



RKGIT
(Pharmacy)



Pharmaware

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VISION

To be recognized as a foremost institution imparting quality pharmacy education to aspiring pharmacists with right competencies, attitude, skills and knowledge, for the greater benefit of mankind.

MISSION

To produce highly qualified and motivated graduates possessing fundamental knowledge and soft skills, who can provide sustainable solutions to health care problems.

To develop partnerships with industries, eminent institutes and government agencies in the field of pharmaceutical sciences.

To serve the community, at local, national and international levels, with a deep awareness of our ethical responsibilities towards profession and society.

PROGRAM EDUCATIONAL OBJECTIVES

OUR GRADUATES SHOULD HAVE:-

1. Have quality theoretical knowledge and practical skills on all core and allied fields of pharmaceutical sciences, so that they can face the challenges of the globalized scenario and contribute to the progress of the nation.
2. Enjoy successful careers in all settings of Pharma sector, by engaging themselves in professional development through leadership, communication, skills, teamwork and entrepreneurship.
3. Function ethically and lawfully in professional environment and exhibit good competency in their work culture.
4. Act as a link between healthcare system and community, so as to serve the society by the transmitting their knowledge, with a sense of social responsibility.
5. Participate in lifelong learning through advanced degrees, continuing education and/or professional activities.

AKTU APPROVED PHD RESEARCH CENTRE

NBA ACCREDITED (B.PHARM)

DRUG INFORMATION

AI Identifies Antimalarial Drug for Osteoporosis Treatment

Artificial intelligence has exploded in popularity and is being harnessed by some scientists to predict which molecules could treat illnesses, or to quickly screen existing medicines for new applications. Researchers have used one such deep learning algorithm, and found that dihydro-artemisinin (DHA), an antimalarial drug and derivative of a traditional Chinese medicine, could treat osteoporosis as well. The researchers say that this work demonstrates that DHA is a promising therapeutic agent for osteoporosis. The team showed that in mice, DHA effectively reversed osteoporosis-related bone loss. In healthy people, there is a balance between the osteoblasts that build new bone and osteoclasts that break it down. But when the "demolition crew" becomes overactive, it can result in bone loss and a disease called osteoporosis, which typically affects older adults. The team ran the program on a profile of differently expressed genes in newborn and adult mice. One of the top-ranked compounds identified was DHA, a derivative of artemisinin and a key component of malaria treatments. Administering DHA extract for six weeks to mice with induced osteoporosis significantly reduced bone loss in their femurs and nearly completely preserved bone structure. To improve delivery, the team designed a more robust system using injected, DHA-loaded nanoparticles.

Reference: <https://www.sciencedaily.com/releases>

NEW DRUG APPROVALS

The following drugs have recently been approved in 2023- 2024 by the FDA.

- **ZELSUVMI (berdazimer sodium) Topical Gel**- It is a nitric oxide-releasing agent indicated for the topical treatment of molluscum contagiosum (MC) in adults and pediatric patients 1 year of age and older.
- **WAINUA (eplontersen) Injection** - It is a transthyretin-directed antisense oligonucleotide indicated for the treatment of the polyneuropathy of hereditary transthyretin-mediated amyloidosis in adults.
- **FILSUVEZ (birch triterpenes) Topical Gel** -It is a topical birch bark extract indicated for the treatment of wounds associated with dystrophic epidermolysis bullosa and junctional epidermolysis bullosa in adult and pediatric patients 6 months of age and older.
- **ALYGLO (immune globulin intravenous, human-stwk) Liquid for Intravenous Injection** – It is a 10% immune globulin liquid for intravenous injection indicated for the treatment of primary humoral immunodeficiency (PI) in adults.
- **IWILFIN (eflornithine) Tablets**-It is an ornithine decarboxylase inhibitor used to reduce the risk of relapse in adult and pediatric patients with high-risk neuroblastoma (HRNB)

Reference: <https://www.drugs.com/newdrugs.html>

HERBAL INFORMATION

HADJOD (VELDT GRAPE)

Botanical name: *Cissus quadrangularis*

Family: vitaceae

Kingdom: Plantae



Cissus quadrangularis, commonly known as ‘Hadjod’ in Hindi, is a fleshy plant belonging to the *Vitaceae* family. It is a climbing herb that turns leafless as it ages. It is a shrubby climber that can grow up to 1.5 metres tall. The plant blossoms small greenish-white flowers. It can grow up to 500 meters above sea level in plain coastal areas, forests, and wastelands. The leaves are 2.5-5 cm long and the stem measure 8–10 cm in length and 1–1.5 cm in width. Stem cuttings are used to propagate the herb from June to December

HADJOD IS USED IN FOLLOWING CONDITIONS

- In the treatment of Ulcer
- In the treatment of various bacterial, viral and worm infections.
- To reduce Obesity
- In the treatment of Cancer
- Used in Diabetes
- Act as Anti-inflammatory agents
- used as Hemorrhoids
- used as Antioxidant
- To Treat infertility
- In the treatment of Osteoporosis.

HADJOD PREPARATIONS

- Hadjod Tablet
- Hadjod Pure Extract Capsules
- Hadjod Stem powder



https://en.wikipedia.org/wiki/Cissus_quadrangularis

<https://www.ayurveda.hu/api/vol-1/pdf>

STUDENT CORNER

APPROACHES OF NANOPARTICLES

Introduction

Nanoparticles are defined as particulate dispersions or solid particles with a size in the range of 10-1000nm. The drug is dissolved, entrapped, encapsulated or attached to a nanoparticle matrix. Depending upon the method of preparation, nanoparticles, nanospheres or nano capsules can be obtained. Nano capsules are systems in which the drug is confined to a cavity surrounded by a unique polymer membrane, while nanospheres are matrix systems in which the drug is physically and uniformly dispersed. In recent years, biodegradable polymeric nanoparticles, particularly those coated with hydrophilic polymer such as poly (ethylene glycol) (PEG) known as long-circulating particles, have been used as potential drug delivery devices because of their ability to circulate for a prolonged period of time and target a particular organ, as carriers of DNA in gene therapy, and their ability to deliver proteins, peptides and genes.

Advantages:

- Nanoparticle drug carriers have higher stabilities.
- Nanoparticles have higher carrier capacity.
- Feasibility of incorporation of both hydrophilic and hydrophobic substances.
- Feasibility of variable routes of administration.
- Nanoparticles are biodegradable, non-toxic and capable of being stored for longer periods.
- Nanoparticles can also be used for controlled delivery of drugs.
- Nanoparticles reduces dosing frequency and have higher.

Applications of Nanoparticles:

1. **Medicine:** Nanoparticles are used in drug delivery systems to target specific cells or tissues, reducing side effects and improving efficacy. They are also used in medical imaging techniques like MRI and in the development of biosensors for disease detection.
2. **Electronics:** Nanoparticles are used in electronics for their conductive properties. They are used in the production of smaller and more efficient electronic components like transistors and memory devices.
3. **Catalysis:** Nanoparticles serve as catalysts in chemical reactions, speeding up the reaction rate and reducing the amount of energy required. They are used in various industrial processes, including fuel production and environmental remediation.
4. **Cosmetics:** Nanoparticles are used in cosmetics and sunscreens for their ability to provide better coverage and UV protection. They can also improve the texture and feel of cosmetic products.
5. **Food packaging:** Nanoparticles are used in food packaging to improve barrier properties, increase shelf life, and reduce the risk of contamination.
6. **Environmental remediation:** Nanoparticles are used to remove pollutants from water and soil through processes like adsorption and catalysis, helping to clean up environmental contaminants.
7. **Energy:** Nanoparticles are used in the development of more efficient solar cells, batteries, and fuel cells. They can also be used to improve the efficiency of energy storage systems.

**MR.SHIVAM TYAGI, MS. SHIVANI CHOUDHARY, MR.SAURABH SINGHAL
M.PHARM (PHARMACOLGY)**

NEWS AT A GLANCE

Talks organized

RKGIT (Pharmacy) organized a talk on "How to Approach and Crack GPAT" session on 22nd December 2023. Dr. Indu Singh Assistant Professor from Amity Institute of Pharmacy delivered this informative session and discussed key points required for GPAT preparation. She also shared a few other platforms where students can apply in foreign universities for post-graduation in Pharmacy. The session was very interactive and informative.



RKGIT (Pharmacy) organized a talk with GDC classes for D Pharm students to create awareness regarding Exit Exam. They shared the mantra for qualifying the exam on 29th December 2023



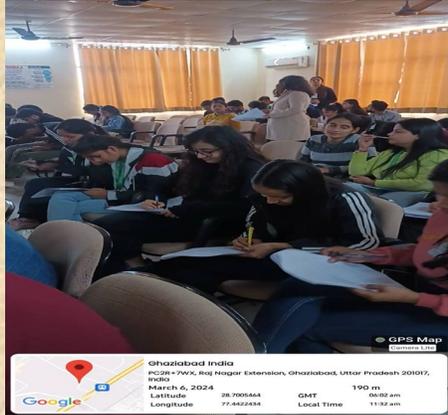
Workshop Organized

Raj Kumar Goel Institute of Technology (Pharmacy) organized a workshop on "Basic Research Techniques" workshop on 5th December 2023. Mr Nazakat Ali, CEO, of Biotenic Pharma Pvt Ltd. provided hands on various techniques such as Routes of drug administrations, Blood withdrawal techniques, and Ovariectomy.



National Pharmacy Education Day

An Activity was organized by RKGIT Pharmacy on the occasion of National Pharmacy Education Day on 6th March, 2024. Quiz Competition was also organized on this occasion. Ms Sweta (B.Pharm IIIrd yr) won the first prize as well as more than 20 students awarded by certificate of appreciation.



International conference attended

M.Pharm (Pharmacology) students, Mr Harsh Tyagi, Mr Jaiprakash, Ms Anjali Sharma actively participated (online) in AIMST international conference on health sciences and technology held at AIMST University, Kedah, Malaysia on 24th and 25th Nov 2023.



“YOU CAN NOT BELIEVE IN GOD UNTILL YOU BELIEVE IN YOURSELF”

-SWAMI VEVEKANADA



Pharmacy Jagrukta Yatra

Raj Kumar Goel Institute of Technology (Pharmacy) welcomed Pharmacy jagrukta yatra organized and delegated by Pharmalok on 28th Feb 2024. Dr Santosh kumar (Dean, Quantam university, Roorkee), Mr Amit Jha (National coordinator, Pharmalok) comprised the importance of pharmacy and contribution of Late Dr (Prof) M.L.Schroff to the students. Dr Monika Sachdeva (Principal), Dr Munendra Mohan Varshney (Professor, Dean SW) flag off Pharmacy Jagrukta Yatra from RKGIT. Dr Laxman prasad (Advisor, RKGIT), Dr Pankaj Sharma (Associate professor) and pharmacy faculty were also present on this occasion.



Guest of Honor

Dr Munendra Mohan Varshney (Professor and Dean SW) and Dr Pankaj Sharma (Associate Professor) served as guest of honor in PCI Sponsored Pharmanveshan 24 Organized BY Subharti University, Meerut



Focus Group discussion

Dr Munendra Mohan Varshney (Professor and Dean SW) invited and attended for Focus group discussion on employability in Higher education organized by Cambridge University Press and Assessment, New Delhi on 15th March 2024. Mr Manish Kumar Varshney (Territory Manager) organized the event and welcomed the patrons from distinguished institutes. Ms Anshika Bhardwaj (B,Pharm 4th Yr) also participated in student activity.



DRDO sponsored conference attended

B.Pharm VIIth Sem students (Mr Vishal Gupta, Mr. Aditya Srivastava, Mr. Shivnandan and Mr. Mukund Vikram singh) attended DRDO sponsored National conference on Smart diet solution Harnessing AI for innovative food adaptation in cold and high altitude on 15-16 march 2023 organized by MIET, Dept of Pharmacy, Meerut



Publications

Design Patent Published/Granted

Dr Neha Krishnarth, Associate Professor has been granted an Indian design Patent on Asthma Detecting Band, Design no 374337-001.



Book Chapter Published

Congratulations to Dr Neha Krishnarth, Associate Professor, for publishing a book chapter Nanopesticides Formulation and Applications in the book Nanopesticides, Nanoherbicides, and Nanofertilizers published by CRC Press Taylor & Francis Group.

Papers Published

Sharma N, Chaudhary A, Sachdeva M. An Insight Into the Structure–Activity Relationship Studies of Anticancer Medicinal Attributes of 7-Azaindole Derivatives: A Review. *Future Med Chem.* 2023 Dec; 15(24):2309-2323 doi: 10.4155/fmc-2023-0216

Sharma N, Chaudhary A, Sachdeva M. Design, Synthesis, Anticancer Activities and Comparative Molecular Docking Studies of a Novel Class of 7-azaindole Analogs as Potent PARP-1 Inhibitors. *Indian J of Pharmaceutical Education and Research.* 2024; 58(2):624-36

Mehta G, Tyagi DR, Sachdeva M, Tripathi R, Tyagi H. An Observational Study on Cosmetics Use-related Adverse Effects: Cosmetovigilance Need of the Day. *Drug Research.* 2024 Mar. doi: 10.1055/a-2251-6655. Epub ahead of print. PMID: 38467158

Students' Achievement

- Mr Sahil Rajput and Ms Khusboo, Students of B.Pharm IV year secured 1st and 2nd position respectively in Delhi State Arm Wrestling Championship Organised by Royal Sports Club on 20th & 21st January, 2024 at Dayal Singh College, University of Delhi, Lodhi Road, New Delhi
- Mr Deepak Mandiyal, Student of B.Pharm III Year, won FIRST prize in T-Shirt painting Competition at Scintilla Fest, hosted by Jaipuria School of Buisnes on 14th March, 2024



Industrial visit

RKGIT (Pharmacy) organized three days Industrial visit to Indian Pharmacopoeia Commission (IPC), Ministry of Health and Family Welfare, Government of India, Sector-23 Rajnagar, Ghaziabad, from 6th Nov to 8th Nov 2023 Under the supervision of Prof. (Dr) Dilip Kumar Gupta, (T&P, Industry and Hospital Training Coordinator of Pharmacy) along with three faculty members Prof. (Dr) Vishwanath Agarhari, Ms. Geetika Mehta (Associate professor) and Mr. Alok Mishra (Assistant professor) for M. Pharm I & II Year (27 students), B.Pharm IV (VII Sem, 65 students) & III Year (V Sem, 14 students). Total 106 students (Batch wise) were visited. Students were benefited with all the necessary information regarding safe use of medicines, priority of Indian Pharmacopoeia Commission in National Coordination Center (NCC) for Pharmacovigilance Programme of India (PvPI), Pharmacopoeia Monograph and the handling of various sophisticated instrument processes.

Glimpse of Industrial visit



**Wishing all the readers
HAPPY AND PROSPEROUS
HOLI**

REGARDS

Pharmaware Team

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