



**RKGIT**  
(Pharmacy)



# Pharmaware

A quarterly e-News Letter  
Issue Oct 24; Volume 31

## Chief Patrons

Shri Dinesh Kumar Goel

Shri Akshat Goel

## Patrons

Dr. Laxman Prasad

Dr D.K Chauhan

Dr. B. C. Sharma

## Editor in Chief

Dr Monika Sachdeva

## Editor

Dr. Munendra Mohan Varshney

## Chief Advisory Committee

Mr. H. G. Garg

Dr. Vipul Goel

## Faculty Advisory Board

Dr. Vijay Agarwal

Mr. Abhinav Agrawal

Dr. Dilip Gupta

Dr. Vishwanath Agrahari

Dr.. Pankaj Kumar Sharma

Ms. Geetika Mehta

Ms.Rashmi Tripathi

Dr. Neha Krishnarth

Dr. M.A. Sheela

Ms.Rituparna Palit

Ms Archana Gupta

Mr. Surya Goel

Ms Rini singhal

Ms Chaya chauhan

Ms Anjali Singh

Ms Anshu Tripathi

Ms Kamini

Ms Anushka jain

Ms. Megha Tonk

Ms. Shallu Sharma

Ms.Alka malik

Ms. Ruchi Singh

Ms. Sonal Sharma

Ms. Shivani Singh

Ms. Sagrika Kabra

Ms. Swati Tyagi

Mr Prithvi Sharma

Mr. Nishant Mishra

Mr Harsh Goswami

## Student coordinators

Jai Prakash

Pariskshit Sachdeva

## 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

### **MODERATE COFFEE AND CAFFEINE CONSUMPTION IS ASSOCIATED WITH LOWER RISK OF DEVELOPING MULTIPLE CARDIOMETABOLIC DISEASES**

Consuming moderate amounts of coffee and caffeine regularly may offer a protective effect against developing multiple cardio-metabolic diseases, including type 2 diabetes, coronary heart disease and stroke, according to new research published in the Endocrine Society's *Journal of Clinical Endocrinology & Metabolism*.

The prevalence of individuals with multiple cardio-metabolic diseases, or CM, is becoming an increasing public health concern as populations' age around the world. Consuming three cups of coffee, or 200-300 mg caffeine, per day might help to reduce the risk of developing cardio-metabolic multi-morbidity in individuals without any cardio-metabolic disease,"

Coffee and caffeine intake at all levels were inversely associated with the risk of new-onset CM in participants without cardio-metabolic diseases. Those who reported moderate coffee or caffeine intake had the lowest risk, the study found. Moderate coffee or caffeine intake was inversely associated with almost all developmental stages of CM

[.https://www.sciencedaily.com/releases](https://www.sciencedaily.com/releases)

## NEW DRUG APPROVALS

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

- **Flycado (flurpiridaz F 18) Injection**– It is a positron emission tomography (PET) myocardial perfusion imaging (MPI) agent used for the detection of myocardial ischemia and infarction.
- **Otulfi(ustekinumab-aauz) Injection**- is a human interleukin-12 and -23 antagonist biosimilar to Stelara used for the treatment of plaque psoriasis, psoriatic arthritis, Crohn's disease, and ulcerative colitis.
- **Cobenfy (xanomeline and trospium chloride)Capsules**- It is a muscarinic agonist and muscarinic antagonist combination indicated for the treatment of schizophrenia in adults.
- **Miplyffa (arimoclomol)Capsules**- It is a heat shock protein amplifier used in combination with miglustat for the treatment of Niemann-Pick disease Type C.
- **Ebglyss (lebrikizumab-lbkz)Injection**- It is a targeted IL-13 inhibitor used for the treatment of moderate-to-severe atopic dermatitis (eczema) in adults and children 12 years and older who weigh at least 88 pounds (40 kg).
- **Boruzu (bortezomib)Injection**- It is a ready-to-use injectable proteasome inhibitor for the treatment of multiple myeloma and mantle cell lymphoma.
- **Lazcluze (lazertinib)Tablets**- It is a kinase inhibitor used in combination with amivantamab for the treatment of certain patients with epidermal growth factor receptor (EGFR)-mutated non-small cell lung cancer.

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

## HERBAL INFORMATION

### MORINGA (DRUMSTICK)

**Botanical name:** *Moringa oleifera*

**Family:** *Moringaceae*

**Kingdom:** Plantae



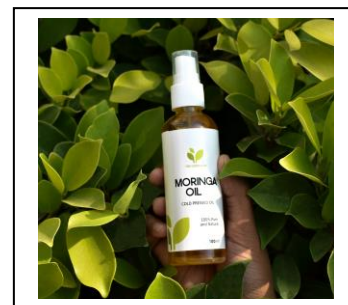
*Moringa* is the sole genus in the plant family **Moringaceae**. It contains 13 species, which occur in tropical and subtropical regions of Africa and Asia and that range in size from tiny herbs to massive trees. *Moringa* species grow quickly in many types of environments. The most widely cultivated species is *Moringa oleifera*, native to the foothills of the Himalayas in northwestern India, a multipurpose tree cultivated throughout the tropics and marketed as a dietary supplement, health food or source for herbalism practices. The fruit pods of *Moringa oleifera* ("drumsticks") are increasingly consumed as food in many parts of the world, but particularly in South Asia. The leaves are commonly used to make tea. Oils are made from the seeds, while powders can be made from the leaves and roots.

#### HEALTH BENEFITS

- Protecting and nourishing skin and hair
- Improving Eye Health
- Preventing liver diseases
- Preventing nervous system disorders
- Managing blood pressure and cardiovascular problems
- Treating diabetes
- Preventing rheumatoid arthritis
- Preventing cancer
- Managing Asthma
- Preventing kidney stone

#### MORINGA PREPARATIONS

- Moringa Tablet
- Moringa Pure Extract Capsules
- Moringa leaves powder



## STUDENT CORNER

### Intraocular Medication Delivery Methods for Diabetic Retinopathy: Present and Future Developments

#### Introduction

Diabetic retinopathy (DR) is a leading cause of blindness among working-age adults globally. This condition results from long-term damage to the retinal blood vessels due to high blood sugar levels, leading to vision impairment. Recent advancements in treatment have centered around intraocular drug delivery, which allows medications to directly target the retina, reducing systemic side effects and enhancing efficacy. In this article, we will explore the current methods of intraocular drug delivery for diabetic retinopathy and potential future developments in this field.

#### Present Intraocular Delivery Methods

**Intravitreal Injections:-** Intravitreal injections involve delivering drugs directly into the eye's vitreous cavity, allowing high concentrations of medication at the site of the disease. Two common drug categories used in this method are anti-vascular endothelial growth factors (anti-VEGF) and corticosteroids. **Anti-VEGF Therapy:** Drugs like ranibizumab and aflibercept are used to treat diabetic macular edema (DME) and proliferative diabetic retinopathy (PDR). These drugs inhibit VEGF, a protein that promotes abnormal blood vessel growth in the retina, thereby preventing further damage. **Corticosteroids:** Medications like dexamethasone (Ozurdex) and fluocinolone acetonide (Iluvien) reduce inflammation and vascular leakage in DME.

**Implantable Devices:-** Sustained-release implants provide long-term drug delivery, reducing the need for frequent injections and improving patient compliance. **Ozurdex (Dexamethasone Implant):** This biodegradable implant releases medication over 3-6 months, reducing the frequency of injections while maintaining efficacy. **Iluvien (Fluocinolone Acetonide Implant):** Offering long-term treatment for chronic DME, Iluvien provides a slow release of corticosteroids over 36 months.

**1. Microinjection and Microneedles:-** These advanced techniques allow more targeted delivery to specific layers of the retina, minimizing side effects and enhancing drug concentration at the affected site.

#### Future Developments

**1. Gene Therapy:** Gene therapy is emerging as a long-term solution for DR, using genetic modifications to prevent the pathological processes behind the disease.

**2. Nanotechnology-Based Drug Delivery:** Nanoparticles offer promising benefits by improving drug bioavailability, providing sustained release, and enhancing drug penetration into retinal tissues.

**3. Hydrogel-Based Delivery Systems:** Hydrogels, which are water-absorbing polymers, are being developed as carriers for intraocular drugs.

**Ms. Tanisha, Ms. Tannisha Garg, Ms. Tannishka Rathore**

**B.Pharm VII sem**

1. Zheng L, Han Y, Ye E, Zhu Q, Loh XJ, Li Z, et al. Recent Advances in Ocular Therapy by Hydrogel Biomaterials. *World Scientific Annual Review of Functional Materials* 2023; 1: 2230002. doi:10.1142/s2810922822300021

2) Taheri, S.L., Poorirani, S. and Mostafavi, S.A., 2025. Intraocular drug delivery systems for Diabetic retinopathy: Current and future prospective.

## NEWS AT A GLANCE

### Talks organized

RKGIT (Pharmacy) organized a talk on **The Current Regulatory Requirements & Approval Process for Drug Regulatory affairs -A Current Scenario**". This program was exclusively for B Pharm (3rd and 4th year) and M Pharm students. The keynote speaker was Mr. Shamsheer Singh, Head of Next Wave India Paonta Sahib (HP), Mr. Singh discussed the overall background behind the regulatory profession, including challenges, product life cycle, organizational structure, importance and responsibility of regulatory affairs agencies and recent developments in the drug regulatory affairs. The program was coordinated by Mr. Alok Mishra (Assistant Professor, Pharmacy).



RKGIT (Pharmacy) organized a talk with Arogyam Team on **Organ-on-Chip devices, 3D Printing, Bioprinting, and Tissue Engineering** on 10th Oct 2024. Dr. Amar Dhawaj, a Postdoctoral Fellow at IIT Bombay specializing in Optical Biosensing & Bio-Instrumentation was the keynote speaker on this occasion. He focused on advanced biomedical technologies, including Organ-on-Chip devices, 3D Printing, Bioprinting, and Tissue Engineering. Dr. Amar Dhawaj provided insights into integrating these technologies for drug testing, personalized medicine, and biosensing, inspiring students to explore these innovative fields. the program was coordinated by Ms Megha Tonk (Assistant Profesoer).



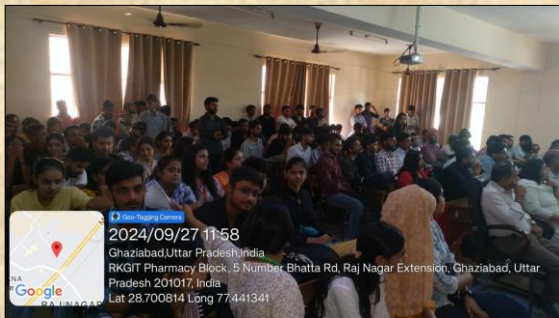
## World Pharmacists' Day

The World Pharmacists Day celebration, themed "Pharmacists: Meeting Global Health Needs," was held on 24th and 25th September 2024 organized by \*AROGYAM\*, the society of pharmacy. The event commenced on 24th September with the inauguration by our esteemed dignitaries, \*Dr. Laxman Prasad\*, Group Advisor, RKG Group of Institution and \*Dr. Monika Sachdeva\*, Principal RKGIT, Pharmacy. The day was filled with excitement as three competitions were conducted: \*Pharma Rumble\*, an oral presentation competition; \*Pharmasketch\*, an art contest; and \*Formulation DIY\*, an innovative formulation challenge. On 25th September, the celebrations began with a tree plantation activity, symbolizing growth and sustainability. Then, poster presentation was conducted. This was followed by insightful talks from our distinguished guests, Dr. V. Kalaiselvan Senior Principal Scientific Officer, IPC, Ghaziabad. Ms Shalini Dwivedi VP, Head of Medical Writing and Clinical Trial Transparency, Krystelis, Gurugram Ms Reena Gupta\*, Founder and Director ELY Curatives Pvt. Ltd. Alumni of RKGIT, M.Pharm. (Batch 2008-2010). They all shared their expertise on the evolving role of pharmacists in healthcare. The event concluded with an awards distribution ceremony recognizing the academic achievers and the winners of the competitions, and the administration of the Pharmacists' Oath, reaffirming the commitment of future pharmacists to their profession and global health. The event was a resounding success, highlighting the pivotal role of pharmacists in shaping healthcare worldwide.



## National Pharmacovigilance week 2024

Raj Kumar Goel Institute of Technology (Pharmacy) celebrated 4th National Pharmacovigilance week on 27<sup>th</sup> Sept 2024. The theme of event was “Building ADR (adverse drug reaction) reporting culture for patient safety” which was issued in public interest by Indian Pharmacopoeia Commission, Ghaziabad. “Pharmacovigilance is not optional but essential to adapt to the ever-evolving landscape of healthcare”, for this reason, students were sensitized about raising complaints on adverse drug effects or side effects caused by the medication. Students actively participated and became familiar on this informative session pertaining to health of every individual. By attending this talk the students came to know about the process of raise complaint against any adverse effect caused by the medication and how to report it to the central drug authority of India and its importance. The event was graced by all the faculty members. The event was a resounding success, reflecting the enthusiasm and engagement of both the speaker and the audience. the talk was delivered by Ms Shivani (Assistant professor) RKGIT and Ex –Senior safety specialist Syneo Health.



## PhD Awarded

Congratulations to Dr Sagarika Kabra (Assistant Professor) for being awarded PhD from Maharishi University of information and technology, Lucknow on 23 Oct 2023.

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

**-SWAMI VEVEKANADA**



## Competition Organized

In celebration of *Pradhan Mantri Seva Pakhwada Yojana*, on 30th September, AROGYAM, the pharmacy society, organized a speech competition under the theme "Atmanirbhar Bharat." This event aimed to promote the vision of a self-reliant India, aligning with the national initiative led by Prime Minister Narendra Modi. Several students actively participated, sharing insightful perspectives on India's journey towards self-reliance. The speeches focused on the importance of self-sufficiency, its impact on the nation's economy, and India's potential as a future global superpower and leader of the Global South. The event was judged by Mr. Abhinav Agarwal and Mr. Suriya Goel, with overall supervision by Mrs. Megha Tonk. Their guidance ensured the smooth execution of the competition.

The winners of the competition were as follows:

*1st Position: Tanishka, B.Pharm, 2nd Year*

*2nd Position: Shailesh Tiwari, B.Pharm, 4th Year*

*3rd Position: Sangita, B.Pharm, 2nd Year*

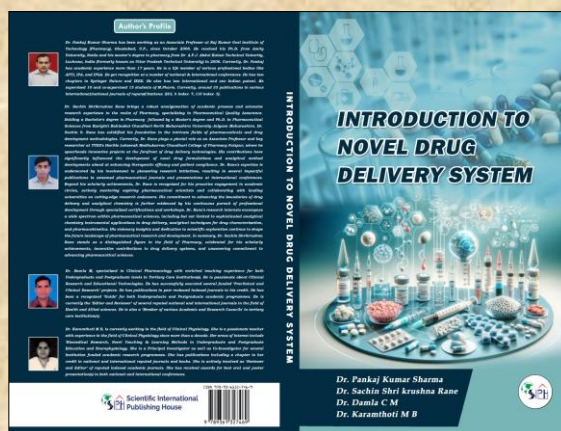




## Publications

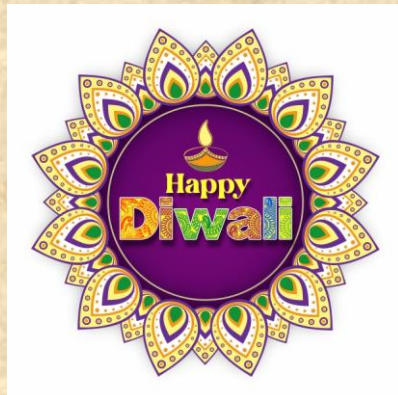
### *Book Published*

- Congratulations to Dr Pankaj Kumar Sharma (Associate Professor) for being Author of newly published Text book titled *Introduction to novel drug delivery system* from SIPH publications.



### *Papers published*

- Anushka Jain et al. Nutriose, a Dextrin-based Natural Polysaccharide Polymer with Beneficial Activities as a Candidate for Future Drug Delivery: A Review in *Combinatorial Chemistry & High Throughput Screening of Bentham Science Publications*, 1386-2073, 04, 2024.
- Kamini bhardwaj et al. Nanogels as Drug Delivery Carrier: A Narrative Review on Formulation Techniques, Characterization, Applications, and Patents in *Current Pharmaceutical Biotechnology (Bentham Science)*, Volume 25, Issue 17, 2024.
- Swati Tyagi et al. Recent Advances in Gastro Retentive Drug Delivery System in *European Journal of Theoretical & Applied Sciences*, Vol. 2, Issue 2, 2024.
- Shivam Tyagi, Pankaj Kumar Shama, Vijay Agarwal, *Advances in Pharmacosomes: A comprehensive review of Formulation strategies, Characterization techniques and Therapeutics Applications in drug delivery systems* in *Journal of Research Administration*, Vol. 6, Issue 1, 2024.
- Kamini, Dinesh Puri, *Hydrogel-based drug delivery systems - A review* in *Polymer-Plastics Technology and Materials (Taylor and Francis)*, 30, 2024.
- Megha Tonk, Vishal Gupta, Monika Sachdeva, in *Current development and advancement of 3-dimensional printing in personalized medication and drug screening* in *Drug Metabolism and Personalized Therapy*, 2024



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

**REGARDS**

**Pharmaware Team**

*For Views and Suggestions  
Connect*

*[epharmaware@gmail.com](mailto:epharmaware@gmail.com)*

*Raj Kumar Goel Institute of Technology (Pharmacy),  
5<sup>th</sup> KM Stone, Delhi-Meerut Road, Ghaziabad, U.P. 201003, Ph. 9582945609*