



AMITY
UNIVERSITY
PUNJAB

E- Newsletter

AMI-PHARMA 2024-25

AMITY SCHOOL OF PHARMACEUTICAL SCIENCES





ACADEMIC PROGRAMS AND ACADEMIC EXCELLENCE

Program: Bachelor of Pharmacy (4 year)

ACADEMIC EXCELLENCE

TOPPERS FOR ACADEMIC SESSION [JAN-JULY 2023-24]
PROGRAM: B. PHARM.



PAWNI KAUR

A28513323012 - SEMESTER: 1st

SGPA: 9.17



SHRUTI

A28513323010 - SEMESTER: 1st

SGPA: 9.09



KANAK DHUPIA

A28513323007 - SEMESTER: 1st

SGPA: 8.97



CO-CURRICULAR AND TECHNICAL EXCELLENCE

EVENTS

SEMINARS

PROFESSIONAL PROGRAMS



**ASPHS, AUPM and Punjab State Pharmacy Council (PSPC) collaborated
Continuing Medical Education (CME) program
& e Poster sessions**

"Novel Therapies for Respiratory, Metabolic, and Cardiac Disorders"

Day 1: 2nd May 2024

The Continuing Medical Education (CME) program titled "Novel Therapies for Respiratory, Metabolic, and Cardiac Disorders" was successfully conducted on May 2nd, 2024, by Amity School of Pharmaceutical Sciences at Amity University Punjab, Mohali. The event commenced with the ceremonial lamp lighting by esteemed dignitaries including the (Prof. (Dr.) R.K Kohli (Hon'ble Vice Chancellor, AUP, Mohali), Dr. Dalip Kumar (Registrar, AUP, Mohali), and distinguished guests, Dr. Jasbir Singh (Registrar, Punjab State Pharmacy Council), Dr. Mukesh Goyal, (Research Scientist, USA), Sh. Jaijaikar Singh (Drug Control Officer, FDA, Punjab), Mr. BB Singal (Member, haryana State Pharmacy Council, Panchkula), Ms. Kamal Kamboj (Zonal Licensing Officer, FDA, Punjab), and Mr. Sudarshan Chaudhary (President, Ropar Chemists Association). The event unfolded with introduction to Amity University and Amity School of Pharmaceutical Sciences, followed by the release of the quarterly newsletter by the esteemed guests. The event was attended by a diverse crowd, including chemists, pharmacists, esteemed faculty members, and enthusiastic students from various colleges. The program continued with a series of expert talks focusing on various themes. Dr. Amol N Patil (Additional Professor, PGIMER, Chandigarh), Mr. Barinder Singh (Director, Pharmacoevidence) and Dr. Anoop Kumar (Assistant Professor, DPSRU) shared their insights during Theme-I: "Elevating Cardiac Care: Empowering Pharmacists through

CME." After a refreshing lunch break, the sessions resumed with a speech of Dr. Tapan Behl (Professor and HoS, ASPHS, AUP, Mohali) on Theme II: "Empower Your Practice: Mastering Metabolic Disease Knowledge with CME," followed by enlightening talks by Dr. Pawan Krishan (Professor and Former Head, Department of Pharmaceutical Sciences and Drug research, Faculty of Medicine, Punjabi University, Patiala) and Dr. Sandeep Arora (Professor and Dean, ASPHS, AUP, Mohali) on Theme III: "Exploring Innovations in Respiratory Disease Management." These sessions provided invaluable knowledge and perspectives that will undoubtedly guide the attendees in their professional endeavors. The CME program concluded on a vibrant note with cultural performances, fostering camaraderie and enriching the overall experience of the participants.

**AUPM-FOPE (Federation of Pharma Entrepreneurs) collaborated
BIOPHARMA & HEALTHCARE CONCLAVE (BHC)- 2024 & MOU CEREMONY**
*'Aligning Biopharmaceuticals, Nutraceuticals, and Innovative Technologies:
Choosing the Right Mix for Pharma Business & Healthcare Services'*

Day 2: 3rd May 2024

The BIOPHARMA & HEALTHCARE CONCLAVE 2024 & MOU CEREMONY (AUP-FOPE-BHC-2024) on the theme of 'Aligning Biopharmaceuticals, Nutraceuticals, and Innovative Technologies: Choosing the Right Mix for Pharma Business & Healthcare Services' was successfully hosted on May 3rd, 2024, by Amity School of Pharmaceutical Sciences, Amity University Punjab, Mohali. The event began with a ceremonial lighting of lamps, followed by an opening address from esteemed

guests, including Prof. (Dr.) R.K Kohli (Hon'ble Vice Chancellor, AUP, Mohali), Sh. Harish Jain (President FOPE), Sh. Subba Rao (MD, CRIUS Life Mohali) and Dr. Sandeep Arora (Professor and Dean, ASPHS, AUP, Mohali). The panel discussion commenced, focusing on the theme, and various distinguished panellists shared their insights, and was stimulated by thoughts of other panelists, including Ms Balwinder Kaur, Consultant QA, Mohali, Mr S K Rana, MD, Bioage India and other experts. The audience benefited greatly from the diverse expertise of the speakers, gaining valuable insights on the theme throughout the discussion.

During the event Memorandums of Understanding (MOUs) was signed, forging agreements between Amity University Punjab and Natural Solutions, Mumbai, and MOU proposal was shared between FOPE and Varenva Labs. The e-poster session, centred around the Conclave & CME theme,



Chief Guest
Sh. Sushil Kumar Bansal
President
Punjab State Pharmacy Council

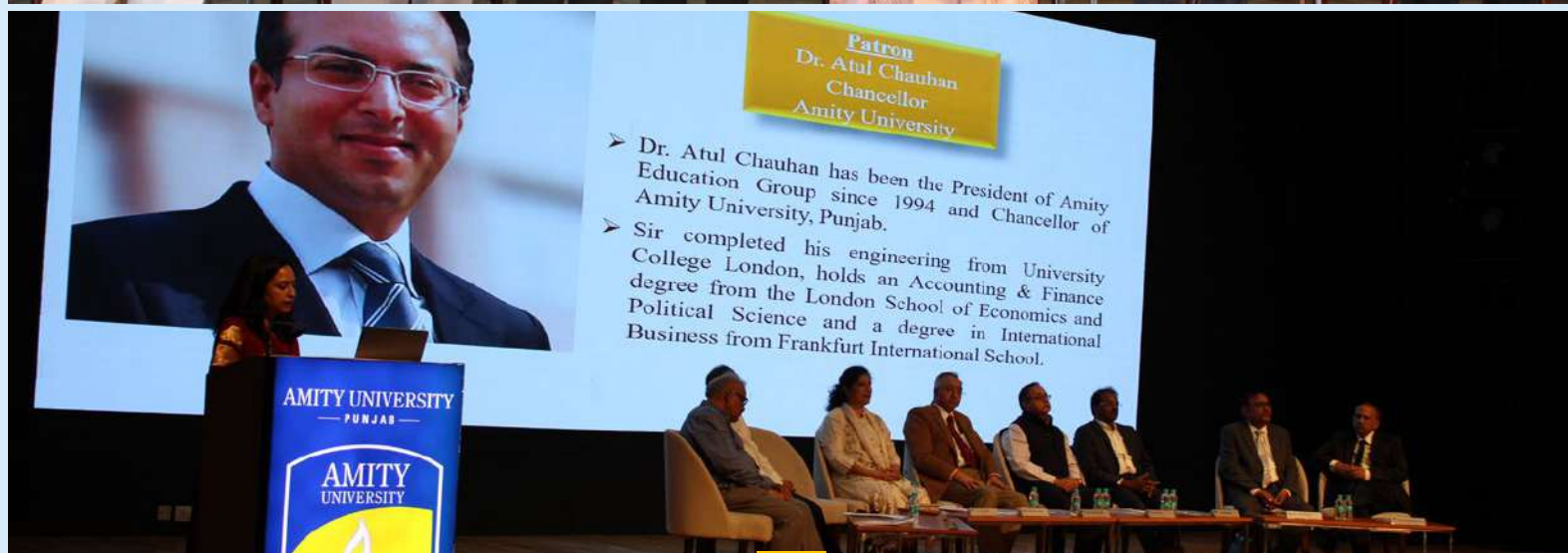
Sh. Sanjeev Kumar
Joint Commissioner,
FDA, Punjab

Guest of Honor
Dr. Jasbir Singh
Registrar
PSPC, Mohali

Jointly Organized by:
**Amity School of Pharmaceutical Sciences, AUP, Mohali, India
& Punjab State Pharmacy Council, Mohali, India**

REGISTRATION:
Registration Link: <https://forms.gle/956...>
Registration Fee: ₹500 for Students/ ₹800 for Faculty
Bank account details: Amity University Punjab, IFSC: HDFC0000000, Account no: 50100451816660
E-poster Submission Link: <https://www.amity.edu/submit>
E-poster Guidelines Link: <https://www.amity.edu/e-poster-guidelines>

started, with students from different colleges participating eagerly. Following a refreshing lunch, the technical session commenced, featuring informative lectures by Mr. Subba Rao (MD, CRIUS Life Mohali), Mr. Harish Jain (President, FOPE), and Ms. Balwinder Kaur (Consultant QA), which captivated the audience. The Conclave concluded with a cultural event and the distributions of prizes for the best e-poster. Dr. Tapan Behl, (Professor and HoS, ASPHS, AUP, Mohali) extended heartfelt gratitude to all attendees, marking the successful conclusion of the event.



II.2 Amity School of Pharmaceutical Sciences Student and Faculty Team at PharmaTech Expo Chandigarh (12-14 April 2024)



PharmaTech Expo set up at Sector 17 Chandigarh brought in various Pharma machine manufacturing companies at the same venue. Students collected technical details of machines and products from Big expo Stalls set up by Pharmaceutical formulation manufacturers from across Maharashtra, Gujarat and prominent pharma hubs and other companies. A report was compiled on the exposure by the students



II.3: Amity School of Pharmaceutical Sciences Student and Faculty Team at PharmaLabChem Expo Baddi (23rd Oct. 2024)

On 23rd October 2024, B.Pharm 1st and 2nd-year students had the enriching experience of attending the PharmaLabChem Expo at Baddi. This event brought together a diverse group of exhibitors, including representatives from the pharmaceutical, chemical, and analytical fields, offering students a valuable opportunity to engage with the latest developments in the industry. Students explored

interactive exhibits and attended live demonstrations featuring advanced instrumentation and methodologies used in pharmaceutical and chemical laboratories, and had relevant detailing by accompanying Faculty from ASPHS, AUP Mohali. This visit proved invaluable for students, bridging their theoretical knowledge with real-world applications and advancing a greater appreciation for their role in pharmaceutical sciences.



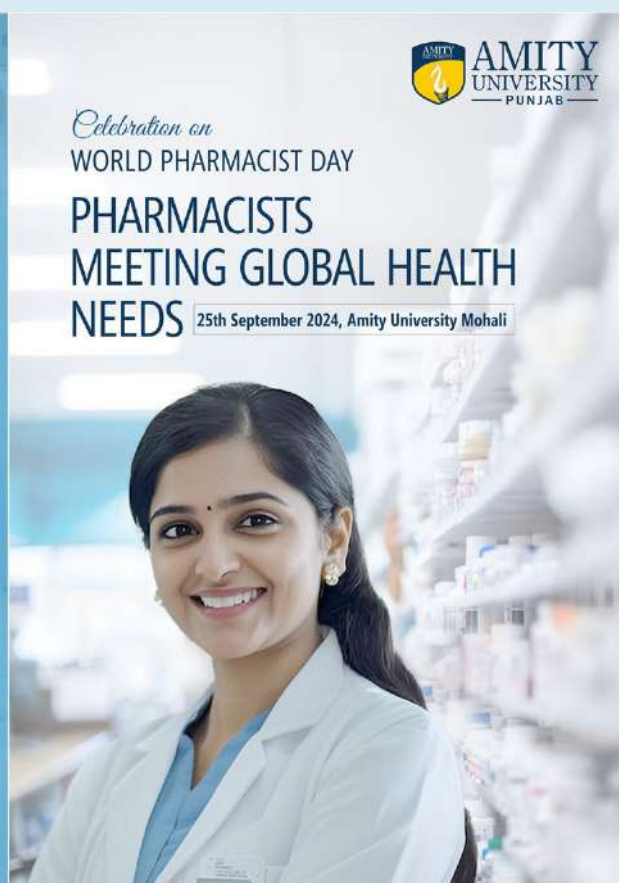
11.4: World Pharmacist Day observed at Amity School of Pharma Sciences, AUPM (25th Sep 2025)

The Amity School of Pharmaceutical Sciences (ASPHS), Amity University Punjab, enthusiastically celebrated World Pharmacists' Day on 25th September 2024. The event aligned with the international FIP theme and included a series of engaging activities such as poster-making, logo-making, and slogan-writing competitions on the theme. The theme for this year was "Pharmacists: Meeting Global Health," which underscored the pivotal role that pharmacists play in addressing

global health challenges, from improving access to essential medicines and vaccines to providing patient-centred care, pharmacists are at the forefront of efforts to ensure healthier communities worldwide.

The event was honoured by the presence of industry expert speaker, Mr. Narinder Verma (Director, International Projects, BAUSCH International).

The day kicked off with logo designing, slogan



writing and Poster-making competitions showcasing the creativity of our students, followed by inspiring address by Prof. (Dr.) Sandeep Arora (Dean, Faculty of Pharmaceutical Sciences, AUP) and Mr. Narinder Verma. Dr. Arora highlighted the role that pharmacists play in improving public health through community pharmacy, operations, and research, while Mr. Narinder Verma gave a motivational speech about project management in the pharmaceutical sector. He gave the students insightful advice by talking about the duties and obligations of project managers as well as sharing his own path of professional and personal development. He focussed on the key skills required to be an efficient project manager in the pharmaceutical sector like

strong knowledge of pharmaceutical regulations, leadership and team management, risk management and problem-solving, communication and interpersonal skills, budgeting and resource management. He highlighted that project manager's role in the pharmaceutical industry is complex due to the highly regulated nature of the field and the need to balance scientific, operational, and business aspects effectively.

ABOUT US

World Pharmacists Day, organized by the International Pharmaceutical Federation (FIP), a WHO partner, is a day dedicated to acknowledging and celebrating the vital role that pharmacists play in promoting healthier communities worldwide.

Pharmacists are essential to our healthcare systems, often serving as the initial point of contact for health advice and primary healthcare, while also addressing the diverse health needs of our populations in various ways.

KEY OBJECTIVES

- Ensuring Access
- Expertise
- Patient Care
- Promoting Disease Prevention
- Research and Development
- Better Health Outcomes



COMPETITIONS

e-Poster Design
Coordinators: Dr. Mayank Joshi, Ms. Vishakha

Slogan Writing
Coordinators: Dr. Deepika Sharma, Mr. Ankush

Digital Logo Making
Coordinators: Dr. Bharat Goel, Mr. Anand Singh Pimoli

ORGANIZING COMMITTEE

Convenor: Prof. (Dr.) Sandeep Arora, Dean, Faculty of ASPHS
Event Advisor: Prof. (Dr.) Tapan Behl, HoS, ASPHS
Event Chief Coordinator: Dr. Ankit Jain, Associate Professor, ASPHS

EVENT SCHEDULE

Poster Evaluation:	10:00 AM to 11: 00 AM
Logo Evaluation:	11:00 AM to 12: 00 Noon
Slogan Evaluation:	12:00 Noon to 01: 00 PM
Expert Lecture I:	02:00 PM to 02: 45 PM
Expert Lecture II:	02:45 PM to 03:30 PM
Panel Discussion:	03:30 PM to 04:30 PM



II.5: ASPHS commemorates National Pharmacy Week (NPW) in collaboration with Indian Pharma Association (IPA) Punjab with the NPW Theme “Pharmacist Strengthening Health Systems.”


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&

INDIAN PHARMA ASSOCIATION (IPA), Punjab Branch

Collaborated

NATIONAL PHARMA CONVENTION: DRRIVE 2024

 & WORKSHOP: PHARMACOVIGILANCE, SAFETY ASSESSMENT & DIGITAL CLINICAL
INFORMATICS

Date: 26th and 27th November 2024

Amity School of Pharmaceutical Sciences, Amity University Punjab, Mohali, in collaboration with Indian Pharmaceutical Association, hosted a vibrant two-day Pharma Convention, aptly titled “Diversified Role in Research Innovation Vigilance and Entrepreneurship (DRRIVE 2024)”. This momentous event was complemented by a workshop on “Pharmacovigilance, Safety Assessment & Digital Clinical Informatics,” celebrating the essence of National Pharmacy Week under the engaging theme “Pharmacist Strengthening Health Systems.”

The convention attracted a diverse group of participants from across several states, including Punjab, Haryana, Chandigarh, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Gujarat, and West Bengal, showcasing a unified effort to advance the pharmaceutical landscape. The inaugural ceremony of the event was a significant affair, graced by the esteemed Guest of Honor, Dr. Indu Pal Kaur, Secretary of the Indian Pharmaceutical Association, Punjab, whose presence added prestige to the



proceedings. A variety of competitions were held throughout the event, providing a platform for participants to showcase their innovative ideas and research findings. In an impressive display of talent and creativity, 40 candidates participated in E-poster and E-paper presentations, demonstrating their proficiency in the field. Additionally, the Therapeutic SOPs clinical algorithm and poster design competitions were lively arenas, attracting 10 and 12 enthusiastic participants, respectively.

The convention featured insightful addresses from distinguished faculty members, including Dr. Sandeep Arora, the Dean of the Faculty of Pharmaceutical Science, and Dr. Tapan Behl, Head of School at ASPHS. They captivated the audience with discussions about the transformative role of artificial intelligence in enhancing health systems, stressing the importance of integrating cutting-edge technology in pharmacy. The workshop sessions, led by the knowledgeable Dr. Arshia Bhandari, Consultant, PV, provided participants with invaluable insights into the pharmacovigilance industry. Her comprehensive explanation of the fundamentals and intricacies of this crucial field left the attendees enriched with a deeper understanding of safety assessment processes and the implications of digital clinical informatics. The first day of the convention concluded on a high note with culturally rich performances by the students, showcasing their creativity and spirit. The blend of educational rigor and artistic expression made for an unforgettable experience, underscoring the commitment to advancing pharmacy education and practice.



AMITY UNIVERSITY PUNJAB
AMITY SCHOOL OF PHARMACEUTICAL SCIENCES
PRESENTS
PHARMA CONVENTION: DIVERSIFYING ROLE IN RESEARCH INNOVATION VIGILANCE AND ENTREPRENEURSHIP
DRRIVE 2024
26th & 27th November 2024
Pharmacists Strengthening Health Systems

Advancing
NATIONAL PHARMACY WEEK

SPONSOR PARTNERS
Evidence Pharmaco[®] ARISTO Aayulga Herbs NATURAL SOLUTIONS A BIOTECHNICAL STORY LTD

Contact Details : Dr. Mayank Joshi 7507963304, mjoshi@amity.edu
Mr. Anand Singh Pimrol 3057092034, anand@amity.edu



On the second day of our event-filled convention, the Convention hosted a range of engaging activities that truly showcased the talent and creativity of our participants. The audience was captivated by esteemed guest of honor, Ms. Suvira Shrivastav, Associate Publishing Director at Springer Nature. She delivered a thought-provoking presentation on the application of AI tools in writing research papers, offering invaluable tips on avoiding plagiarism while underscoring the serious consequences of paper retraction. The workshop segment of the day was equally enlightening, starting with Dr. Shaveta Nayyar, Country Head at DSN Healthcare Consulting. She shared her expertise on the crucial field of Clinical Informatics in Healthcare Planning, enlightening students about the vast opportunities that await those interested in this domain. Following her session, Dr. Arshia Bhandari took the stage, engaging the audience with her knowledgeable and inspiring talk that broadened their understanding of the important subject

theme, PV & Safety Assessment.

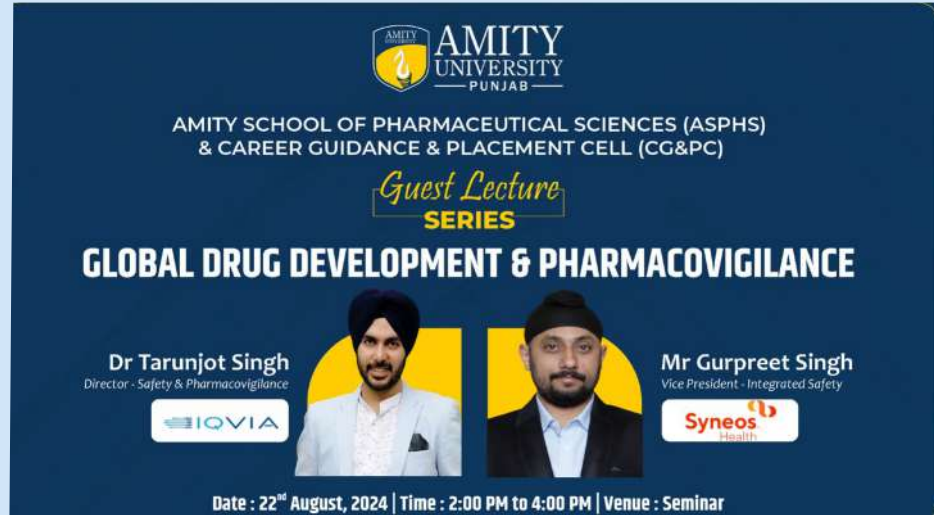
As the day progressed, ASPHS students took the spotlight with vibrant cultural performances that infused energy and spirit into the event. The day's highlights included events "Podium for the Inspiring Critique", a competition on Book Critique, "Brand Cues" an imaginative competition centered around Pharma brand comparison, "Therapeutic SOPs" on Clinical Algorithms for critical Disease management, Rangoli competition, involving an enthusiastic participation by above 100 students from various teams.

The event was culminated with valedictory function, where the deserving winners of various competitions were celebrated with trophies and certificates, recognizing their hard work and achievements. The two-day convention program and workshop drew to a close with a sincere vote of thanks by Dr Mayank Joshi and a delightful high tea, leaving participants inspired and eager for future endeavours.



II.6: ASPHS conducts Industrial Interaction in collaboration with C&G Cell, AUPM

Mr Gurpreet Singh, VP,
Integrated Safety, IQVIA, UK
and Mr tarunjot Singh, Director
Safety, Syneos Health, UK were
invited to deliver sessions on
Pharmacovigilance and Safety as
a Workshop (22nd Aug 2024)



The experts focussed on the international Standard Operating Processes (SOPs) for sources for adverse event data collection, identification of such events as per international classification, statistical analysis, and final Safety reporting (PSURs, ASURs), also discussing the skills for medical writing of such reports.



II.7: ASPHS, AUPM Students Shine in National Technical Event for Product Formulation and Packaging

We're delighted to share that B. Pharm students, Miss Pawni Kaur and Miss Rijul from Amity School of Pharmaceutical Sciences, secured Winner's Trophy in the Formulation Development and Packaging Competition at recent National event. Their hard work and innovation, a product for skin care and aesthetics, in the form of outstandingly packaged powder formulation for foot and skin care, charmed the judges into a loud applause for its innovation, finish, packaging and presentation, bringing laurels to Amity University Punjab, along with a cash prize of Rs. 5100!

Join us in congratulating them and wishing them all the best for their future endeavours and entrepreneurship zeal. Keep shining! #AmityUniversityPunjab #ProudMoment #StudentSuccess #PharmaceuticalSciences





PUBLICATION AND IPR EXCELLENCE AND GRANTS

REVIEW AND RESEARCH PUBLICATIONS, PATENTS AND GRANTS



III : Publications & IPR Excellence & Grants 2024

III.1 External Research Grants

S.No.	Name of funding applied	Funding agency	Outcome

III.2 Other Grants

S.No.	Name of funding applied	Funding agency	Outcome
1.	Department of Pharmaceuticals Grant for Capacity Building Program with LSSSDC for Associate: Regulatory Affairs: Medical Devices Dr Sandeep Arora, Prof and Dean, ASPHS, AUPM	Department of Pharmaceuticals Amount: Rs 11 Lakhs for 2025-26 and Rs 11 lakhs for 2026-2027 each	Certification Program with Life Sciences Skill Sector Council LSSSDC

III.3: IPRs Produced

S.No.	Name of funding applied	Patent no.	Sponsoring agency	Status
1.	Novel Formulation of Nasal In Situ Gel with Lamotrigine and Aripiprazole for Effective Management of Concomitant Epileptic Morbidities in Autism Spectrum Disorders (ASD) and method thereof Dr Sandeep Arora	202411081124	Intellectual Property India	Filed
2.	Benzofuran and pyrazole substituted 1, 3, 4-oxadiazole compounds, compositions and process of preparation thereof Dr Tapan Behl	541286	Intellectual Property India	Granted
3.	A multilayered Tablet with Apixaban Extended Release (ER) core layer, an intermediate impervious Rosuvastatin layer and an outer Fast Dissolving (FD) Clopidogrel layer for prophylactic management of Atherosclerosis and Coronary thrombosis. Dr Sandeep Arora	202411105235	Intellectual Property India	Filed

सं० / No. 31026/64/2024-MD
भारत सरकार / Government of India
रसायन एवं उर्वरक मंत्रालय / Ministry of Chemicals and Fertilizers
औषध विभाग / Department of Pharmaceuticals

शास्त्री भवन, नई दिल्ली
Shastri Bhawan, New Delhi
Dated the 27th December, 2024

To
Director / Chairperson
Amity University, Mohali
Sector 82 A, IT City Rd, Block D
Sahibzada Ajit Singh Nagar, Punjab 140306

Subject:- Proposal under Component B of Sub-scheme "Capacity Building and Skill Development in Medical Device Sector" under the scheme for "Strengthening of Medical Device Industry"- conveying In-principle approval of the program-regarding.

Sir/ Madam,

I am directed to refer to Amity University, Mohali's proposal dated 09.08.2024 for consideration under component-B of the sub-scheme "Capacity Building and Skill Development in Medical Device Sector" under the scheme for Strengthening of Medical Device Industry.

2. The Scheme Steering Committee (SSC) in its meeting, held on 13.12.2024 has accorded in-principle approval for the said application under component-B of the sub-scheme "Capacity Building and Skill Development in Medical Device Sector" under the Scheme for Strengthening of Medical Device Industry for total project cost of INR 11,00,000/- (Rupees Eleven Lakhs only), subject to the compliance of the conditions under the guidelines of the scheme 'Strengthening of Medical Device Industry' dated 08.11.2024, as follows:-

Name of Program	Associate- Regulatory Affairs and Intellectual Property (IVD and Medical Devices): Regulated Business Operations
Period of Financial Support	FY 24-25 to FY 26-27
Duration of Program	5.5 Months
Academic Year and No. of Approved Seats	Academic Year 25-26: 20 Seats
Financial Support on Reimbursement Basis (INR)	INR 55,000/- per Student for 20 Students



PATENT Filing

Welcome Harish Sharma [Sign out](#)




संरक्षण विभाग
C.A.R.A
(See Rule 25(1))
RECEIPT

Docket No 169558

Date/Time 2024/12/31 21:10:26

To
Harish Sharma

Userid: inpa3649

A-2, Sect.-40, Noida, Uttar Pradesh

CBR Detail:

Sl. No.	App. Number	Del. No./Application No.	Amount Paid	C.D.R. No.	Form Name	Remarks
1	20241105234	TEMPRE-1/12099/2024-DEL.	1600	77247	FORM 1	AN IMMERSIVE ENGLISH LANGUAGE LEARNING SYSTEM INTEGRATING VIRTUAL REALITY (VR) AND AUGMENTED REALITY
2	E-18616868/2024/DEL	20241105234	0	---	FORM28	---
3	E-18616870/2024/DEL	20241105235	0	---	FORM28	---
4	E-18616873/2024/DEL	20241105237	0	---	FORM28	---
5	20241105234	TEMPRE-1/121765/2024-DEL.	1600	77247	FORM 1	NANOCELLULOSE-BASED COMPOSITIONS AND METHODS FOR OCULAR SURFACE REGENERATION IN DRY EYE DISEASE (DED)
6	20241105235	TEMPRE-1/121775/2024-DEL.	1600	77247	FORM 1	MULTI-LAYER, FIXED-DOSE COMBINATION TABLET COMPOSITION FOR CARDIOVASCULAR MANAGEMENT WITH TAILORED DR
7	20241105237	TEMPRE-1/121891/2024-DEL.	1600	77247	FORM 1	Res42ND-Transformative psychosomatic scale-based Text-Independent Speaker Recognition System
8	E-18616869/2024/DEL	20241105236	0	---	FORM28	---

Transaction ID	Payment Mode	Customer Identification Number	Amount Paid	Bank of A/C No.
N-8881572531	Online Bank Transfer	311204828586	6400.00	147500102898888

Total Amount : ₹ 6400.00
Amount in Words: Rupees Six Thousand Four Hundred Only

<https://portal.ipindia.gov.in/portal/filing/CBRR/receipt/print/CBRRReceipt>

III.4 Publications

S.No.	Title of article	Journal	Scopus indexed (Y/N)	Status
1.	<i>Unraveling the nexus of age, epilepsy, and mitochondria: exploring the dynamics of cellular energy and excitability</i>	<i>Frontier in Pharmacology</i>	Y	<i>Published</i>
2.	<i>Insights into medicinal attributes of imidazo[1,2-a]pyridine derivatives as anticancer agents</i>	<i>Archiv der Pharmazie</i>	Y	<i>Published</i>
3.	<i>Application of nano- and micro-particle-based approaches for selected bronchodilators in management of asthma</i>	<i>3 Biotech</i>	Y	<i>Published</i>
4.	<i>Shaping the future of Gastrointestinal Cancers through Metabolic Interactions with Host Gut Microbiota</i>	<i>Heliyon</i>	Y	<i>Published</i>
5.	<i>Benefits of sacubitril/valsartan administration and physical training in cardiac rehabilitation: current trends and bibliometric analysis of the years 2015-2024</i>	<i>Balneo and PRM Research Journal</i>	Y	<i>Published</i>
6.	<i>The Link Between Alzheimer's Disease and Stroke: A Detrimental Synergism</i>	<i>Ageing research reviews</i>	Y	<i>Published</i>
7.	<i>Impact of Bioactive Compounds in the Management of Various Inflammatory Diseases</i>	<i>Current Pharmaceutical Design</i>	Y	<i>Published</i>
8.	<i>Exploring the Pathophysiological Influence of Heme Oxygenase-1 on Neuroinflammation and Depression: A Study of Phytotherapeutic-Based Modulation</i>	<i>Phytomedicine</i>	Y	<i>Published</i>

S.No.	Title of article	Journal	Scopus indexed (Y/N)	Status
9.	<i>Types of memory, dementia, Alzheimer's disease, and their various pathological cascades as targets for potential pharmacological drugs</i>	<i>Ageing research reviews</i>	Y	<i>Published</i>
10.	<i>Investigating the Anti-Arthritic Potential of Gallic Acid from Tecoma stans Leaves via Phytosome Based Formulation and Examining Physical, Hematological Effects, and Molecular Dynamics Simulations</i>	<i>Journal of Biological Regulators and Homeostatic Agents</i>	Y	<i>Published</i>
11.	<i>Revolutionizing pediatric neuroblastoma treatment: unraveling new molecular targets for precision interventions</i>	<i>Frontiers in cell and developmental biology</i>	Y	<i>Published</i>
12.	<i>Predictive Modelling in pharmacokinetics: from in-silico simulations to personalized medicine</i>	<i>Expert Opinion on Drug Metabolism & Toxicology</i>	Y	<i>Published</i>
13.	<i>Revisiting the Mitochondrial Function and Communication in Neurodegenerative Diseases</i>	<i>Current Pharmaceutical Design</i>	Y	<i>Published</i>
14.	<i>Computational insights into KRAS G12C inhibition: exploring possible repurposing of Azacitidine and Ribavirin</i>	<i>Journal of Biomolecular Structure and Dynamics</i>	Y	<i>Published</i>
15.	<i>Integrating Nanotechnological Advancements of Disease-Modifying Anti-Rheumatic Drugs into Rheumatoid Arthritis Management</i>	<i>Pharmaceuticals</i>	Y	<i>Published</i>
16.	<i>Targeting the vivid facets of apolipoproteins as a cardiovascular risk factor in rheumatoid arthritis</i>	<i>Canadian Journal of Physiology and Pharmacology</i>	Y	<i>Published</i>
17.	<i>Harnessing the Potential of Natural Products in Cancer Treatment: A Comprehensive Review</i>	<i>Journal of Biological Regulators and Homeostatic Agents</i>	Y	<i>Published</i>

S.No.	Title of article	Journal	Scopus indexed (Y/N)	Status
18.	<i>Exploring the Intersection of Geophysics and Diagnostic Imaging in the Health Sciences</i>	<i>Diagnostics</i>	Y	<i>Published</i>
19.	<i>Understanding the mechanistic pathways and clinical aspects associated with protein and gene based biomarkers in breast cancer</i>	<i>International Journal of Biological Macromolecules</i>	Y	<i>Published</i>
20.	<i>Understanding the Therapeutic Approaches for Neuroprotection</i>	<i>Current Pharmaceutical Design</i>	Y	<i>Published</i>
21.	<i>Molecular Chaperones as Therapeutic Target: Hallmark of Neurodegenerative Disorders</i>	<i>Molecular Neurobiology</i>	Y	<i>Published</i>
22.	<i>Understanding the Pharmacological and Nanotechnological Facets of Dipeptidyl Peptidase-4 Inhibitors in Type II Diabetes Mellitus: a Paradigm in Therapeutics</i>	<i>Bio Nanosciences</i>	Y	<i>Published</i>
23.	<i>Reactive oxygen species (ROS)-mediated oxidative stress in chronic liver diseases and its mitigation by medicinal plants</i>	<i>American Journal of Translational Research</i>	Y	<i>Published</i>
24.	<i>Chrysin restores the cardioprotective effect of ischemic preconditioning in diabetes-challenged rat heart</i>	<i>Heliyon</i>	Y	<i>Published</i>
25.	<i>Recent insights into synthesis, biological activities, structure activity relationship and molecular interactions of thiazolidinone hybrids: A systematic review</i>	<i>Synthetic Communications</i>	Y	<i>Published</i>
26.	<i>From Plants to Therapies: Exploring the Pharmacology of Coumestrol for Neurological Conditions</i>	<i>Current Medicinal Chemistry</i>	Y	<i>Published</i>
27.	<i>Insights into the Pivotal Role of Calcium Channel Blockers and Its Nanoformulations in the Management of Hypertension</i>	<i>BioNanoScience</i>	Y	<i>Published</i>

S.No.	Title of article	Journal	Scopus indexed (Y/N)	Status
28.	<i>BIN1 in the Pursuit of Ousting the Alzheimer's Reign: Impact on Amyloid and Tau Neuropathology</i>	<i>Neurotoxicity Research</i>	Y	<i>Published</i>
29.	<i>Highlighting the Use of the Hepatoprotective Nutritional Supplements among Patients with Chronic Diseases</i>	<i>Healthcare</i>	Y	<i>Published</i>
30.	<i>Understanding the promising role of antibody drug conjugates in breast and ovarian cancer</i>	<i>Heliyon</i>	Y	<i>Published</i>
31.	<i>Unveiling the potential of proteomic and genetic signatures for precision therapeutics in lung cancer management</i>	<i>Cellular Signaling</i>	Y	<i>Published</i>
32.	<i>Synthesis, In Vitro and in Silico Evaluation of 3-(4, 5-diphenyl-4H-1, 2,4-triazol-3-yl) pyridine derivatives as potential antimicrobial agents</i>	<i>(Russian journal 9J Capital) of Bioorganic Chemistry</i>	Y	<i>Published</i>
33.	<i>Synthesis and Antimicrobial Screening of Some Thiazolidin-4-one Derivatives</i>	<i>(Russian journal 9J Capital) of Bioorganic Chemistry</i>	Y	<i>Published</i>
34.	<i>Semisynthesis: Bridging Natural Products and Novel Anticancer Therapies</i>	<i>European Journal of Medicinal Chemistry Reports</i>	Y	<i>Published</i>

III.5: Research Quality

S. No.	Title of manuscript	Impact factor	Quartile
1.	<i>Unraveling the nexus of age, epilepsy, and mitochondria: exploring the dynamics of cellular energy and excitability</i>	4.4	Q1
2.	<i>Insights into medicinal attributes of imidazo[1,2-a]pyridine derivatives as anticancer agents</i>	4.3	Q1
3.	<i>Application of nano- and micro-particle-based approaches for selected bronchodilators in management of asthma</i>	2.6	Q2
4.	<i>Shaping the future of Gastrointestinal Cancers through Metabolic Interactions with Host Gut Microbiota</i>	3.4	Q1
5.	<i>Benefits of sacubitril/valsartan administration and physical training in cardiac rehabilitation: current trends and bibliometric analysis of the years 2015-2024</i>	0.7	Q4
6.	<i>The Link Between Alzheimer's Disease and Stroke: A Detrimental Synergism</i>	12.5	Q1
7.	<i>Impact of Bioactive Compounds in the Management of Various Inflammatory Diseases</i>	2.6	Q2
8.	<i>Exploring the Pathophysiological Influence of Heme Oxygenase-1 on Neuroinflammation and Depression: A Study of Phytotherapeutic-Based Modulation</i>	6.7	Q1
9.	<i>Types of memory, dementia, Alzheimer's disease, and their various pathological cascades as targets for potential pharmacological drugs</i>	12.5	Q1
10.	<i>Investigating the Anti-Arthritic Potential of Gallic Acid from Tecoma stans Leaves via Phytosome Based Formulation and Examining Physical, Hematological Effects, and Molecular Dynamics Simulations</i>	1.3	Q3
11.	<i>Revolutionizing pediatric neuroblastoma treatment: unraveling new molecular targets for precision interventions</i>	4.6	Q1
12.	<i>Predictive Modelling in pharmacokinetics: from in-silico simulations to personalized medicine</i>	3.9	Q1
13.	<i>Revisiting the Mitochondrial Function and Communication in Neurodegenerative Diseases</i>	2.6	Q2
14.	<i>Computational insights into KRAS G12C inhibition: exploring possible repurposing of Azacitidine and Ribavirin</i>	2.7	Q2

S. No.	Title of manuscript	Impact factor	Quartile
15.	<i>Integrating Nanotechnological Advancements of Disease-Modifying Anti-Rheumatic Drugs into Rheumatoid Arthritis Management</i>	4.3	Q1
16.	<i>Targeting the vivid facets of apolipoproteins as a cardiovascular risk factor in rheumatoid arthritis</i>	2.1	Q2
17.	<i>Harnessing the Potential of Natural Products in Cancer Treatment: A Comprehensive Review</i>	1.3	Q2
18.	<i>Exploring the Intersection of Geophysics and Diagnostic Imaging in the Health Sciences</i>	3.0	Q1
19.	<i>Understanding the mechanistic pathways and clinical aspects associated with protein and genebased biomarkers in breast cancer</i>	7.7	Q1
20.	<i>Understanding the Therapeutic Approaches for Neuroprotection</i>	2.6	Q2
21.	<i>Molecular Chaperones as Therapeutic Target: Hallmark of Neurodegenerative Disorders</i>	4.6	Q1
22.	<i>Understanding the Pharmacological and Nanotechnological Facets of Dipeptidyl Peptidase-4 Inhibitors in Type II Diabetes Mellitus: a Paradigm in Therapeutics</i>	3.0	Q2
23.	<i>Reactive oxygen species (ROS)-mediated oxidative stress in chronic liver diseases and its mitigation by medicinal plants</i>	2.2	Q2
24.	<i>Chrysin restores the cardioprotective effect of ischemic preconditioning in diabetes-challenged rat heart</i>	3.4	Q1
25.	<i>Recent insights into synthesis, biological activities, structure activity relationship and molecular interactions of thiazolidinone hybrids: A systematic review</i>	1.8	Q2
26.	<i>From Plants to Therapies: Exploring the Pharmacology of Coumestrol for Neurological Conditions</i>	3.5	Q2
27.	<i>Insights into the Pivotal Role of Calcium Channel Blockers and Its Nanoformulations in the Management of Hypertension</i>	3.0	Q3
28.	<i>BIN1 in the Pursuit of Ousting the Alzheimer's Reign: Impact on Amyloid and Tau Highlighting the Use of the Hepatoprotective Nutritional Supplements among Patients with Chronic Diseases Neuropathology</i>	2.9	Q2

S. No.	Title of manuscript	Impact factor	Quartile
29.	<i>Highlighting the Use of the Hepatoprotective Nutritional Supplements among Patients with Chronic Diseases</i>	2.4	Q2
30.	<i>Understanding the promising role of antibody drug conjugates in breast and ovarian cancer</i>	3.4	Q1
31.	<i>Unveiling the potential of proteomic and genetic signatures for precision therapeutics in lung cancer management</i>	4.4	Q1
32.	<i>Synthesis, In Vitro and in Silico Evaluation of 3-(4, 5-diphenyl-4H-1, 2,4-triazol-3-yl) pyridine derivatives as potential Antimicrobial agents</i>	1.1	Q3
33.	<i>Synthesis and Antimicrobial Screening of Some Thiazolidin-4-one Derivatives</i>	1.1	Q3
34.	<i>Semisynthesis: Bridging Natural Products and Novel Anticancer Therapies</i>	4.0	Q1

II.6: Research Collaborations:

S. No.	Type of Collaborations	Author Countries with Collaborations
1.	<i>Computationally drug designing of new molecule and research collaboration</i>	<i>United States, Saudi Arabia, China, Japan</i>
2.	<i>Academic Quality & Standards (As Expert: Dr Sandeep Arora)</i>	<i>DHERST, NHTEB Papua New Guinea</i>
3.	<i>Research and Development (Consultancy: Dr Sandeep Arora)</i>	<i>Natural Solutions, Mumbai</i>
4.	<i>Research and Development (Consultancy: Dr Sandeep Arora)</i>	<i>Amulya Labs Ltd</i>

Summary: High quality and reputed manuscript were published from department.



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Investigating the Anti-Arthritic Potential of Gallic Acid from *Tecoma stans* Leaves via Phytosome Based Formulation and Examining Physical, Hematological Effects, and Molecular Dynamics Simulations

Rashita Makkar¹, Aayush Sehgal², Sukhbir Singh³, Neelam Sharma³, Ravi Rawat⁴, Monica Gulati^{5,6}, Celia Vargas-De-La-Cruz⁷, Nemat Ali⁸, Havagiray R Chitme⁹, Tapan Behl^{10,*}, Simona Gabriela Bungau^{11,12}

Author information +

History +

Abstract

Background: Rheumatoid arthritis is a chronic inflammatory autoimmune disorder characterized with destruction and degradation of synovial joints. The current study aims to evaluate the physical and hematological effects of gallic acid (GA) isolated from *Tecoma stans* leaf extract and further synthesis of its gallic acid phytosome (GAP) to evaluate antiarthritic activity in Complete Freund's Adjuvant induced rheumatoid arthritis in Wistar rats.

Methods: The experimental rats were categorized into nine groups (n = 6 each group) namely normal control, disease control, methotrexate (0.75 mg/kg) treated group, GA 50 mg/kg treated group, GA 100 mg/kg treated group, GAP 50 mg/kg treated group, GAP 100 mg/kg treated group, GA 100 mg/kg treated group + methotrexate (0.75 mg/kg), GAP 100 mg/kg treated group + methotrexate (0.75 mg/kg) for 21 days. All the parameters were assessed at the end of the study. To assess the role of GA in mediating anti-arthritic activity through inhibition of NLR family pyrin domain containing 3 (NLRP3) inflammasome, an additional Molecular Dynamics (MD) simulation was also conducted.

Results: GA and GAP significantly decreased arthritic score ($p < 0.01$, $p < 0.05$, and $p < 0.001$), paw volume, pain latency ($p < 0.01$, $p < 0.05$, and $p < 0.001$) and increased body weight ($p < 0.01$, $p < 0.05$, and $p < 0.001$) in a dose-dependent manner in arthritic rats. The level of Haemoglobin (Hb) and number of red blood cells (RBCs) were significantly increased while the levels of white blood cell (WBC), platelet count and erythrocyte sedimentation rate (ESR) were drastically dropped in treatment groups compared to disease control group ($p < 0.001$, $p < 0.01$ and $p < 0.05$). During the MD simulation, GA demonstrated the formation of 2–3 stable hydrogen bond contacts with the NLR family pyrin domain containing 3 (NLRP3, previously known as NACHT domain), primarily involving the residues Threonine439 (THR439), Single Amino Acid of Gα16 Alanine228 (ALA228), and Arginine578 (ARG578).

Conclusion: The results produced by GAP were higher than GA indicating the benefit of formulation in providing better efficacy and suggesting its potential role in rheumatoid arthritis. The MD simulation result also suggested that GA has the potential to function as an inhibitor of NLRP3 protein and thus expressing anti-arthritic activity.

Key words

Tecoma stans / rheumatoid arthritis / gallic acid / phytosomes

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AMIPHARMA INDUSTRY UPDATE

IV: AMIPHARMA INDUSTRY UPDATE 2024 July-Dec

<i>FDA Novel Drug Approvals for 2024</i>				
<i>S. No.</i>	<i>Drug Name</i>	<i>Active Ingredient</i>	<i>Approval Date</i>	<i>FDA-approved use on approval date*</i>
1.	Winrevair	sotatercept-csrk	3/26/2024	To treat pulmonary arterial hypertension
2.	Vafseo	vadadustat	3/27/2024	To treat anemia due to chronic kidney disease
3.	Voydeya	danicopan	3/29/2024	To treat extravascular hemolysis with paroxysmal nocturnal hemoglobinuria
4.	Zevtera	ceftobiprole medocartil sodium	4/3/2024	To treat certain bloodstream infections, bacterial skin and associated tissue infections, and community-acquired bacterial pneumonia
5	Lumisight	pegulicianine	4/17/2024	To use as an optical imaging agent for the detection of cancerous tissue
6	Anktiva	nogapendekin alfa inbakicept-pmln	4/22/2024	To treat bladder cancer
7	Ojemda	tovorafenib	4/23/2024	To treat relapsed or refractory pediatric low-grade glioma
8	Xolremdi	mavorixafor	4/26/2024	To treat WHIM syndrome (warts, hypogammaglobulinemia, infections and myelokathexis)
9	Imdelltra	tarlatamab-dlle	5/16/2024	To treat extensive stage small cell lung cancer
10	Rytelo	imetelstat	6/6/2024	To treat low- to intermediate-1 risk myelodysplastic syndromes
11	Iqirvo	elafibranor	6/10/2024	To treat primary biliary cholangitis in combination with ursodeoxycholic acid
12	Sofdra	sofpironium	6/18/2024	To treat primary axillary hyperhidrosis
13	Piasky	crovalimab-akkz	6/20/2024	To treat paroxysmal nocturnal hemoglobinuria
14	Ohtuvayre	ensifentrine	6/26/2024	To treat chronic obstructive pulmonary disease
15	Kisunla	donanemab-azbt	7/2/2024	To treat Alzheimer's disease

FDA Novel Drug Approvals for 2024

S. No.	Drug	Active Ingredient	Approval	FDA-approved use on approval date*
16	Leqselvi	deuruxolitinib	7/25/2024	To treat severe alopecia areata
17	Voranigo	vorasidenib	8/6/2024	To treat Grade 2 astrocytoma or oligodendroglioma
18	Yorvipath	palopegteriparatide	8/9/2024	To treat hypoparathyroidism
19	Nemluvio	nemolizumab-ilto	8/12/2024	To treat prurigo nodularis
20	Niktimvo	axatilimab-csfr	8/14/2024	To treat chronic graft-versus-host disease (cGVHD)
21	Livdelzi	seladelpar	8/14/2024	To treat primary biliary cholangitis (PBC)
22	Lazcluze	lazertinib	8/19/2024	To treat non-small cell lung cancer
23	Ebglyss	lebrikizumab-lbkz	9/13/2024	To treat moderate-to-severe atopic dermatitis
24	Miplyffa	arimoclomol	9/20/2024	To treat Niemann-Pick disease type C
25	Aqneursa	levacetylleucine	9/24/2024	To treat Niemann-Pick disease type C
26	Cobenfy	xanomeline and trospium chloride	9/26/2024	To treat schizophrenia
27	Flyrcado	flurpiridaz F 18	9/27/2024	A radioactive diagnostic drug to evaluate for myocardial ischemia and infarction
28	Itovebi	inavolisib	10/10/2024	To treat locally advanced or metastatic breast cancer
29	Hympavzi	marstacimab-hncq	10/11/2024	To prevent or reduce bleeding episodes related to hemophilia A or B
30	Vyloy	zolbetuximab-clzb	10/18/2024	To treat gastric or gastroesophageal junction adenocarcinoma
31	Orlynvah	sulopenem etzadroxil, probenecid	10/25/2024	To treat uncomplicated urinary tract infections (uUTI)
32	Revuforj	revumenib	11/15/2024	To treat relapsed or refractory acute leukemia
33	Ziihera	zanidatamab-hrii	11/20/2024	To treat unresectable or metastatic HER2-positive (IHC 3+) biliary tract cancer

<i>FDA Novel Drug Approvals for 2024</i>				
<i>S. No.</i>	<i>Drug</i>	<i>Active Ingredient</i>	<i>Approval</i>	<i>FDA-approved use on approval date*</i>
34	<i>Rapiblyk</i>	<i>landiolol</i>	<i>11/22/2024</i>	<i>To treat supraventricular tachycardia</i>
35	<i>Attruby</i>	<i>acoramidis</i>	<i>11/22/2024</i>	<i>To treat cardiomyopathy of wild-type or variant transthyretin-mediated amyloidosis</i>
36	<i>Iomervu</i>	<i>iomeprol</i>	<i>11/27/2024</i>	<i>For use as a radiographic contrast agent</i>
37	<i>Bizengri</i>	<i>zenocutuzumab-zbco</i>	<i>12/4/2024</i>	<i>To treat non-small cell lung cancer and pancreatic adenocarcinoma</i>
38	<i>Crenessity</i>	<i>crinecerfont</i>	<i>12/13/2024</i>	<i>To treat classic congenital adrenal hyperplasia</i>
39	<i>Unloxcyt</i>	<i>cosibelimab-ipdl</i>	<i>12/13/2024</i>	<i>To treat cutaneous squamous cell carcinoma</i>
40	<i>Ensacove</i>	<i>ensartinib</i>	<i>12/18/2024</i>	<i>To treat non-small cell lung cancer</i>
41	<i>Tryngolza</i>	<i>olezarsen</i>	<i>12/19/2024</i>	<i>To treat familial chylomicronemia syndrome</i>
42	<i>Alhemo</i>	<i>concizumab-mtci</i>	<i>12/20/2024</i>	<i>For routine prophylaxis to prevent bleeding episodes in hemophilia A and B</i>
43	<i>Alyftrek</i>	<i>vanzacaftor, tezacaftor, and deutivacaftor</i>	<i>12/20/2024</i>	<i>To treat cystic fibrosis</i>

Winrevair

WINREVAIR™ is a prescription medicine used to treat adults with pulmonary arterial hypertension (PAH). PAH is a type of high blood pressure in the arteries of your lungs. WINREVAIR can improve your ability to exercise, improve your ability to perform normal activities with fewer symptoms, and reduce the risk of your physical condition and symptoms worsening. It is not known if WINREVAIR is safe and effective in children under 18 years of age.



Voydeya

VOYDEYA is a complement factor D inhibitor indicated as add-on therapy to ravulizumab or eculizumab for the treatment of extravascular hemolysis (EVH) in adults with paroxysmal nocturnal hemoglobinuria (PNH) (1). VOYDEYA is a medicine that affects your immune system. VOYDEYA may lower the ability of your immune system to fight infections.



Anktiva

ANKTIVA® is the first U.S. FDA-approved immunotherapy that activates a type of cell called a natural killer (NK) cell, part of the body's natural immune system, to attack and kill non-muscle invasive bladder cancer (NMIBC) cells.^{1,2} ANKTIVA is a treatment for use in combination with a standard treatment for NMIBC, Bacillus Calmette-Guérin (BCG), for people with NMIBC for whom BCG alone was not effective or in whom NMIBC returned after initial successful treatment. These people have what is termed BCG-unresponsive NMIBC.
Imdelltra



Imdelltra

IMDELLTRA™ is a prescription medicine used to treat adults with extensive-stage small cell lung cancer (ES-SCLC), which is cancer that has spread throughout lung or to other parts of the body, and who have received treatment with chemotherapy that contains platinum, and it did not work or is no longer working. It is not known if IMDELLTRA™ is safe and effective in children.



Sofdra



Sofdra is a prescription topical treatment for adults and children 9 years of age and older with excessive underarm sweating, known as primary axillary hyperhidrosis.

Sofdra was specifically designed for those who continue to struggle to stay dry:

- Acts specifically on sweat glands: Developed to work on receptors responsible for causing sweating
- Reduces sweat without clogging pores: Unlike antiperspirants, which block pores that release sweat, Sofdra works by blocking the body's signal to sweat in the first place
- Designed for simple application: Apply before bed using convenient applicator to help keep the drug off your hands. See "How Should I Apply Sofdra". Always wash hands with soap and water after use

Voranigo

SVoranigo is a once-daily pill for people with Grade 2 IDH-mutant glioma, astrocytoma, or oligodendroglioma.

VORANIGO (40 mg tablets) is a prescription medicine used to treat adults and children 12 years of age and older with certain types of brain tumors called astrocytoma or oligodendroglioma with an isocitrate dehydrogenase-1 (IDH1) or isocitrate dehydrogenase-2 (IDH2) mutation, following surgery. It is not known if VORANIGO is safe and effective in children under 12 years of age.



Livdelz



Livdelzi (seladelpar) is an oral PPAR-delta agonist, or delpar, for the treatment of primary biliary cholangitis (PBC). PPAR-delta has been shown to regulate critical metabolic and liver disease pathways. Preclinical and clinical data support its ability to regulate genes involved in bile acid synthesis, inflammation, lipid metabolism and transport and fibrosis.

Livdelzi has potential to help meet the current unmet need of people living with PBC, as the first and only treatment that achieved statistically significant reduction across biochemical response, alkaline phosphatase (ALP) normalization, and pruritus versus placebo. Pruritus is a common symptom that can significantly impair quality of life in people with PBC.

As part of the FDA accelerated approval, Gilead has committed to a confirmatory long-term outcomes study called AFFIRM, which has already been initiated in people with compensated cirrhosis. Continued approval may be contingent upon verification of clinical benefit in confirmatory trial(s).

Aqneursa

AQNEURSA™ (levacetylleucine) is indicated for the treatment of neurological manifestations of Niemann-Pick disease type C (NPC) in adults and pediatric patients weighing ≥ 15 kg. AQNEURSA is the only FDA-approved stand-alone therapy for the treatment of NPC, demonstrating significant improvements in neurological symptoms and functional benefits that could be seen within 12 weeks in adult and pediatric patients



Itovebi



Itovebi (inavolisib) is a prescription medicine used in combination with the medicines palbociclib and fulvestrant to treat adults who have hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative breast cancer that has an abnormal phosphatidylinositol-3-kinase catalytic subunit alpha (PIK3CA) gene, and has spread to nearby tissue or lymph nodes (locally advanced), or to other parts of the body (metastatic), and has come back after hormone (endocrine) therapy.

Your healthcare provider will test your cancer for abnormal PIK3CA genes to make sure that Itovebi is right for you.

It is not known if Itovebi is safe and effective in children.

Orlynvah

ORLYNVAH™ (pronounced Or-lin-va) is the first FDA-approved oral penem antibiotic for the treatment of uncomplicated urinary tract infections caused by the designated microorganisms *Escherichia coli*, *Klebsiella pneumoniae*, or *Proteus mirabilis* in adult women with limited or no alternative oral antibacterial treatment options.





AMIPHARMA Literary Update



The Role of Artificial Intelligence As A Catalyst For Education

(By Pawni Kaur, B.Pharmacy 3rd Sem)

Amity School of Pharmaceutical Sciences, Amity University Punjab, Mohali, India

Artificial Intelligence or AI as we know it, has in this fast-growing world, strongly impacted almost every segment existing; be it the medical sciences, the industrial strata or even teaching and education. If we talk about Education in particular, the teaching-learning with AI as the key media has its own bagful of benefits that have made education not only fun but much better than ever, in a lot more ways.

Artificial Intelligence has not only proven itself a source of intelligent tutoring systems, but has also upscaled personalized learning by efficiently and effectively understanding an individual's learning patterns, thereby providing data driven insights, better accessibility and inclusivity via-media virtual learning and classroom tools such as quizzes, tests, virtual flashcards, mock tests etc. and then curating automated results, gradings, feedbacks and analytical reports of the person using these tools. What more has AI helped the education sector with?

Apart from adding value to virtual learning, modern forms of learning with the technology have also helped with enhanced content creation that not only helps students perform better in projects and skill assessments but also the educators by helping them curate learning materials in such a way that learning tasks could become fun, easier to grasp and can be effectively utilized by students with all kinds of learning patterns and IQs.

Yet another merit of Artificial Intelligence as a source of learning is the way it helps a student grasp topic that are generally hard to understand with such ease, that these topics become difficult to remove from memory for a very long time thereby assisting skill development adding to the lifelong intellect of the user.

There are two sides of a coin....

A coin has two sides and so has AI. Alongside a sack full of advantages, there also exist a handful of demerits to the use of pseudo-intelligence. While a student gets all data pre-prepared, he loses the chance of honing his research and inquisitive skill. Not only does this impact a student's cognitive skill, but also affects the quality of intellect he possesses. To end this argument and sum up the topic, it can without a doubt be justified that the pros of this crucial topic outweigh and outshine the cons, henceforth proving Artificial Intelligence a pivotal aid to modern day learning.



An article on Cancer
(By Komal, B.Pharmacy 1st Sem)

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Cancer is a disease in which some of the body's cells grow uncontrollably and spread to other parts of the body. Cancer can start almost anywhere in the human body, which is made up of trillions of cells. Normally, human cells grow and multiply (through a process called cell division) to form new cells as the body needs them. When cells grow old or become damaged, they die, and new cells take their place. Sometimes this orderly process breaks down, and abnormal or damaged cells grow and multiply when they shouldn't. These cells may form tumors, which are lumps of tissue. Tumors can be cancerous or not cancerous (benign).

If a tumor remains localized to the area in which it originated and poses little risk to health, it is designated benign. Although benign tumors are indeed abnormal, they are far less dangerous than malignant tumors because they have not entirely escaped the growth controls that keep normal cells in check. They are not aggressive and do not invade surrounding tissues or spread to distant sites. In some cases, they even function like the normal cells from which they arise. Nevertheless, though benign tumors are incapable of dissemination, they can expand and place pressure on organs, causing signs or symptoms of disease. In some cases benign

tumors that compress vital structures can cause death—for instance, tumors that compress the brainstem, where the centres that control breathing are located.

The main cause of cancer is mutations, or changes to the DNA in your cells. Genetic mutations can be inherited. They can also occur after birth because of environmental forces. These external causes, called carcinogens, can include physical carcinogens (radiation and ultraviolet (UV) light) chemical carcinogens (cigarette smoke, asbestos, alcohol, air pollution) and biological carcinogens (viruses, bacteria, and parasites). WHO, through its cancer research agency, the International Agency for Research on Cancer (IARC), maintains a classification of cancer-causing agents. The incidence of cancer rises dramatically with age, most likely due to a build-up of risks for specific cancers that increase with age. The overall risk accumulation is combined with the tendency for cellular repair mechanisms to be less effective as a person grows older.

Prevention: cancer risk can be reduced by avoiding the use of tobacco and eating a healthy diet, including fruit and vegetable. Moreover, by avoiding ultraviolet radiation exposure (which primarily results from exposure to the sun and artificial tanning devices) and using sun protection measures.

Why Reading is the Best Medicine for Your Brain

(By Harman, B.pharmacy 1st Sem)

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If there is anything that ensures the efficient functioning of the brain, then it is reading, which is among the easiest activities as well. Whether it is an enticing book, an informative article, or a captivating biography, reading has significant advantages other than amusement alone. Here is a list of reasons for the numerous advantages of reading as a brain enhancement strategy.

1. **Increases Activity Time for the Brain**

When you engage in reading, your mind has to work hard lest it fails to make meaning of words, and characters and scenes come into play. Such a mental workout promotes greater electrical connection between another so that your mind is always engaged and in good working order. If reading is done regularly, in the long run, one's thinking capacity can be enhanced as well.

2. **Enhances One's Ability to Concentrate**

Today's fast-moving world can make it difficult to remain attentive to any one thing. However, reading demands you to be engaged in the plot or ideas, helping you to master the art of maintaining attention for extended periods. Eventually, this can help you improve your ability to concentrate on other activities in your daily routine.

3. **Increases Knowledge and Words Understanding**

The more you read, the more ideas and words you will have access to. Having a good command of language will help one communicate clearly which in turn builds one's confidence. More so, having a variety of topics available to you and being able to read them will help one better comprehend and be more knowledgeable.

4. **Improves Retention**

Books are rich sources of information especially because they bring characters, plots and settings together, and by doing this they assist to awaken your memory muscles.

5. **Reduces Stress and Improves Mental Health**

For many, reading lets one escape from the overwhelming and exhausting realities of life. It's a great way to alleviate stress as you immerse yourself in different worlds altogether. Scientific studies have proven that reading even for six minutes can assist in lowering stress levels and promote a sense of well-being.

6. **Encourages Empathy and Emotional Intelligence**

As a reader, you come across an extensive range of characters from different walks of life – this, in return, allows one to step into a reader's shoes and understand their emotions. Doing so greatly enhances one's emotional intelligence, which is a key aspect of any healthy relationship.

7. **Keeps the Brain Young**

Engaging and amusing oneself through reading regularly can be beneficial in retaining essential cognitive skills as one grows older and crosses over into the later stages of life. In particular, those who have been diagnosed with Alzheimer's disease and other such illnesses greatly benefit from mentally stimulating activities such as reading.

Conclusion: Reading is one of the few activities disconnected from technology and all the distractions, it is timeless and enriches one's brain in countless ways. If reading becomes a habit, it is more than an activity meant for enjoyment as much as it is serving as an investment in one's knowledge, mental and personal development. So don't hesitate and pick up a book today, the benefits of reading are endless!

Fog And Air Pollution Effects On Human Health (By Khushboo Dhadwal, B.Pharmacy 1st Sem)

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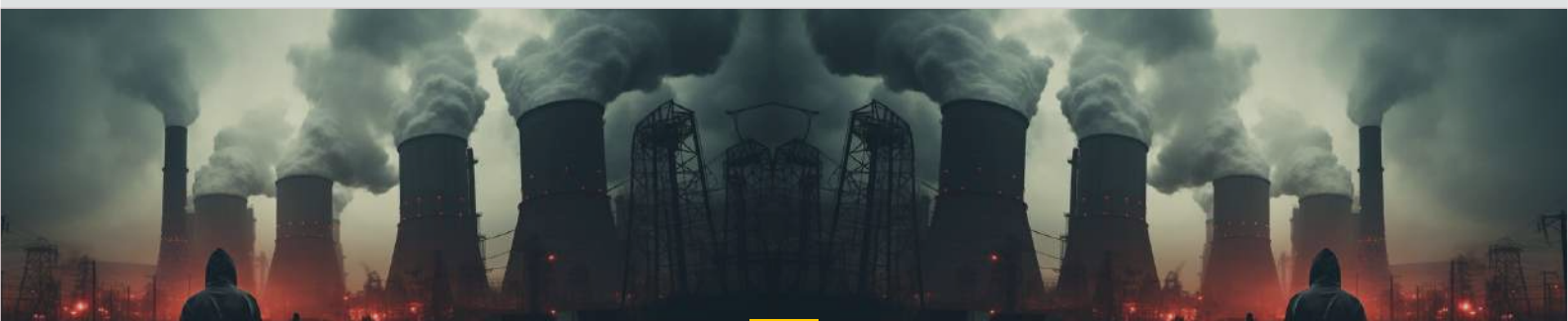
Fog being the most shocking yet relevant part this winter. Fog not only affects health but also leads to numerous hazardous accidents during the chill season. Fog is a low-lying cloud made up of tiny water droplets or ice crystals. It can be affected by many factors, including wind, topography, and nearby bodies of water. Fog can impact human activities like travel, shipping, and warfare. Fog is a low-lying cloud made up of tiny water droplets or ice crystals. Air pollution is the mixing of foreign substances into the whole atmospheric air. Harmful and toxic gases emitted by industries and motor vehicles cause huge damage to living organisms, whether plants, animals, or human beings. Some of the natural and various human resources are causing air pollution. Human exposure to unhealthy levels of air pollution, often exacerbated by seasonal fog, has become a significant public health issue in urban areas across both developed and developing nations. According to the World Health Organization (WHO), air pollution was responsible for nearly 4.2 million premature deaths in 2018 alone. Although the connection between air pollution and serious respiratory and cardiovascular diseases is established, research continues to reveal other adverse effects of air pollution on brain health, especially in children and the elderly. Effects on brain health. Exposure to polluted air for an extended period has increasingly been associated

with neurodegenerative diseases like dementia. Short-term exposure has been associated with reduced daily productivity, declining attention spans particularly in children, and headaches. Research studies involving MRI found that aging brains that had high concentrations of pollutants combined with fog show structural brain changes and atrophy. Air pollution has many bad effects on the health of people. It is the cause of many skin and respiratory disorders in human beings. Also, it causes heart disease too. Air pollution causes asthma, bronchitis, and many other diseases. The fog and haze can increase the air humidity and decrease the oxygen level. The low temperature stimuli in the morning may more easily induce acute onset of chronic respiratory or cardiovascular diseases in the elderly.

Structural brain changes: Fog combined with air pollution can cause structural brain changes and atrophy, especially in aging brains.

Reduced concentration: Fog can reduce concentration and attention span, making it difficult to focus on tasks also impair brain function. Short-term exposure to polluted fog can impair brain function.

To reduce the risk of health issues, you can try to avoid outdoor activities in foggy weather, wear a mask, and practice good hygiene.

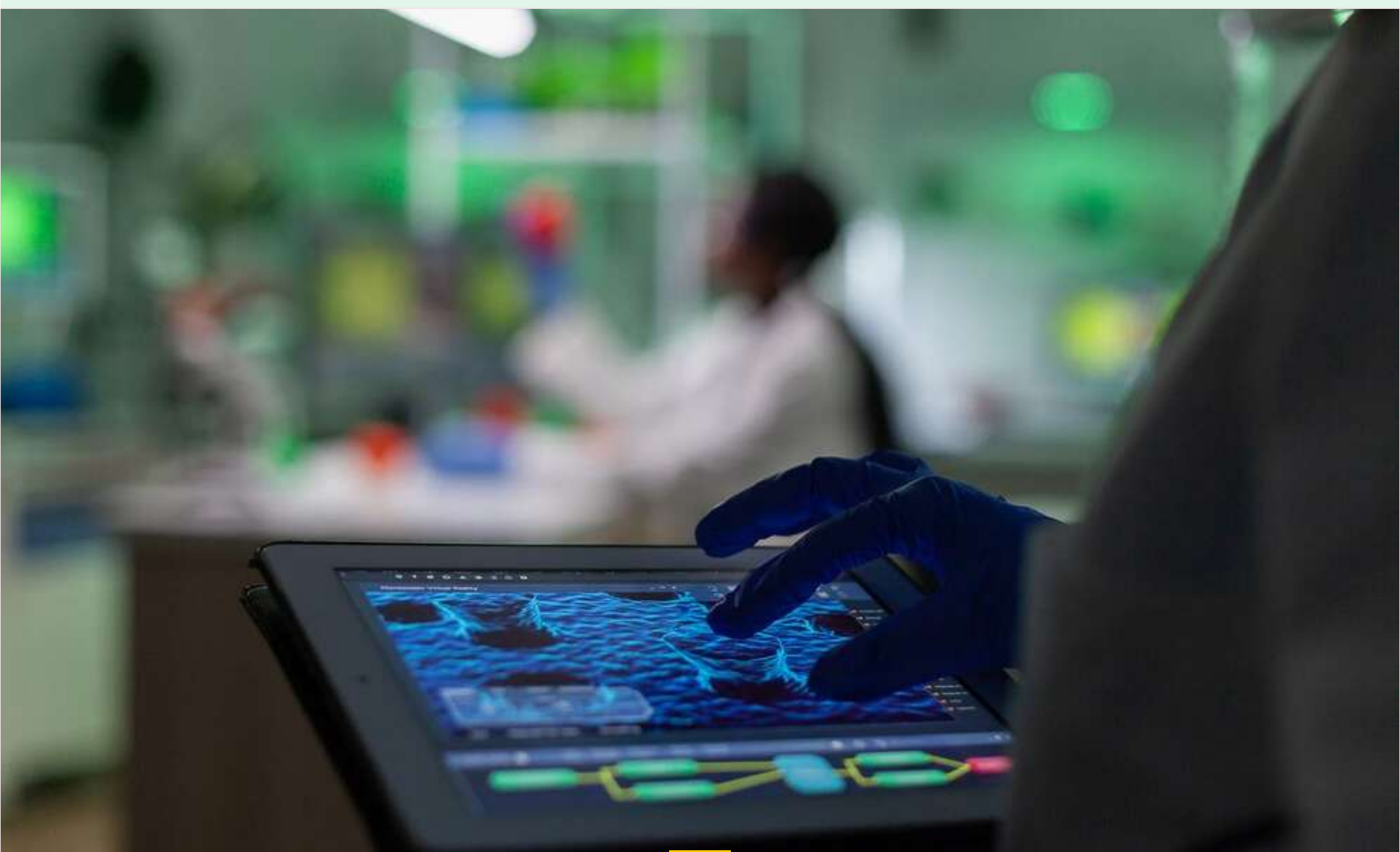


Artificial Intelligence in Pharmaceuticals
(By Nitya Gupta, B.pharmacy 1st Sem)

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Artificial Intelligence (AI) emerged as an intervention for data and number-related problems. This breakthrough has led to several technological advancements in virtually all fields from engineering to architecture, education, business, health and so on. AI has come a long way in healthcare and pharmacy, having played significant roles in data and information storage and management – such as patient medical histories, medicine stocks, sale records, software and computer applications like diagnostic tools such as MRI (Magnetic Resonance Imaging) radiation technology, CT (Computed Tomography) diagnosis and many more have all been created to aid and simplify healthcare measures. Its application in pharmaceutical technology has expanded, enhancing workflow efficiency, cutting operational expenses, and fostering safety, precision, and productivity by tackling intricate data processing tasks. With the aid of an AI program, doctors can generally evaluate their patient's conditions and analyse any side effects or other health risks related to their medications. With the use of AI applications, such as different artificial surgery simulators (such as those that simulate the heart, gastrointestinal tract, brain, etc.), trainee surgeons can learn a lot. AI can play a significant role in drug development. Application of Artificial Intelligence in the pharmaceutical sciences has marked potential for improving drug discovery, clinical trials, personalized medicine, manufacturing processes, and pharmacovigilance.

Keywords: Artificial Intelligence, Pharmacy



The Art of Healing: A Pharmacy's Gift
(Poem by Anmol Mehta, B.Pharmacy 3rd Sem)

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*In the heart of the town, where people seek grace,
Lies a place of solace, a healing space.*

*Where bottles and tablets in neat rows align,
And hope is dispensed in each measured sign.*

*The art of pharmacy, both science and care,
A pharmacist's touch is always aware.
They know each remedy, its strength and its need,
Guiding with wisdom to help those in need.*

*From the young to the old, from the sick to the
strong,
Pharmacy's role is where health belongs.
With knowledge profound and compassion to
guide,*

*They stand as the guardians, with care by their
side.*

*For it's not just the medicine, but the heart in their
hands,
That turns life's struggles into calmer lands.
The healing they offer is more than the cure,
It's the trust and the care that make patients sure.*

*So here's to the pharmacy, with its promise so
bright,
A place where health and hope take flight.
For in every pill, in each measured dose,
Lies a story of healing, and a life we can boast.*

The Guardian of Health
(Poem by Kanishka Nagpal, 3rd Sem)

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*In the corner shop or hospital wing,
The pharmacy hums, where hope takes wing. A
quiet force, a steady hand,
A pillar of care across the land.*

*Rows of remedies, crafted with care,
Solutions for burdens too heavy to bear. From
tablets small to syrups sweet, Each dose a lifeline,
each cure discreet.*

*Behind the counter, they stand with grace, A
pharmacist's wisdom lights up the place. With
knowledge vast and hearts so true, they guide us
gently, they see us through.*

*They read the scripts, they decode the need,
Ensuring safety in every deed.
A guardian watching, alert and wise, Protecting
lives with discerning eyes.*

*In times of fear, in times of strife, they hold the
thread of precious life. From pandemics fierce to
daily care,
A pharmacist's presence is always there.
So let us honour this noble art,
Of science and care, a healing heart.
For in the pharmacy, love's work is done, A silent
hero for everyone.*

The Journey of a Pill
(Poem by Prabhjot Kaur, B. Pharmacy 3rd Sem)
Amity School of Pharmaceutical Sciences, Amity University Punjab, Mohali, India

*Born in a lab with precision and care,
A tiny creation, a healer to bear,
Encased in a shell, so small yet profound,
A marvel of science where miracles abound*

*From factory floors to pharmacy shelves,
Guided by hands that trust in themselves,
Labeled and boxed, its purpose is clear,
To bring hope to hearts, to wipe away fear*

*Swallowed with water, it starts its quest,
Through tunnels and chambers, it never rests,
Dissolving swiftly, it breaks apart,
Releasing its magic, its healing art*

*Through veins it travels, a silent guide,
Seeking the ailment it must override,
A whisper to cells, a message to mend,
A promise of health, a body to defend*

*But its journey isn't without its strife,
Balancing power with the rhythm of life,
For every relief, it carries a cost,
A careful balance so no good is lost*

*At last, its mission comes to an end,
Its essence spent, its purpose penned,
Flushed from the body, its story untold,
A fleeting hero, both brave and bold*

*So next time you hold a pill in your hand,
Think of its journey, so carefully planned,
For in that capsule, so tiny and still,
Lies the untold tale of a wondrous pill*



The Silent Sentinel

(Poem by Prabhjot Kaur, 3rd Sem B.Pharmacy)

Amity School of Pharmaceutical Sciences, Amity University Punjab, Mohali, India

*In the shadows of science, where medicines glow,
Lies a force of vigilance you may not know,
Pharmacovigilance, a guardian unseen,
Protecting the world where healing has been*

*From patients' voices to doctors' pens,
The journey of safety never ends,
Each report, a puzzle, a clue to decode,
Lighting the path on the safety road*

*A whisper of warning, a flicker of doubt,
It listens to murmurs the drugs speak about,
A rash, a fever, a pain unexplained,
Every small signal, carefully examined*

*So raise your gaze to the silent few,
The protectors of health, steadfast and true,
Pharmacovigilance, a watchtower bright,
Ensuring our medicines heal with their light*

*Through storms of data, they search for the signs,
Tracing the threads, untangling the lines,
The mission is simple, yet vast in its scope
To ensure every cure carries safety and hope*

Compounding Magic

(Poem by Ritik Rajput, 3rd Sem B.Pharmacy)

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*In a quiet room, with vials aligned,
A pharmacist works, with a healer's mind.
Not off the shelf, but tailored with care,
A potion unique, beyond compare.*

*Capsules split, dosages refined,
A cure reshaped, redefined.
Lotions soothing, creams to mend,
Compounding magic, a trusted friend.*

*The scales tip gently, precise and true,
Measuring powders, a drop, a hue.
Mixing and stirring, a patient's need,
Crafting solutions, a noble deed.*

*It's more than science—it's an art,
Where compassion plays a vital part
For every blend, a story is told,
Of care and comfort, worth more than gold.*

*A child who struggles with a bitter pill,
Finds a sweetened syrup to ease the ill.
For those allergic to common molds,
A custom remedy their hand now holds.*

*So here's to the hands that mix and measure,
Turning chemistry into life's treasure
In every prescription, they leave their mark,
A spark of magic in the healing arc.*

Pharmacy Automation: The Future's Touch
(Poem by Ritik Rajput, 3rd Sem B.Pharmacy)
Amity School of Pharmaceutical Sciences, Amity University Punjab, Mohali, India

*In the heart of the pharmacy, bright lights gleam,
Where innovation dances like a dream.
No longer just shelves and a human's hand,
Machines now rise, precision planned.*

*Robotic arms with a steady grace,
Count pills and sort them, no time to waste.
Barcodes scanned with a gentle hum,
Ensuring each order is perfectly done.*

*Gone are the errors of manual days,
Automation works in seamless ways.
Inventory tracked with a digital mind,
Efficiency that's one of a kind.*

*Yet beyond the mechanics, there's more to see,
A promise of time for humanity,
For pharmacists now, with tasks made light,
Can focus on care, a guiding light.*

*Counselling patients, their stories heard,
Explaining treatment with thoughtful words,
While machines handle the repetitive chore,
The human connection means so much more.*

*So here's to the tech that's leading the way,
Transforming pharmacy day by day,
A partnership forged, machine and heart,
A future of healing, where both play their part.*



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