Guru Nanak Institute of Pharmaceutical Science and Technology

GNIPST BULLETIN

LIFE-SCIENCE

VOLUME 4 ISSUE 2

Quote of the Month

"Fortune favors the prepared mind." -Louis Pasteur

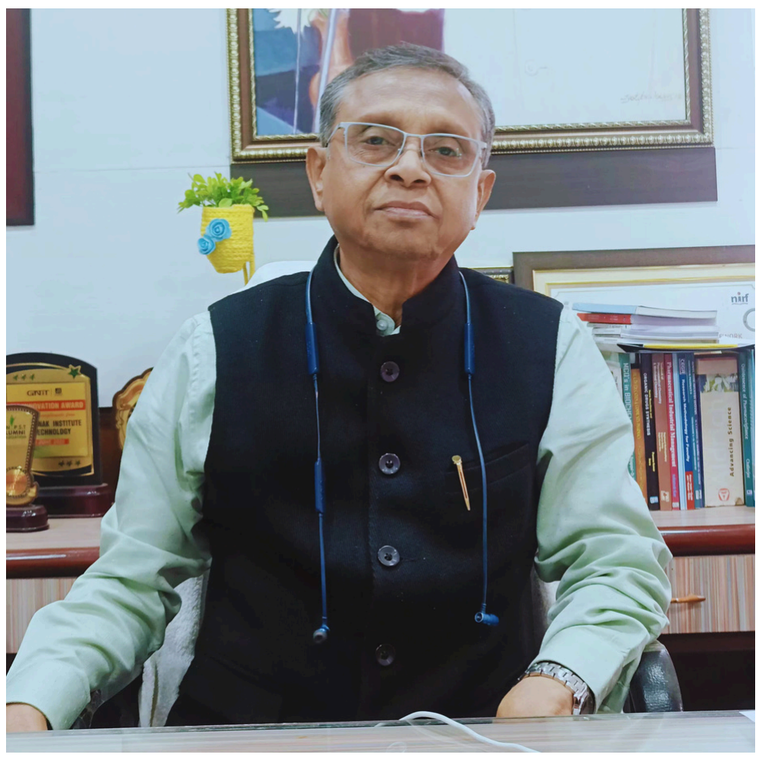
www.gnipst.ac.in

IN REFLECTION AND VISION

The Director's Note

It is with great pride that we present Volume 4, Issue 2 of the GNIPST Bulletin, a vibrant reflection of our collective academic spirit and scientific inquiry. At Guru Nanak Institute of Pharmaceutical Science and Technology- Life Science, we remain committed to fostering a culture of excellence through a blend of rigorous academics, practical exposure, and innovative thinking. The life sciences are rapidly evolving, and our students and faculty continue to contribute meaningfully to this dynamic field.

This bulletin highlights achievements, new initiatives, and the creative energy that drives GNIPST forward. We extend our warmest regards to all readers and well-wishers. May this edition inspire continued learning, collaboration, and progress as we collectively strive toward growth, discovery, and success.



Dr. Abhijit Sengupta

The Principal's Note

Dr. Lopamudra Datta

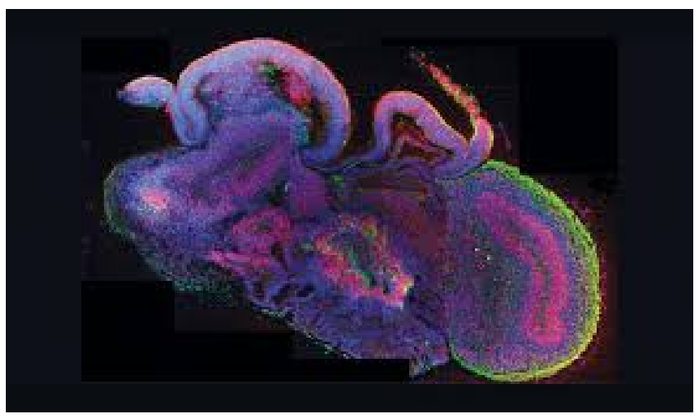
We are delighted to present Volume 4, Issue 2 of the GNIPST Bulletin – Life Science, showcasing the continued journey of our commitment to academic excellence, research, and innovation. As one of the leading institutions in West Bengal, GNIPST remains dedicated to providing advanced laboratory facilities, practical learning experiences, and industry-relevant internships, while nurturing our students with a strong foundation in scientific knowledge, ethical values, and critical thinking.

We extend our warm regards to all our readers, contributors, and well-wishers. Your continued support and enthusiasm encourage us to strive for excellence and to keep advancing in our mission of education, discovery, and service. We look forward to sharing many more stories of achievement, growth, and inspiration in the issues ahead.

INSIDE THE BULLETIN

SCIENCE UPDATE

Lab-Grown Organs Move Closer to Transplant Reality



Researchers have made significant progress in developing functional human organs in laboratory settings using advanced techniques such as stem cell engineering and 3D bioprinting. By guiding stem cells to differentiate into specific cell types and organizing them into complex tissue structures, scientists are able to recreate organ-like systems that closely mimic natural physiology. These lab-grown tissues demonstrate improved compatibility with the patient's own body, thereby reducing the risk of immune rejection commonly seen in traditional transplants. Although still in developmental stages, this innovation holds immense promise in addressing the global shortage of donor organs, advancing personalized medicine, and transforming the future of transplantation and regenerative healthcare.

mRNA Technology Expands Beyond Vaccines

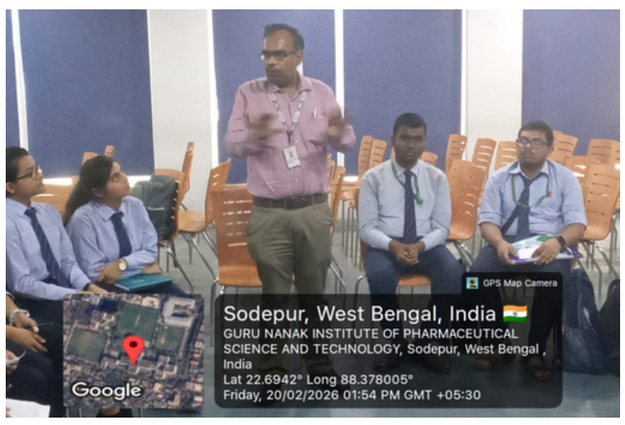
Following its success in vaccine development, mRNA technology is now being widely explored as a powerful tool for treating diseases such as cancer and rare genetic disorders. By delivering synthetic messenger RNA into cells, this approach enables the body to produce specific proteins that can trigger immune responses against tumors or replace defective proteins in genetic conditions. Its flexibility and rapid design process allow scientists to develop highly targeted and personalized therapies more efficiently than traditional methods. Although still under active research, mRNA-based treatments hold great promise in revolutionizing modern medicine and expanding the scope of precision therapeutics.

Discovery of New Deep-Sea Species Reveals Unique Adaptations

Marine biologists have uncovered previously unknown species in deep-sea ecosystems, revealing remarkable adaptations that enable survival under extreme conditions such as high pressure, low temperatures, and complete darkness. These organisms exhibit unique physiological and biochemical traits, including bioluminescence, specialized metabolic pathways, and pressure-resistant cellular structures. Such discoveries not only broaden our understanding of Earth's biodiversity but also provide valuable insights into evolutionary processes and the limits of life in harsh environments. This research may further contribute to advancements in biotechnology, medicine, and our exploration of life in similar extreme habitats beyond Earth.

CAMPUS PULSE

Few Glimpses of GNIPST at JIS SAMAN



Grooming Session for Students of GNIPST

International Conference organised by GNIPST on Frontiers in Medical, Pharmaceutical and Allied Sciences: Translating Innovation into Impact

Day One: 26th February

Taj City Center

Day Two: 27th February

GNIPST

ACTIVITY CORNER

World Cancer Day : 4th February

World Cancer Day, observed on 4th February each year, is a global initiative led by the Union for International Cancer Control to raise awareness about Cancer and promote its prevention, early detection, and treatment. The day emphasizes that many cancers are preventable through healthy lifestyle choices such as avoiding tobacco, maintaining a balanced diet, regular physical activity, and timely screenings. It also highlights the importance of equitable access to diagnosis and care, as well as reducing stigma associated with the disease. Through campaigns, education, and community participation, World Cancer Day aims to unite individuals, organizations, and governments in the global fight against cancer and to inspire action toward saving millions of lives.

Scrambled Words

CIRNOCAGENSE →

OMTSAETTIS →

NAGIEOENCSRCI →

IMONHUTERAPMY →

PAOPTOSIS →

ENOGNCOE →

TUMRROSMIERVCONENIT →

CLICK HERE

To Submit Your Answers!

ANSWER KEY (VOLUME 4 ISSUE 1)

PMAOREELTCYOBIACMRU → Mycobacterium leprae
NLUEANRMGTOAOUS → Granulomatous
SHETAEINASE → Anesthesia (loss of sensation)
YHPRREELIPAOPNYUT → Peripheral neuropathy
MDLITURUGRYPETAH → Multidrug therapy
NIOIMMTYU → Immunity
TSOHOACMRGEASAC → Macrophages

SHOUT OUT TO THE WINNER OF ACTIVITY CORNER OF VOLUME 2 ISSUE 6

Gopal Das, BBA(HM)

Guru Nanak Institute of Pharmaceutical Science and Technology

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- **B.Sc in Biotechnology**
- **B.Sc in Microbiology**
- **B.Sc in Genetics**
- **B.Sc in Medical Lab Technology**
- **BBA in Hospital Management**

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"The best is yet to come. Here’s to a year of new beginnings and limitless possibilities!"

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