

2024

GNIPST LIFE SCIENCE BULLETIN

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Guru Nanak Institute of Pharmaceutical Science and Technology

157/F, Nilgunj Road, Kolkata- 700114, West Bengal, India

Message from Director's Office

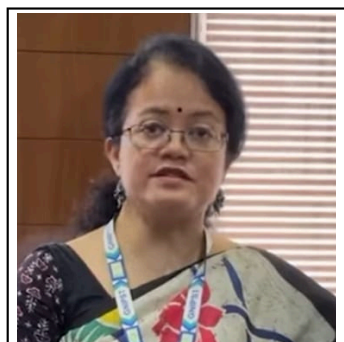


Prof. (Dr.) Abhijit Sengupta

(Director, Guru Nanak Institute of Pharmaceutical Science and Technology)

At Guru Nanak Institute of Pharmaceutical Science and Technology we strive for excellence in our triad of responsibilities: learning, discovery and engagement. Utilizing educational technology and diverse approaches to teaching, our programs bestows students the opportunity to learn fundamental principles and practical applications. Our Life Science Laboratories provide an excellent setting for applying classroom experiences in a simulated practical environment. Research conducted by our faculty provides students with the opportunity to learn about emerging trends in science. Our vision is to be a center of excellence ensuring high-quality value-based education with an international focus to students from all sections of society.

Message from Principal's Office



Prof. (Dr.) Lopamudra Datta

(Principal, Guru Nanak Institute of Pharmaceutical Science and Technology)

It is my great pleasure to extend a warm welcome to you to Guru Nanak Institute of Pharmaceutical Science and Technology , Department of Life Science. We are among the leading educational institutes of West Bengal aiming to provide quality education to students on subjects such as Microbiology, Biotechnology, Genetics, Medical Lab Technology and Hospital Management both UG and PG levels. GNIPST was established in 2005, affiliated to Maulana Abul Kalam Azad University of Technology, West Bengal. We provide high end laboratory facilities to our students, to inculcate practical demonstrations of the subjects along with amazing internship opportunities and placements. We sincerely believe that rich values and traditions imbibed here along with proper educational facilities would carry the students to greater levels in their life. Take LIFE SCIENCE as a career and join with us to have a academically rewarding student life at GNIPST, Department of Life Science.

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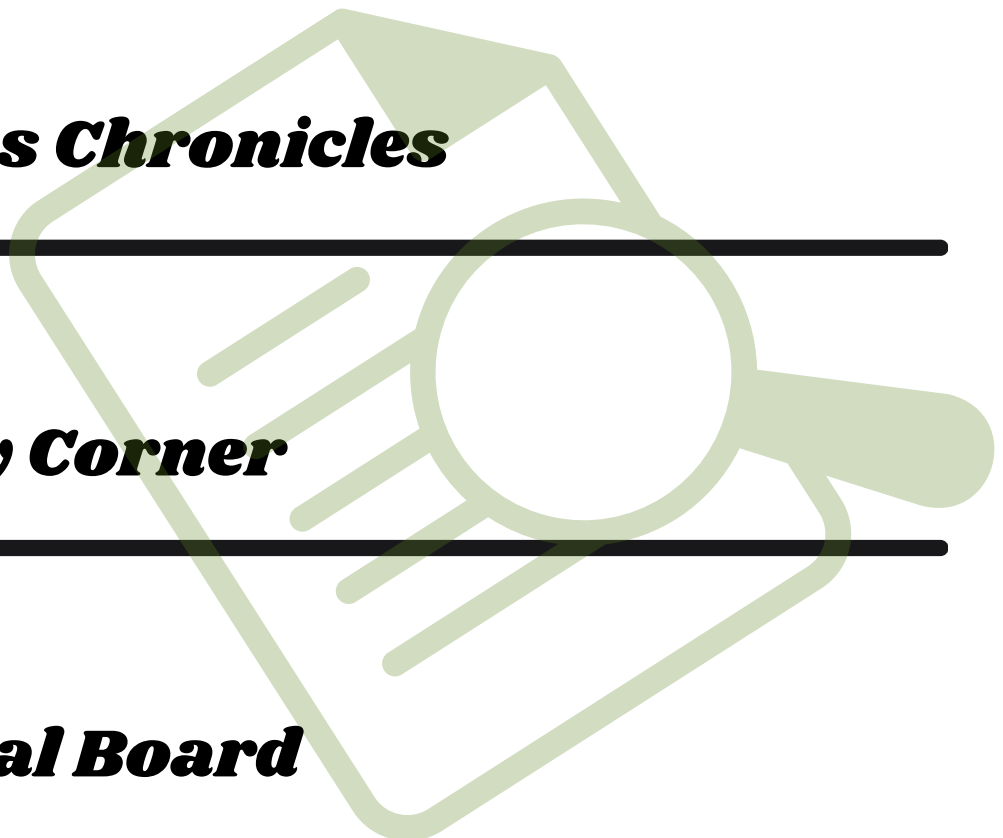
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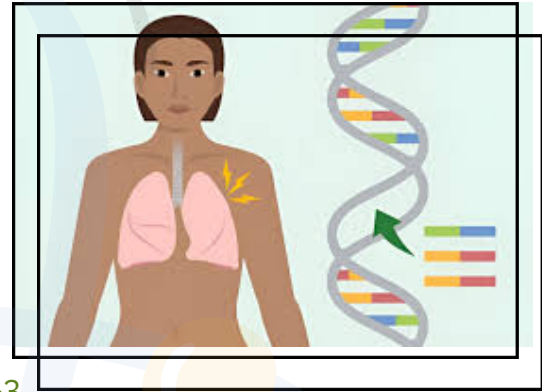
**"THE MIND IS NOT A VESSEL TO BE FILLED,
BUT A FIRE TO BE KINDLED." – PLUTARCH**

WHAT'S NEW IN RESEARCH?

Pioneering Progress!

One-time prime editing targets common genetic cause of cystic fibrosis

In a recent study published in the Nature Biomedical Engineering, a group of researchers optimized prime editing (PE) for the efficient correction of the cystic fibrosis (CF) transmembrane conductance regulator (CFTR) F508del (a three-nucleotide deletion that is the predominant cause of CF) mutation in human airway epithelial cells, achieving high correction efficiencies and functional restoration with minimal off-target effects.

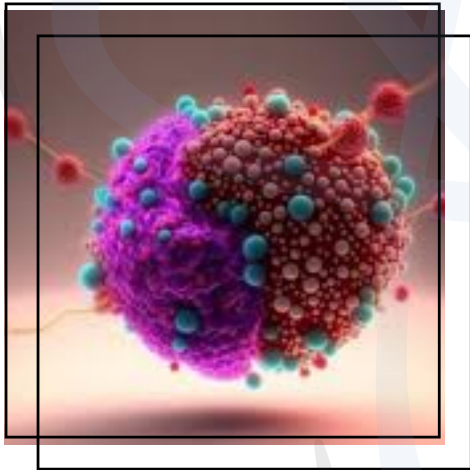


Read more : <https://www.nature.com/articles/s41551-024-01233-3>

Cellular immunotherapy offers hope for solid tumors

Early findings from a clinical trial provide evidence that a new cellular immunotherapy approach may be effective in treating metastatic solid tumors. Researchers from the National Institutes of Health (NIH) genetically engineered normal WBCs, known as lymphocytes, from each patient to produce receptors that recognize and attack their specific cancer cells. These initial findings are from people with metastatic colorectal cancer who had already undergone multiple earlier treatments. The personalized immunotherapy shrank tumors in several patients and was able to keep the tumors from regrowing for up to seven months (published in July 11, 2024, in *Nature Medicine*).

Read more : [1591-024-0310](#)



DID YOU KNOW?

This year marks the **100th anniversary of the first human electroencephalogram (EEG)**, pioneered by German physiologist Hans Berger.



CAMPUS CHRONICLES

What's going on?



Our students of **Bachelors in Medical Lab Technology** are currently interning with the leading Laboratories in Kolkata like **Suraksha Diagnostics, Serum Analysis Centre** . They are gaining hands on experiences of medical labs from experts of the field.

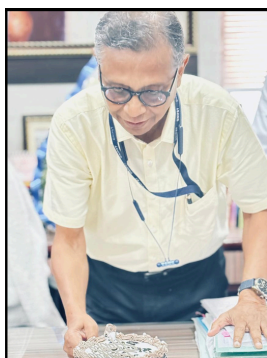


Meet **Team Positive** by **B.Sc Students** in "**Mede in GNIPST Idea Competition**" in collaboration with **Idea-o-Meter by JIS** on **24th July 2024**. Let us hear it from the team: "All In One AI - It's an Umbrella App, Mother of all AI ChatBots , AI Toolkits & AI Server , Operated In public Domain for solve our daily life problems & maintain our life properly by assisting with multiple Ai ChatBots , Toolkits . We are thrilled we could share the idea in this platform."

Our students have been selected for **2024 Science Academies' Summer Research Fellowship Program**. They are working under the guidance of leading scientists.

"Working under **Dr. Shamprasad Varija Raghu** in the Division of **Neuroscience at Yenepoya Research Center (YRC)**, Yenepoya (Deemed to be) University, as part of the summer research fellowship program from the **Indian Academy of Science (IAS)**, has been a fantastic learning experience. Dr. Shamprasad Varija Raghu has been a great mentor, guiding me in using the *Drosophila* model for neuroscience research. I have learned to prepare and clean different types of vials, make and pour media as well as label and plug vials with cotton for the *drosophila*. I have also practiced sorting flies by gender, transferring them between vials, using different methods for analysing the (flies) *drosophila*. This internship has helped me understand how to study epileptic behavior in *Drosophila* and test the effects of anti seizure drugs. I've also learnt the ways for conducting detailed behavioral and molecular tests in our research" says Anoushka Roy, a student of Bachelor in Medical Laboratory Technology.

As said by Anoushka Roy, student of Medical Lab Technology



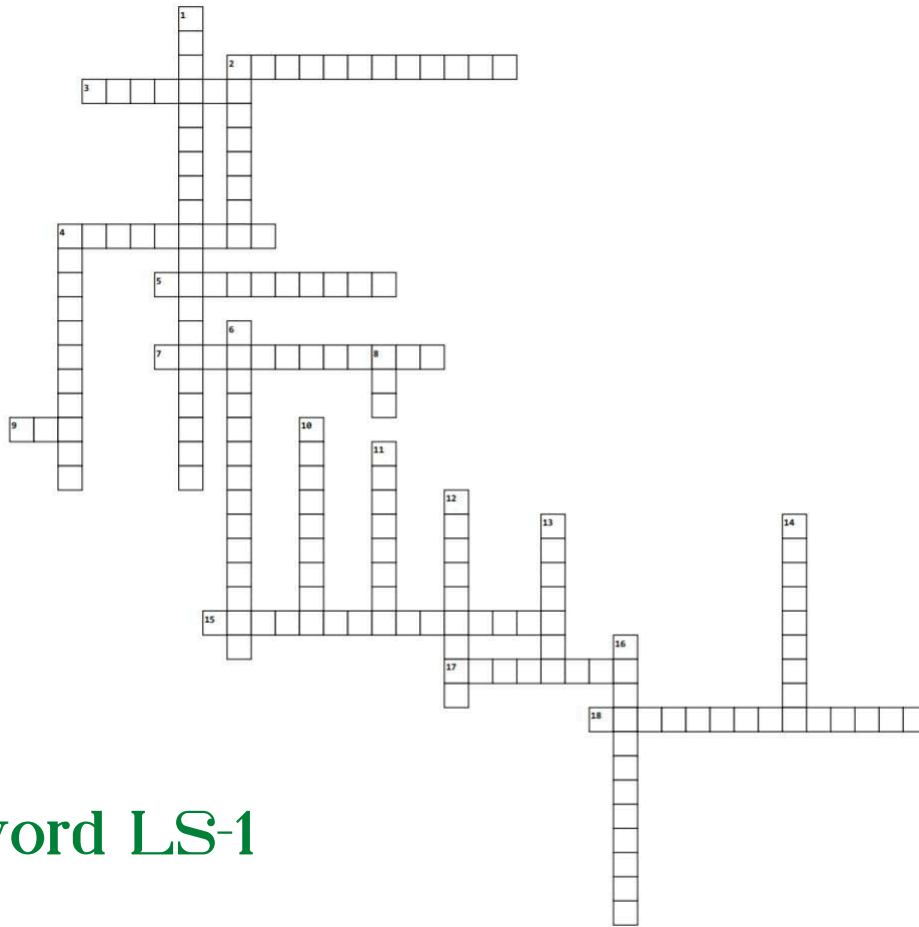
GNIPST organised a **National Seminar on "Traditinal System of Medicine to Combat Diabetes and it's Related Pathological Complications"** on 19th July by Dr. Pallab Kanti Haldar, Depqartment of Pharmaceutical Technology, Jadavpur University.



We celebrated the Birthday of our Honourable Director Sir, **Prof.(Dr.) Abhijit Sengupta** on 18th July.

Visit www.gnipst.ac.in for more information!

ACTIVITY CORNER



Crossword LS-1

Across

2. Network of protein filaments that gives the cell its shape and assists in movement.
3. Stores water, nutrients, and waste materials in plant cells.
4. Assists in cell division and is part of the centrosome.
5. A cell lacking a nucleus and membrane-bound organelles.
7. Known as the "powerhouse" of the cell, it produces energy.
9. Genetic material that contains instructions for cell functioning.
15. A double membrane surrounding the nucleus, controlling the flow of materials.
17. Contains enzymes that break down waste and cellular debris.
18. Another name for the cell membrane, which separates the cell from its environment.

Down

1. An extensive network of membranes involved in protein synthesis.
2. Provides structural support and protection in plant cells.
4. Found in plant cells, it's the site of photosynthesis.
6. Modifies, packages, and transports proteins within the cell.
8. A molecule involved in protein synthesis, among other functions.
10. A cell with a true nucleus and membrane-bound organelles.
11. Tiny structures where proteins are assembled.
12. A specialized structure within a cell that performs a specific function.
13. The control center of the cell, containing genetic material.
14. The gel-like substance that fills the cell and houses organelles.
16. The outer boundary of the cell, regulating the passage of substances.

SUBMIT YOUR ANSWERS:



or



Stay tuned for a shout out to fastest correct answers in the next edition!

EDITORIAL BOARD

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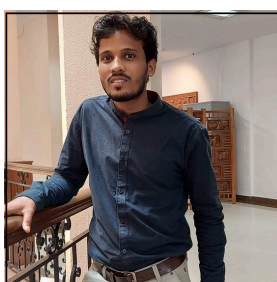
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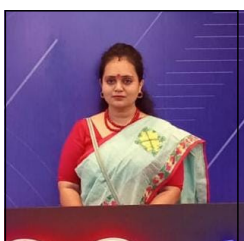


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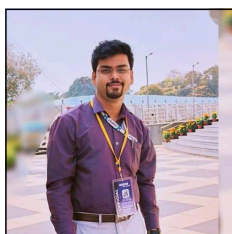
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