



INNOVATIVE COLLEGE OF PHARMACY

(Affiliated to Dr. APJAKTU, BTEUP - Lucknow
and Approved by PCI, New Delhi)

Faculty Development Program

EMERGING TRENDS IN PHARMACEUTICAL RESEARCH

ELIGIBILITY:
All Pharmacy Faculty Members

DURATION :
5 July 2021 To 11 July 2021



Principal:
Dr. J. Joanofarc
Pharmacy

Coordinator:
Dr. Titiksha Sharma
Academic Director

Plot No.-6, Knowledge Park-2, Greater Noida, U.P.
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Date: 1 July 2021

Circular

All the faculty members are hereby informed that the institute has scheduled seven days FDP on "Emerging Trends in Pharmaceutical Research" from 5 July 2021 to 11 July 2021.

The brief date wise Itinerary of the event is as under:

Day	Date	Time	Topic	Resource Person
1	05/07/2021	12M -1PM 1PM -3PM	Inauguration Optical Microscopy and Its Applications	Prof. (Dr.) Pankaj Sharma
2	06/07/2021	2 PM to 3:30 PM	"Propolis - A bee product for holistic health"	Dr. Divya Voehra
3	07/07/2021	2 PM to 3:30 PM	"Biological therapy and the role of India in this therapy field"	Prof. R.K. Saxena
4	08/07/2021	2 PM to 3:30 PM	Nanotechnology-boon to drug delivery	Prof. (Dr.) Kaushal K Chandrul
5	09/07/2021	2 PM to 3:30 PM	Cancer Diagnostics - FDA Pathways	Dr. S. Kumar
6	10/07/2021	2 PM to 3:30 PM	Implementation Research in Cutaneous Leishmaniasis	Prof. (Dr.) Nayyar Parvez
7	11/07/2021	2 PM to 3:30 PM 3:30 PM to 4 PM	Nanotechnology and Bioavailability Enhancement Valedictory	Dr. Anurag Kharkar





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All the faculty members are requested to attend the sessions. The faculty members having their scheduled lectures during the time of the FDP may attend the session after their lectures.

On the completion of the event, the proper certificate shall be conferred to the participants who have attended all the sessions. It is further to be noted that every day there will be short multiple-question tests to ascertain what you have understood during the session.

All are requested to comply with the instructions.

**Copy to:-
Central Office
All Department Heads
IQAC**





Report on Faculty Development Program
Organized by
INNOVATIVE COLLEGE OF PHARMACY
on
Emerging Trends in Pharmaceutical Research
(Period- 5 July 2021 to 11 July 2021)

INTRODUCTION

Pharmaceutical research stands at the forefront of innovation, continually evolving to meet the complex healthcare challenges of our time. From personalized medicine and biopharmaceuticals to advances in drug delivery systems and the integration of artificial intelligence, these trends promise to revolutionize the way we approach disease treatment and prevention. By delving into these transformative trends, this discussion aims to provide a comprehensive overview of the current state and future prospects of pharmaceutical research, emphasizing its profound impact on global health outcomes and the pursuit of improved patient care.

The seven-day Faculty Development Program (FDP) on Emerging Trends in Pharmaceutical Research. It will embark a knowledge to explores the dynamic landscape of emerging trends in pharmaceutical research, highlighting pivotal developments, technologies, and methodologies that are reshaping the industry.





PURPOSE

The primary objective of the Faculty Development Program (FDP) on Emerging Trends in Pharmaceutical Research is to equip educators and researchers with the latest knowledge and skills necessary to navigate and contribute to the rapidly evolving landscape of pharmaceutical research. This FDP aims to explore cutting-edge trends such as personalized medicine, biopharmaceuticals, drug delivery systems, and the integration of artificial intelligence in drug discovery and development.

PROGRAM OVERVIEW

The Faculty Development Program (FDP) on Emerging Trends in Pharmaceutical Research is designed to provide educators and researchers with a comprehensive understanding of the latest advancements shaping the pharmaceutical industry. This program aims to equip participants with the knowledge, skills, and resources necessary to stay abreast of cutting-edge trends and effectively integrate them into their academic and research practice.





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The day-wise FDP program is as under :

Day	Date	Time	Topic	Resource Person
1	05/07/2021	12M -1PM 1PM -3PM	Inauguration Optical Microscopy and Its Applications	Prof. (Dr.) Pankaj Sharma
2	06/07/2021	2 PM to 3:30 PM	“Propolis - A bee product for holistic health”	Dr. Divya Voehra
3	07/07/2021	2 PM to 3:30 PM	“Biological therapy and the role of India in this therapy field”	Prof. R.K. Saxena
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7	11/07/2021	2 PM to 3:30 PM 3:30 PM to 4 PM	Nanotechnology and Bioavailability Enhancement Valedictory	Dr. Anurag Kharkar



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DAY-WISE REPORT

A seven-day Faculty Development Programme was organized in the institute from **5 July 2021 to 11 July 2021.**

The day-wise report in the brief is being encapsulated for the reference of all concerned.



Session Topic: Inauguration & Optical Microscopy and Its Applications

Timing: 12 PM to 3 PM .

Resource Person: Prof. (Dr.) Pankaj Sharma

The first day of the Programme commenced with the **formal welcome** of the **Guest Prof. Navin Mathur** and the Resource Person

Prof. and all participants by Principal **Dr. J.Joanofarc.**

Prof. , our esteemed resource person, provided valuable insights into the Recent advancements in optical microscopy include faster imaging speeds, higher spatial resolution, and improved compatibility with live-cell imaging and complex biological environments. Emerging technologies such as adaptive optics and computational imaging promise further breakthroughs in resolution and sensitivity.

Moreover, Prof. discussed about the Principles of Optical Microscopy that Optical microscopy utilizes visible light or other electromagnetic radiation within the optical spectrum to magnify small objects that are otherwise invisible to the naked



eye. Key components typically include a light source, lenses for magnification and resolution, and detectors for image formation. The interaction of light with specimens provides detailed information about their structure, composition, and dynamics

Overall, the session provided attendees with valuable insights into the principles, advancements, and diverse applications of optical microscopy across various fields.



Session Topic: Propolis - A bee product for holistic health

Timing: 2 PM to 3:30 PM

Resource Person: Dr. Divya Voehra

In this enlightening session, Dr. Divya Voehra, our distinguished resource person, emphasized the critical role of Propolis, which is a natural resinous substance produced by honeybees from plant exudates and their own secretions. This remarkable substance has gained attention for its diverse therapeutic properties and potential benefits for holistic health

The session commenced with an overview of propolis which represents a fascinating example of nature's pharmacy, offering a range of potential health benefits for holistic wellness. Its centuries-old use in traditional medicine continues to inspire modern research and applications, making it a valuable natural remedy in today's health-conscious world.



This introduction delves into the multifaceted realm of propolis, exploring its composition, traditional uses in folk medicine, and emerging scientific insights. From boosting immune function to promoting skin health and supporting overall well-being, propolis exemplifies nature's profound capacity to provide holistic solutions for human health. By examining its historical significance and contemporary applications, this discussion aims to underscore propolis as a versatile and promising natural remedy in the pursuit of holistic health and wellness.



Session Topic: “Biological therapy and the role of India in this therapy field”

Timing: 2 PM to 3:30 PM

Resource Person: Prof. R.K. Saxena

The session commenced with an overview of “Biological therapy and the role of India in this therapy field”. Biological therapy, also known as biologic therapy or biotherapy, represents a cutting-edge approach in medicine that harnesses natural substances and processes within living organisms to treat diseases. This introduction explores the transformative impact of biological therapy and India's pivotal role in advancing this dynamic field.

Biological therapies encompass a diverse range of treatments, including monoclonal antibodies, vaccines, cell therapies, and gene therapies, among others. These therapies are designed to target specific molecules, cells, or biological





pathways involved in disease processes, offering precision and efficacy in treatment.

India's contribution to biological therapy is increasingly significant, fueled by its robust pharmaceutical industry, world-class research institutions, and a wealth of scientific talent. Indian researchers and biotech companies are at the forefront of developing innovative biologic drugs, enhancing accessibility to advanced therapies, and addressing global health challenges.

This discussion will explore India's achievements, challenges, and future prospects in biological therapy, highlighting its role in shaping the landscape of modern medicine and improving patient outcomes worldwide.



Session Topic: Nanotechnology: boon to drug delivery

Timing: 2 PM to 3:30 PM

Resource Person: Prof. (Dr.) Kaushal K Chandrul

In this informative session, Prof. (Dr.) Kaushal K Chandrul, our esteemed resource person, provided invaluable insights into the realm where science fiction meets reality, where tiny particles hold the promise of monumental change in healthcare: nanotechnology in drug delivery. Nanotechnology, the manipulation of matter at the nanoscale, has revolutionized many fields, but perhaps none more promising than medicine.

This vision is becoming reality thanks to nanotechnology. Nanoparticles, often





smaller than viruses, can be engineered to carry therapeutic agents like drugs, genes, or proteins directly to their targets in the body. These carriers can bypass biological barriers, enhance drug stability, and control release kinetics, making treatments more effective and less invasive.

In conclusion, he concluded that nanotechnology holds immense promise as a boon to drug delivery and beyond. Its ability to transform how we diagnose and treat diseases underscores its potential to revolutionize healthcare. As we continue to explore this frontier, let us embrace collaboration, innovation, and ethical stewardship to harness nanotechnology's full potential for the betterment of human health worldwide.



Session Topic: Cancer Diagnostics -FDA Pathways

Timing: 2 PM to 3:30 PM

Resource Person: Dr. S. Kumar

In this engaging session, Dr. S. Kumar, our esteemed resource person, facilitated a dynamic research discussion address a critical aspect of modern healthcare: cancer diagnostics and the regulatory pathways overseen by the U.S. Food and Drug Administration (FDA). Cancer remains one of the most pressing health challenges of our time, affecting millions worldwide. Accurate and timely diagnosis is paramount for effective treatment and improved patient outcomes.

The session commenced with an overview of the importance the FDA in ensuring the safety, efficacy, and reliability of diagnostic tests used in the detection and





management of cancer. This oversight encompasses various pathways through which cancer diagnostic tests can achieve regulatory approval or clearance.

In conclusion, Dr. S. Kumar's research discussion session provided participants with a valuable opportunity to engage in meaningful dialogue, share expertise, and build networks within their academic community. Participants left the session inspired and motivated to continue their research journeys with renewed enthusiasm and insight.



Session Topic: Implementation Research in Cutaneous Leishmaniasis

Timing: 2 PM to 3:30 PM

Resource Person: Prof. (Dr.) Nayyar Parvez

In this enlightening session, Prof. (Dr.) Nayyar Parvez, our esteemed resource person, delved into the Implementation Research in Cutaneous Leishmaniasis. With a wealth of knowledge and experience, Prof. (Dr.) Nayyar Parvez guided participants through an exploration of the ethical principles and practices essential for conducting research with integrity and professionalism.

The session commenced with an overview on the Prevention strategies, including vector control measures and health education initiatives, are evaluated to reduce





transmission rates and enhance community awareness. Diagnostic research aims to improve accuracy and accessibility of diagnostic tools, ensuring timely and effective case detection. Moreover, implementation studies assess the integration of CL diagnosis and treatment within existing healthcare systems, emphasizing capacity building and stakeholder engagement to strengthen healthcare delivery.



Session Topic: Nanotechnology and Bioavailability Enhancement

Timing: 2 PM to 3:30 PM

Guest : Prof. Anil Varshaneya

Resource Person: Dr. Anurag Kharkar

In this culminating session, Dr. Anurag Kharkar provided invaluable insights into nanotechnology and Applications of nanotechnology in enhancing bioavailability span various therapeutic areas, including oncology, infectious diseases, and chronic conditions. For instance, anticancer drugs encapsulated in nanoparticles can achieve higher tumor accumulation and therapeutic efficacy compared to conventional formulations.

Dr. Anurag Kharkar began the session by emphasizing the importance of nanoparticles can protect drugs from enzymatic degradation and acidic conditions in the gastrointestinal tract, extending their circulation time and improving stability. Furthermore, nanotechnology facilitates targeted delivery by functionalizing





nanoparticles to recognize specific cells or tissues, ensuring precise drug release and minimizing systemic exposure.

During the valedictory segment, Dr. Anurag Kharkar expressed their gratitude to the participants, organizers, and fellow resource persons for their contributions to the success of the workshop. They highlighted the importance of Emerging Trends in Pharmaceutical Research.

In conclusion, the session on research writing and valedictory by Dr. Anurag Kharkar provided participants with practical guidance, encouragement, and inspiration as they concluded their journey in the workshop. Their insights and reflections served as a fitting conclusion to an enriching and impactful learning experience, leaving participants motivated to apply their newfound knowledge and skills in their research endeavors.





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ATTENDANCE LIST OF THE PARTICIPANTS

S.No.	Name of the Faculty	Signature
1	Dr. J. Joanofarc	
2	Dr. Amarjeet Singh	
3	Ms. Chanda ray	
4	Ms. Jaya Bhati	
5	Ms Parul Sinha	
6	Ms. Sangeeta Singh	
7	Ms. Deepika Chauhan	
8	Ms. Tabassum Malik	
9	Ms. Nida Hafiz	
10	Ms. Sandhya Sharma	
11	Mr. Bijender	
12	Ms. Ashwathy	
13	Ms. Monika Setia	
14	Ms. Suman Lata Rawat	
15	Ms. Nidhi Rani	
16	Ms. Sapna Salar	
17	Mr. Vikas Sharma	
18	Ms. Priyanka Bhati	
19	Mr. Adil Parvez	
20	Ms. P V Vani	





Faculty Development Program
Organized by
INNOVATIVE COLLEGE OF PHARMACY
on
"Emerging Trends in Pharmaceutical Research"
(Period-15 July 2021 to 11 July 20212)

FEEDBACK FORM

Thank you for participating in our Faculty Development Program (FDP) on Ethical Dimensions in Research and Professional Integrity. Your feedback is invaluable to us as we strive to continuously improve our programs. Please take a moment to share your thoughts by completing the following feedback form:

1. How satisfied were you with the FDP overall?
 - Extremely satisfied
 - Very satisfied
 - Somewhat satisfied
 - Not satisfied
2. Were the topics covered in the FDP relevant to your role as a teaching staff member?
 - Yes





- No
 - Somewhat
3. How would you rate the quality of the content presented during the FDP?
- Excellent
 - Good
 - Fair
 - Poor
4. Were the sessions engaging and interactive?
- Yes, very much
 - Somewhat
 - Not really
5. Do you feel that you acquired new knowledge or skills related to ethical dimensions in research and professional integrity?
- Yes
 - No
 - Partially
6. How effective were the facilitators/resource persons in delivering the content?
- Extremely effective
 - Effective
 - Somewhat effective
 - Not effective
7. How would you rate the organization and logistics of the FDP?
- Excellent





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- Good
- Fair
- Poor

8. Do you have any suggestions for improving future FDPs on similar topics?

Thank you for taking the time to provide your feedback. Your input will help us enhance future iterations of the FDP and better meet the needs of our teaching staff.

Sincerely,

[INNOVATIVE COLLEGE OF PHARMACY]





Test Questions for all Day Sessions

Result Analysis : 90% of participants felt that the session was excellent and/or 10%. It was a very good session.

- Is personalized medicine an emerging trend in pharmaceutical research?
- Are mRNA-based vaccines considered a promising area of research in pharmaceuticals?
- Is artificial intelligence being increasingly used for drug discovery and development?
- Are nanotechnology applications being explored for targeted drug delivery?
- Is there a growing focus on natural product-based drug discovery?
- Are there efforts to develop vaccines for diseases that were previously considered difficult to target?
- Is there increasing research into the use of CRISPR technology for genetic therapies?
- Are there ongoing efforts to enhance drug efficacy and safety through pharmacogenomics?
- Is there a trend towards developing sustainable and eco-friendly pharmaceutical manufacturing processes?
- Are researchers exploring the potential of psychedelic drugs for therapeutic purposes?

