blood test that tells doctors when to switch patients onto it.*** During hormone therapy, some breast cancers develop an ESR1 resistance mutation months before anything changes on a scan. Normally, treatment changes after the cancer visibly progresses.

- ***AstraZeneca tested something different.***

Patients gave blood every few months. When the resistance mutation appeared, they switched to the new drug immediately, while scans still showed stable disease.

Those patients went 16 months before the cancer progressed, versus 9 months for those who waited.

<https://www.cnn.com/2026/05/01/astrazeneca-stock-az-fda-panel-cancer-drug.html>

Octant Announces First Patient Dosed in Phase 1b/2 Clinical Study of OCT-980 for the Treatment of Retinitis Pigmentosa

Years of work by an incredible team and community of supporters. The first patient with RHO-adRP has been dosed with OCT-980, our oral small molecule corrector for a serious disease that has no approved therapy. So much thanks to the patients, investigators, and team making this study possible. Lots more to come!

<https://www.octant.bio/news/octant-announces-first-patient-dosed-in-phase-1b-2-clinical-study-of-oct-980-for-the-treatment-of-retinitis-pigmentosa>



PATENTS WATCH



WIPO



WO2026193162A1 disclosing an invention in which an IL-31 analogue is fused to Fc and used as an antigen-specific immunotherapy intended to induce an immune response against endogenous IL-31 signalling.

Inventor: Akston

US20260274961A1 disclosing an invention in which dual-variable-domain IgGs bind FcRn and an activating Fcγ receptor to redirect immune complexes into receptor-dependent handling pathways

Inventor: Brigham and Women's Hospital, INC

US20260274966A1 disclosing an invention in which cetuximab is fused to a CD137-binding affibody to localise costimulatory activity to EGFR-positive tumour cells

Inventor: AbClon

WO2026192887A1 disclosing an invention in which a trispecific T-cell engager recognises hashtag#CD79B, hashtag#CD20 and hashtag#CD3, placing two B-cell antigens in one molecule to address heterogeneous or escape-prone disease.

Inventor: Johnson & Johnson.

US20260265340A1 disclosing an invention in which an IL-17RA/RC hybrid extracellular domain is fused through Fc to TNFR2 to neutralise IL-17A, IL-17F and TNFα in one protein.

Inventor: CUROGEN

WO2026189421A1 disclosing an invention in which a CLDN-targeted conjugate carries both a cytotoxic payload and a protease-activatable IL-2 prodrug on the same antibody scaffold

Inventor: Tsinghua University

WO2026189486A1 disclosing an invention in which a scaffolded bicyclic peptide binds hashtag#uPAR and can be coupled to chelators and radionuclides for tumour imaging or radioligand therapy

Inventor: HANGZHOU HEALTHYTIDE BIOTECHNOLOGY CO LT

WO2026189350A1 disclosing an invention in which a HER3-directed ADC is combined with an anti-EGFR antibody to treat tumours with overlapping ErbB signalling.

Inventor: Kelun-Biotech.

WO2026189212A1 disclosing an invention in which a humanised anti-GD2 antibody is coupled to a disclosed linker-payload series.

Inventor: Shandong Boan Biotechnology co., Ltd

US20260265325A1 disclosing an invention in which iL-33 variants with substitutions at N60 and selected cysteines are combined with IL-2 and optional half-life extension to expand ST2-positive regulatory T cells.

Inventor: University of Virginia

SELECTED PUBLICATIONS



Biotech startup funding gap widens despite rebound in VC investment

Nearly 70 venture-backed biotechnology startups raised more than \$9.1 billion between January and June, according to BioPharma Dive data, but the majority already had drugs in testing. Biotechnology venture capital funding continued a multi-year surge in the first half of 2026, as strong public market performance and a spike in dealmaking activity helped spur interest in privately held drug startups, BioPharma Dive data show. Data compiled by BioPharma Dive indicate that at least 68 biotech companies banked more than \$9.1 billion in venture capital funding between January and June.

<https://www.biopharmadive.com/news/biotech-venture-capital-funding-2026-first-half/824881/>



Global economic burden of depression in 154 countries from 2025 to 2050

Zhong Cao et al., 2026

<https://doi.org/10.1038/s41591-026-04548-7>

Depression significantly adds to the global disease burden, leading to major economic issues. A macroeconomic model was created using World Bank and Global Burden of Disease data to estimate the economic effects of depression. From 2025 to 2050, the global economic burden is projected to reach US\$12 trillion, about 0.460% of annual global GDP. Including depression-related suicides raises this to US\$14 trillion



A world model of the virtual cell

Eric P. Xing and Le Song, 2026

DOI: 10.1016/j.cell.2026.08.042

The idea of an AI-driven digital organism (AIDO), like a virtual cell, is generating excitement in the AI and biology fields. A virtual cell is imagined as a flexible and complex system that can simulate the actions of a real cell. This approach could change how cell biology is studied, moving from trial-and-error lab experiments to systematic digital simulations. This paper introduces the world model framework to make this idea a reality.

SELECTED PUBLICATIONS

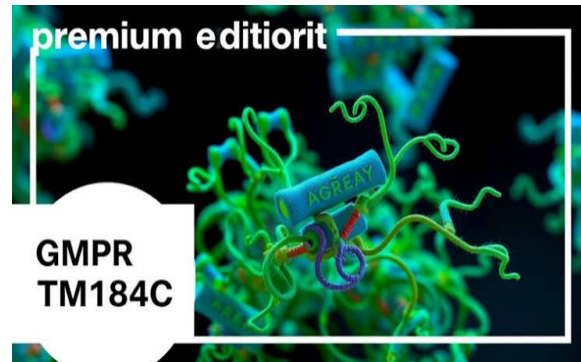


Clinical decision support in hematological malignancies using a case-grounded AI agent

Julian Zoller et al., 2026

<https://doi.org/10.1038/s41591-026-04494-4>

Multidisciplinary tumor boards help make treatment decisions for blood cancers by using detailed patient histories and the latest research. However, access to this support is not equal everywhere. To address this, HemaGuide was created, which is a local agent that organizes clinical documents into structured cases. It can send cases to specialized decision modes and uses over 2,000 real-world cases for reference.

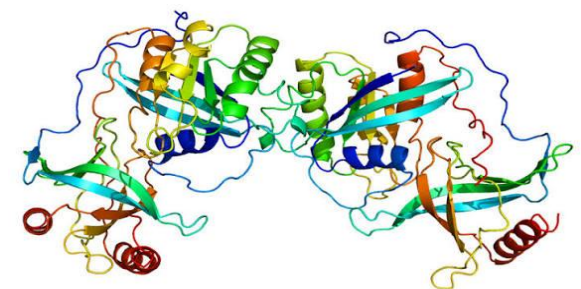


TM184C is a GPCR-like regulator of intercellular exchange and autophagy

Lee et al., 2026

<https://doi.org/10.1038/s41586-026-10993-8>

Sequence similarity is important for protein classification, but many protein functions are still unclear. By studying millions of AlphaFold2 models, researchers found two human protein families, TM184 and PRRT, that resemble G-protein-coupled receptors (GPCRs). TM184C, the most widely expressed of these, is not found on the plasma membrane but instead in moving intracellular vesicles. These vesicles help form connections between cells, allowing for shared materials, which involves a specific part of TM184C.



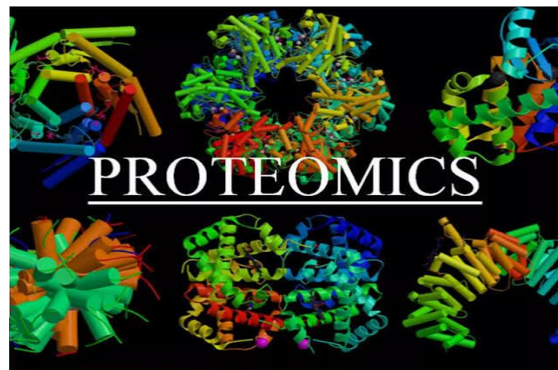
RanBP2-dependent annulate lamellae drive nuclear pore assembly and nuclear expansion

Junyan Lin et al., 2026

<https://doi.org/10.1038/s41467-026-71101-y>

Nuclear pore complexes (NPCs) allow transport between the nucleus and the cytoplasm. They are mostly found in the nuclear envelope but also in structures called annulate lamellae (AL) in the endoplasmic reticulum. AL was thought to exist only in embryonic and cancer cells, but it is also found in normal mammalian cells. Under usual conditions, AL stores pre-formed AL-NPCs that become part of the nuclear envelope.

SELECTED PUBLICATIONS

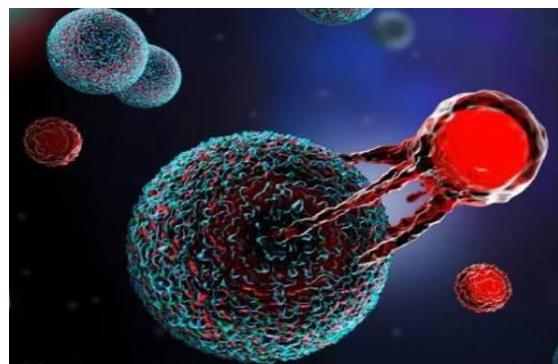


Proteomics identify disease-associated variants in patients with rare diseases undiagnosed after genome sequencing

Julia Carrasco-Zanini et al., 2026

DOI: [10.1126/scitranslmed.aeb1331](https://doi.org/10.1126/scitranslmed.aeb1331)

Genome sequencing often does not identify genetic causes for many patients with rare diseases. Researchers analyzed serum proteins in 424 patients from the 100,000 Genomes Project. They found that low serum protein levels helped confirm diagnoses for 13 patients and suggested candidate genes for 23 others. This study shows that serum proteomics can improve rare disease diagnosis when genome sequencing is not enough.

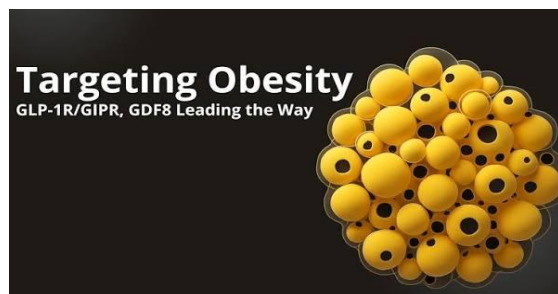


Synthetic transcription factors designed by domain recombination enhance CAR T cell antitumor function

Oliver Takacsi-Nagy et al., 2026

DOI: [10.1016/j.cell.2026.07.054](https://doi.org/10.1016/j.cell.2026.07.054)

Human protein-coding genes evolved by reorganizing parts from older genes. The DESynR method creates new genes from protein families. In human T cells, DESynR activator protein-1 transcription factors outperform natural ones in antitumor tests, enhancing gene expression and unique T cell functions. The study also looks at DESynR ETS and FOX transcription factors for wider use.



GLP-1R and GIPR crosstalk modulates insulinotropic signaling pathways

Peter Lindquist et al., 2026

DOI: [10.1016/j.chembiol.2026.06.003](https://doi.org/10.1016/j.chembiol.2026.06.003)

Drugs targeting GLP-1R and GIPR are effective for type 2 diabetes and obesity. Activating or blocking GIPR improves GLP-1R effects. GLP-1 and semaglutide create heterodimers with GLP-1R and GIPR, affecting signaling in pancreatic cells. Semaglutide and exenatide have different safety profiles, and GIPR changes relate to body fat and diabetes, guiding drug design.

SELECTED PUBLICATIONS

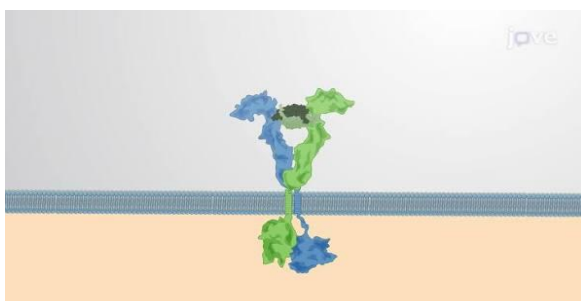


Identification and structural characterization of stereochemical promiscuity in a taste receptor

Rakuto Mizoguchi et al., 2026

<https://doi.org/10.1073/pnas.2534924123>

Taste receptor type 1 (TAS1R) includes receptors for sweet and umami flavors that detect nutrients like sugars and amino acids. This study reveals the crystal structure of the pufferfish Tas1r1/Tas1r3, which binds both l- and d-amino acids. The findings suggest that internal interactions help stabilize the receptor's active form, enabling diverse specificities in TAS1Rs.



RHAMM drives formation of polyploid cancer cells and confers resistance to ER-targeted therapy in breast cancer

Shiyi Wu et al., 2026

<https://doi.org/10.1073/pnas.2535342123>

Endocrine resistance in ER+ breast cancer is a major issue. RHAMM is a key factor in this resistance, aiding in the formation of polyploid cancer cells. It disrupts normal cell functions and is linked to poor patient outcomes. Targeting RHAMM or YAP may improve treatment.



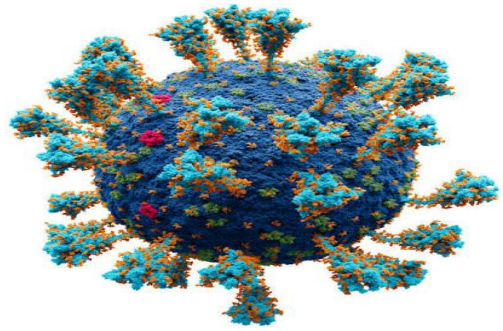
In vivo genome-wide CRISPR screens identify FOXR1 as a suppressor of CD8+ T cell antitumor immunity

Xue Yang et al., 2026

<https://doi.org/10.1073/pnas.2534362123>

T cell dysfunction limits the effectiveness of immunotherapies for solid tumors. A CRISPR screen in CD8+ T cells revealed FOXR1 as a strong suppressor of T cell functions. Removing FOXR1 boosted cytokine production and cytotoxic ability in both murine and human CD8+ T cells, but its overexpression reduced T cell activation. FOXR1 binds to the promoters of key effector genes and represses their expression. Deleting FOXR1 in human CAR T cells improved their effectiveness against solid tumors, suggesting targeting FOXR1 may enhance CAR T cell therapies.

SELECTED PUBLICATIONS



Increased receptor binding and spike glycosylation, remodeled immune escape of surging SARS-CoV-2 subvariant BA.3.2.2/RE.2.2/Cicada

Linjie Li et al., 2026

<https://doi.org/10.1073/pnas.2614163123>

SARS-CoV-2 developed different clades and mutant strains, with BA.1, BA.2.86, and BA.3.2 being notable for their rapid rise and numerous mutations in the spike protein. This study focused on the BA.3.2.2 S protein characteristics, including receptor binding and immune evasion. Some nonneutralizing antibodies against older variants were found to neutralize BA.3.2.2, aiding in viral surveillance and vaccine development.



Decade-long persistence of CD19 CAR T cells in B cell lymphomas

Luca Paruzzo et al.,

<https://doi.org/10.1038/s41591-026-04578-1>

Chimeric antigen receptor (CAR) T cell therapy can achieve long-term remission in lymphoid cancers, but the persistence of CAR T cells in B cell lymphoma is unclear. This study examined 4-1BB-costimulated anti-CD19 CAR T cells in 38 non-Hodgkin lymphoma patients over 10 years. Among long-term responders, unique features of CART19 cells contributed to their durability and survival.



Inhaled siRNA therapy targeting RAGE for pulmonary inflammation: a first-in-human randomized trial

Mark O'Carroll et al., 2026

<https://doi.org/10.1038/s41591-026-04607-z>

The receptor for advanced glycation end products (RAGE) plays a key role in lung diseases such as asthma and chronic obstructive pulmonary disease. ARO-RAGE is an inhaled siRNA that targets RAGE mRNA. Studies in animals showed it reduces inflammation, and a trial in healthy volunteers and asthma patients found it safe and well tolerated. These results support further development of ARO-RAGE for lung diseases.

RECOMMENDED EVENTS & STUDENTSHIP

KEYSTONE SYMPOSIA

Keystone Symposia on Molecular and Cellular Biology Conferences

Most conferences are held in mountain venues across the American and Canadian West. Scientific programs are dictated by field experts, with guidelines from Keystone Symposia to encourage fresh perspectives and broad participation.

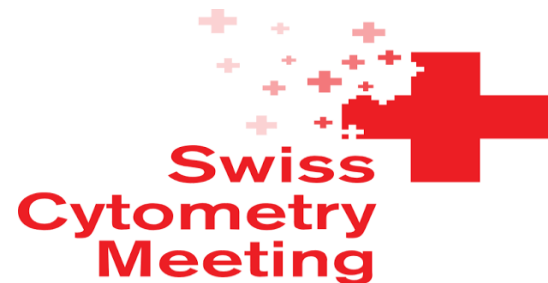
<https://www.keystonesymposia.org/about-us/mission-and-history>



Apply for a Kennedy Scholarship for the academic year 2027-2028

In 1964 a Fund was established in the United Kingdom by public subscription to commemorate President John F. Kennedy. A Memorial was created at Runnymede in perpetuity; and it was resolved that Scholarships to the United States should be offered every year to British Citizens who are graduates of UK Universities. The Scholarships are tenable at Harvard University or the Massachusetts Institute of Technology.

<https://www.kennedytrust.org.uk/articles/applications-now-open-for-kennedy-scholarships/>



Swiss Flow Cytometry School

Join us in Geneva for our Autumn School: Immune Cell Analysis by Flow Cytometry, **November 9–13, 2026.**

https://cytometryschool.ch/inscription-new.php?code=2026-AUTOMN_SCHOOL-20&debut=2026-11-09



EMBO events

Upcoming schedule highlights include:

- Molecular mechanisms in evolution/ecology: 6–9 October 2026, Heidelberg, Germany
- Lab Leadership for Group Leaders: 6–8 October 2026 (Online); 13–16 October 2026, Leimen, Germany
- EMBO Young Scientists' Forum (EYSF): 28–30 October 2026, Dubrovnik, Croatia
- EMBO | EMBL Symposium: 10–13 November 2026, Heidelberg, Germany

<https://www.embo.org/conferences-training/#/>

RECOMMENDED EVENTS & STUDENTSHIP

Call For Sponsors

Academic Drug Discovery Consortium (ADDC) Conference in UCSF: April 12-14, 2027



ADDC 2027 COLLOQUIUM

**APRIL 12-14
SAN FRANCISCO**

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Bridging the Gap: Translating Discovery into Patient Impact

www.addconsortium.org

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