

NEWS LETTER

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CMR COLLEGE OF PHARMACY

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VISION

- To be the most preferred institution for education and research in Pharmacy.

MISSION

- To foster professional graduates with consistent quality education, training and research to serve the needs of industry, environment and society.
- To inculcate leadership qualities, team work and professional ethics.
- To make the students globally competitive.
- To expand research activities in new avenues and emerging segments.

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LATEST INTERNATIONAL UPDATES



WHO Issues Multiple Cough Syrup Alerts

Between April and June 2023, the WHO issued several medical product alerts regarding contaminated cough syrups originating from India, which were linked to serious illnesses and child fatalities in parts of Africa and Asia. These warnings triggered widespread product recalls and reinforced the need for stricter manufacturing oversight and improved quality control in export-oriented pharmaceutical production.

EU Proposes Comprehensive Pharma Reforms

In April 2023, the European Commission unveiled major legislative reforms to update the EU pharmaceutical framework, aiming to streamline drug approvals, improve access to essential medications, and ensure preparedness for future health crises with harmonized regulatory mechanisms.

India's Pharma Export Resilience

Despite global scrutiny, India's pharmaceutical exports grew by 5% in April–May 2023, reaching around \$4.3 billion. Demand remained strong in key markets like the U.S. and Europe, particularly for generic cardiovascular, oncology, and CNS drugs.

Boom in Pharma M&A & Digitalization

The pharmaceutical industry embraced “Pharma 4.0” between April and June, focusing on digital manufacturing, AI integration, advanced analytics, and sustainable operations. This digital surge was paralleled by robust M&A activity as companies invested in innovation and supply-chain resilience.

FDA Approvals Highlight Innovation

The FDA greenlit six new molecular entities and four biologics in Q2 2023, including high-impact therapies like Trikafta for cystic fibrosis and Keytruda for urothelial cancer, underscoring continued investment in novel treatment innovations.

Eco-Friendly Packaging Gains Traction

Pharma manufacturers accelerated adoption of recyclable and sustainable packaging solutions in Q2 2023, driven by regulatory encouragement and growing demand for environmental responsibility across global supply chains.

Ahmedabad Pharma Summit Drives India's Value Shift

In April, the inaugural Ahmedabad Pharma Summit focused on transitioning India's pharmaceutical industry from volume-centric to value-based models—highlighting the importance of innovation, digital skills, regulatory modernization, and sustainable manufacturing.

FDA Approves Orally Ingested Fecal Microbiota for *C. difficile*

In June 2023, the FDA approved the first orally administered fecal microbiota product aimed at preventing recurrent *Clostridioides difficile* infections in adults aged 18 and over. This novel microbial therapy underscores growing confidence in live biotherapeutics and the microbiome's role in gut health.

Pfizer's Expanded Vaccine Approvals

Also in Q2, Pfizer secured FDA approval for a 20-valent pneumococcal conjugate vaccine (Pneumovax 20) for children aged six weeks to 17 years. This broader-coverage vaccine enhances protection against invasive pneumococcal disease compared to earlier versions.



FACULTY CORNER

CEREBROVASCULAR ACCIDENT ASSOCIATED WITH HEMIPARESIS AND HEMIPLEGIA

Cerebrovascular accidents (CVAs), commonly known as strokes, frequently result in hemiparesis, a condition characterized by weakness or partial paralysis on one side of the body. This abstract explores the association between CVA and hemiparesis, emphasizing the intricate interplay of vascular events leading to neurological deficits. Ischemic strokes, caused by blood clot obstruction, and hemorrhagic strokes, resulting from bleeding in the brain, can both precipitate hemiparesis by disrupting blood supply to crucial motor areas. Treatment strategies for CVA-associated hemiparesis encompass a multidisciplinary approach. Acute interventions often involve thrombolytic therapy or endovascular procedures to mitigate ischemic damage. Post stroke rehabilitation plays a pivotal role, incorporating physical, occupational, and speech therapies to enhance motor function, facilitate activities of daily living, and address communication challenges. Pharmacological interventions, such as muscle relaxants and spasticity-reducing medications, are frequently employed to manage associated complications. Technological advancements, including robotic-assisted therapy and virtual reality, are increasingly integrated into rehabilitation programs, offering innovative avenues for recovery. Furthermore, ongoing research explores neurostimulation techniques and regenerative therapies to promote neural repair. Comprehensive care involves addressing not only the physical aspects but also the emotional and cognitive dimensions, underscoring the importance of holistic approaches in optimizing outcomes for individuals affected by CVA-associated hemiparesis.

Submitted by: Dr. V. Shirisha, Assistant Professor

SYNTHETIC BIOLOGY

Synthetic biology is an interdisciplinary field that combines principles from biology, engineering, and computer science to design and construct new biological parts, systems, and organisms, or to redesign existing ones for useful purposes. The field seeks to create novel solutions for problems in medicine, agriculture, energy, and environmental sustainability by engineering organisms with enhanced or entirely new functionalities. Key techniques in synthetic biology include genetic circuit design, gene synthesis, CRISPR-Cas9 gene editing, and cell-free systems, all of which enable the precise modification and assembly of biological components. Notably, synthetic biology has led to advances such as the production of biofuels, biodegradable plastics, gene therapies, and more efficient vaccines. Despite its immense potential, the field faces challenges related to ethical considerations, biosafety, regulatory frameworks, and public perception. This abstract explores the state of synthetic biology, highlighting its groundbreaking applications, technological advancements, and the opportunities it offers across various industries.

Submitted by: Mrs. S. Lahari, Assistant Professor

STUDENTS CORNER

GAI-POWERED MOLECULE DESIGN: GPT-4 AND ALPHAFOLD REDEFINE DRUG DISCOVERY

The second quarter of 2023 witnessed significant advancements in the integration of artificial intelligence (AI) within the drug discovery pipeline, particularly through the deployment of large language models (LLMs) such as GPT-4 and structural prediction tools like AlphaFold. This period marked a notable evolution in AI's role from that of an assistive analytical utility to an autonomous generator of novel therapeutic candidates. GPT-4 demonstrated the capacity to interpret and synthesize vast volumes of biomedical literature, extract mechanistic insights, and propose plausible drug-target interactions. Concurrently, AlphaFold enabled high-resolution, in silico prediction of protein tertiary structures, including targets for which crystallographic data were previously unavailable, thereby facilitating structure-based drug design with enhanced precision. These AI platforms accelerated early-phase drug discovery by enabling virtual screening, de novo compound generation, and rapid optimization of pharmacokinetic and pharmacodynamic profiles. Case studies from Q2 2023 revealed that AI-driven biotech firms, in collaboration with pharmaceutical enterprises, successfully identified and validated first-in-class lead compounds within compressed timelines. These developments underscore the emergent necessity for interdisciplinary competence in cheminformatics, algorithmic modeling, and machine learning within pharmaceutical research. Moreover, the evolving landscape mandates that pharmacists and drug development scientists engage with AI tools not only as users but also as contributors to ethical oversight, model interpretation, and translational integration. This paradigm shift illustrates that AI is no longer peripheral but foundational to next-generation pharmaceutical innovation, with implications for academic curricula, regulatory frameworks, and clinical implementation strategies.

Submitted by: **E.Varshini, B.Pharm 3rd Year**

DIGITAL PHARMACOVIGILANCE: REAL-TIME ADR MONITORING WITH SMART TECHNOLOGY

The evolution of pharmacovigilance in the digital age has catalyzed a transformative shift from passive, retrospective adverse drug reaction (ADR) reporting to proactive, real-time safety surveillance. During the second quarter of 2023, the global pharmacovigilance landscape experienced a marked acceleration in the deployment of digital health technologies, including mobile applications, wearable biosensors, and integrated electronic health record (EHR) platforms, to facilitate instantaneous ADR detection and reporting. These tools leverage patient-reported outcomes, physiological monitoring, and algorithmic signal detection to enhance the precision, timeliness, and granularity of pharmacovigilance data. Regulatory agencies and healthcare systems began integrating artificial intelligence (AI)-driven dashboards and cloud-based systems capable of identifying ADR trends, automating causality assessment, and prioritizing high-risk signals for regulatory evaluation. Wearable technologies—such as smartwatches and biosensor patches—further contributed by capturing real-time biometric data that correlated with pharmacodynamic responses, enabling early identification of potentially harmful drug effects, particularly in polypharmacy and geriatric populations. This paradigm shift not only enhances post-marketing surveillance but also redefines the pharmacist's role in digital therapeutics, emphasizing the need for competencies in digital literacy, data interpretation, and patient engagement. The implementation of real-time ADR reporting frameworks promotes a more dynamic and responsive pharmacovigilance ecosystem, aligning with the principles of precision medicine and patient-centered care. The April–June 2023 period underscored the necessity of integrating advanced digital tools into national pharmacovigilance strategies to mitigate drug-related morbidity and mortality while fostering public trust in regulatory science. As pharmacovigilance becomes increasingly data-driven and decentralized, pharmacists and clinical scientists will serve as pivotal agents in the stewardship of digital drug safety systems.

Submitted by: **K. Nikhila, B.Pharm 3rd Year**

NSS PROGRAMME ACTIVITIES



Conducted NSS meeting as a part of World Environment day on June 5th 2023
In CMR Collge of Pharmacy Block II

TELANGANA AVATHARANA DHASHABDHI UTSAVAALU 2023



INTERNATIONAL YOGA DAY



ANNUAL DAY CELEBRATIONS-2023



Annual Day Celebrations forms an integral part of our college activities. Every year it is celebrated in the month April. It is an occasion of celebration, felicitation, feast and festivity when students present not only their wonderful performances but also receive honors for their curricular and co-curricular achievements.



PROGRAM

VISION:

To emerge as a centre for academic excellence in pharmaceutical sciences.

MISSION:

1. To impart pharmacy knowledge to students through professionally competent teachers and shape them as the best health care professionals.
2. To pursue and explore the students in core and frontier areas of pharmacy research through conducive environment of sophisticated laboratories and cater the needs of pharmaceutical industry and society.
3. To develop critical problem analysis, leadership qualities and self-learning abilities.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO-1: To develop the graduates into aspirant individuals with profound knowledge and outstanding capabilities to excel in their pharmacy profession.

PEO-2: To shape up the graduates as better leaders for effective teamwork to cope up with the needs of the society.

PEO-3: To foster them to adopt professional ethics and lifelong learning while serving the society as healthcare professional

PROGRAM OUTCOMES (PO'S)

1. Pharmacy Knowledge: Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.

2. Planning Abilities: Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.

3. Problem analysis: Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.

4. Modern tool usage: Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.

5. Leadership skills: Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfillment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and wellbeing.

6. Professional Identity: Understand, analyze and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).

7. Pharmaceutical Ethics: Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behavior that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.

8. Communication: Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.

9. The Pharmacist and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practice.

10. Environment and sustainability: Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

11. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Selfassess and use feedback effectively from others to identify learning needs and to satisfy these needs on an ongoing basis.



CMR COLLEGE OF PHARMACY

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