

Biotechnology & Health:

Indian Biotechnology IN

The main news from India is a significant delay in funding for the DBT Biocare programme, an initiative by the Department of Biotechnology (DBT) to support women scientists. Over 75 women scientists who were selected in March 2025 have not yet received the promised funds or salaries, preventing them from starting their research projects. This delay is attributed to a new, centralized fund disbursement policy called the Treasury Single Account system, which has faced "tardy" execution since November 2024.

Cancer Research

There are several new developments in cancer research:

Brain Cancer: A world-first clinical trial in Australia, using an innovative platform called BrainPOP, has provided unprecedented insights into how a new drug, Safusidenib, suppresses tumor activity in patients with low-grade gliomas. The trial is the first to observe the drug's effect on tumor samples taken both before and after treatment.

AI in Oncology: The use of Artificial Intelligence (AI) is rapidly advancing in cancer treatment. AI is being used to analyze cancer genomes, identify promising treatment targets, and improve the speed and accuracy of diagnosis.

AUN Bacteria Treatment: Researchers in Japan have developed a novel, immune-independent cancer therapy using two types of bacteria. Named the AUN bacteria cancer treatment, it works by directly infiltrating and destroying tumors without relying on the patient's immune

system, which could be a breakthrough for patients with compromised immunity.

CRISPR Technology

Advancements in CRISPR gene-editing technology are making it safer and more precise:

Off-target effects: Researchers from MIT and the Broad Institute have engineered a new protein system, LFN-Acr/PA, that can precisely turn off the CRISPR-Cas9 enzyme after it has completed its task. This significantly reduces "off-target" effects, which are unintended DNA breaks that could lead to harmful mutations, thereby improving the clinical safety of gene therapies.

Therapeutic Applications: Clinical trials are continuing to expand for CRISPR-based therapies, with positive results for conditions such as heart disease and liver-related disorders. The FDA's earlier approval of the first CRISPR-based medicine, Casgevy, for sickle cell disease, has paved the way for more widespread application.

Global Health

Health Funding Cuts: The Global Health Cluster has issued a strong warning about the dire consequences of significant cuts to global health funding, primarily driven by a 67% reduction in U.S. financing for development assistance. This has forced NGOs and UN agencies to downsize, leading to potential starvation and a deepening of acute malnutrition in conflict zones like Gaza and Sudan.

Disease Outbreaks: The Pan American Health Organization (PAHO) has issued an alert urging strengthened surveillance and vector control in the Americas due to localized outbreaks of



spardhaguru2022



Spardhaguru Current affairs



Spardhaguru1



SpardhaGuru



Spardha.guru



www.spardha.guru



chikungunya and the ongoing circulation of the Oropouche virus (OROV).

Attacks on Healthcare: The World Health Organization (WHO) has documented over 2,450 attacks on healthcare across 21 countries between January 2024 and August 2025, resulting in more than 2,000 deaths and 2,395 injuries to health workers and patients. The Global Health Cluster is calling for urgent action to protect these humanitarian workers.

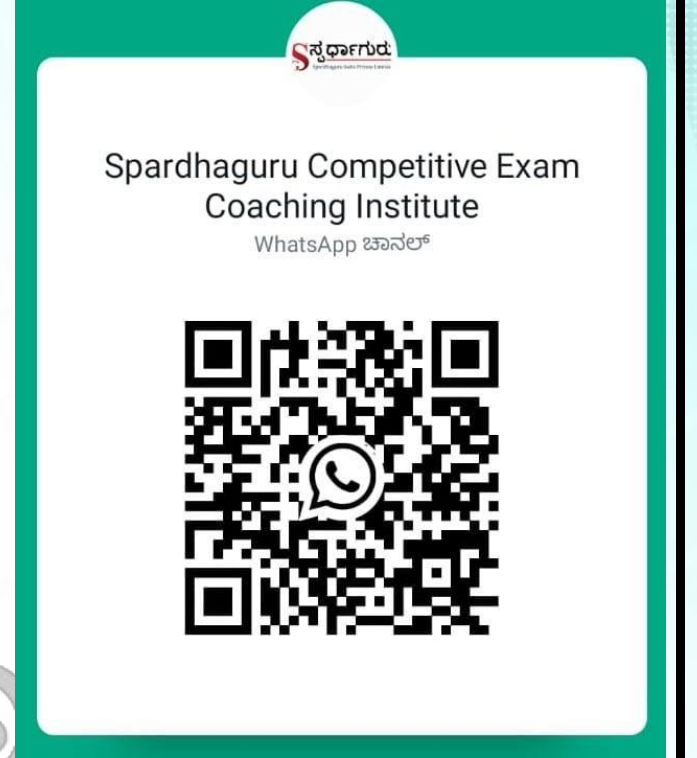
Dear Aspirants,

Stay updated with **important lessons, tutorials, and announcements** by subscribing to our official **WhatsApp Channel!**

Scan the QR code below to join and never miss an update!

Thank you for your continued support and enthusiasm.

Let's keep learning and growing together!



MCQS

1. What is the reason for the delay in funding for the DBT Biocare programme, which supports women scientists in India?

- a) A lack of available funds from the government.
- b) A new, centralized fund disbursement policy called the Treasury Single Account system.
- c) The research projects of the selected scientists were not approved.
- d) The COVID-19 pandemic caused a disruption in financial services.

Answer: b) A new, centralized fund disbursement policy called the Treasury Single Account system.

The news states that the delay is attributed to the "tardy" execution of the new Treasury Single Account system for fund disbursement.





spardhaguru2022



Spardhaguru Current affairs



Spardhaguru1



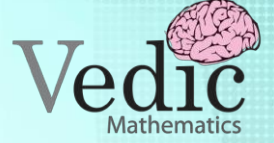
SpardhaGuru



Spardha.guru



www.spardha.guru



2. In the Australian clinical trial, what new drug was found to suppress tumor activity in patients with low-grade gliomas?

- a) BrainPOP
- b) Safusidenib
- c) AUN bacteria
- d) Casgevy

Answer: b) Safusidenib

The news reports that a clinical trial used the drug Safusidenib to suppress tumor activity in low-grade gliomas.

3. What is the unique characteristic of the AUN bacteria cancer treatment developed in Japan?

- a) It requires the patient's immune system to function.
- b) It can only be used on brain tumors.
- c) It directly destroys tumors without relying on the patient's immune system.
- d) It works by strengthening the patient's immune response.

Answer: c) It directly destroys tumors without relying on the patient's immune system.

The news highlights that this immune-independent therapy "works by directly infiltrating and destroying tumors without relying on the patient's immune system."

4. What is the purpose of the new LFN-Acr/PA protein system engineered by researchers from MIT and the Broad Institute?

- a) To enhance the power of the CRISPR-Cas9 enzyme.
- b) To precisely turn off the CRISPR-Cas9 enzyme to reduce "off-target" effects.
- c) To deliver the CRISPR-Cas9 enzyme to targeted cells.
- d) To identify new targets for the CRISPR-Cas9 enzyme.

Answer: b) To precisely turn off the CRISPR-Cas9 enzyme to reduce "off-target" effects.

The text explains that the new protein system was engineered to "precisely turn off the CRISPR-Cas9 enzyme after it has completed its task," which reduces unintended "off-target" DNA breaks.

5. What is the primary cause of the significant cuts to global health funding, according to the Global Health Cluster?

- a) A global economic recession.
- b) Reduced funding from the World Health Organization.
- c) A 67% reduction in U.S. financing for development assistance.
- d) Increased funding for military operations.

Answer: c) A 67% reduction in U.S. financing for development assistance.

The news states that the funding cuts are "primarily driven by a 67% reduction in U.S. financing for development assistance."

6. What is the Pan American Health Organization (PAHO) urging the Americas to do in response to localized disease outbreaks?

- a) Implement a travel ban on all countries.
- b) Develop new vaccines immediately.
- c) Strengthen surveillance and vector control.
- d) Increase public awareness campaigns.

Answer: c) Strengthen surveillance and vector control.

The PAHO has issued an alert urging "strengthened surveillance and vector control" due to outbreaks of chikungunya and the Oropouche virus.





spardhaguru2022



Spardhaguru Current affairs



Spardhaguru1



SpardhaGuru



Spardha.guru



www.spardha.guru



Dear Aspirants,

Stay updated with **important lessons, tutorials, and announcements** by subscribing to our official **YouTube Channel!**

Scan the QR code below to subscribe and never miss an update!

Thank you for your continued support and enthusiasm. Let's keep learning together!



ಸ್ಪರ್ಧಾಗುರು
Spardhaguru India Private Limited

