

# NEWS LETTER

JULY-SEPTEMBER 2023



**CMR COLLEGE OF PHARMACY**

Kandlakoya (V), Medchal Road, Hyderabad - 501401

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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

## FDA Alerts Over Contaminated Eye Drops

- In mid-2023, the U.S. FDA issued a warning to Indian manufacturer Global Pharma Healthcare for CGMP violations in its OTC eye-drop products distributed online and through Amazon—escalating concerns over overseas manufacturing standards.

## Global Surge in Generic Drug Shortages

Generic medication shortages—including methotrexate and alteplase—reached a ten-year high across Europe and North America, triggered by supply-chain fragility, low profit margins, and heavy reliance on single sources. The structural gaps prompted calls for diversification and strategic stockpiling.

## India Charting ‘Volume to Value’ Pharma Growth

By mid-2023, Indian pharma leaders actively pursued a strategic pivot from volume-based generics to high-value biologics and innovation—targeting a domestic market size of \$130 billion by 2030. This shift prioritized biotech investments, digital health adoption, and R&D-led growth.

## Australia Eyes Revival Post-Patent Cliff

While Australia’s pharma and biotech activity slowed due to patent expirations and macroeconomic headwinds, analysts anticipate resurgence in oncology, neurology, and AI-health spaces by 2024—mirroring trends in the U.S. and EU.

## Kenvue’s \$3.8 B IPO Marks Health Spin-off Boom

Johnson & Johnson’s consumer health arm, Kenvue, spun off via a \$3.8 billion IPO in May 2023—emblematic of the growing trend for big pharma companies to separate consumer healthcare to enhance strategic focus and unlock value.

## Alzheimer’s Care Costs Spotlights

The American Heart Association flagged that dementia-related healthcare costs—including Alzheimer’s—stood at \$1.3 trillion in 2019 and are projected to double by 2030, reinforcing investment urgency in therapeutics and policy support.

## Resilient Pharma Supply Chains Take Center Stage

Amid persistent drug shortages, global stakeholders adopted resilience strategies from high-risk industries—diversifying suppliers, improving transparency, and near-shoring facilities—to secure supply continuity for critical medications.

## India Deploys National Digital Health Summit

In July 2023, the IMAI Digital Health Summit in New Delhi brought together global and Indian stakeholders to explore the digital transformation of healthcare in India. The event featured key figures from the National Health Authority, Apollo Hospitals, Amazon, Google Cloud, and others—focusing on telemedicine, health-tech innovation, and India’s drive to lead in digital health.

## India Launches National Sickle Cell Elimination Mission

Prime Minister Modi launched India’s first-ever National Sickle Cell Anemia Elimination Mission in July 2023, aiming to screen 7 crore tribal populations across 278 districts over three years. The mission includes genetic counselling and intervention to address a disease that disproportionately affects marginalized communities.



# FACULTY CORNER

## NEUROPHARMA: PERSONALIZED MENTAL HEALTH VIA DIGITAL BIOMARKERS

Neuropharma is revolutionizing mental healthcare by leveraging digital biomarkers and artificial intelligence (AI) to deliver personalized, proactive treatment. Digital biomarkers are measurable data points collected through smartphones, wearables, and other digital tools. These include passive data like sleep, movement, speech patterns, and phone usage, as well as active inputs such as mood surveys or voice recordings. By continuously capturing this information, Neuropharma enables early detection of mood shifts and mental health deterioration, supporting timely and individualized interventions.

AI algorithms analyze these biomarkers to predict responses to treatment, recommend therapy adjustments, and personalize care strategies. For example, changes in smartphone usage patterns have been shown to predict antidepressant response with high accuracy, allowing clinicians to fine-tune therapy before visible symptoms escalate. This represents a significant improvement over traditional trial-and-error psychiatric approaches.

The global market for psychiatric digital biomarkers is growing rapidly, with projections indicating an 18–24% CAGR and a multi-billion-dollar valuation by 2030. Broader neuro-biomarker technologies are also gaining traction, supporting advancements in diagnosing and managing neurological and psychiatric disorders.

Despite its promise, Neuropharma must address critical challenges such as data privacy, algorithmic bias, and regulatory oversight. Ensuring ethical implementation, informed consent, and equitable access is essential to avoid reinforcing disparities or stigmatization in mental healthcare.

Neuropharma merges digital health data with AI-driven insights to offer precise, dynamic, and patient-centered mental health care. Its ability to detect issues early and tailor treatment represents a transfo.

**Submitted by :Dr. V. V. Rajesham , Associate Professor**

## WHITE ANALYTICAL CHEMISTRY (WAC)

White Analytical Chemistry (WAC) is an emerging framework that seeks to integrate Green Analytical Chemistry (GAC) and Red Analytical Chemistry (RAC) principles to ensure sustainable, reliable, and regulatory-compliant analytical methodologies. This review builds upon the foundational thesis by Nowak, Wietecha-Poslusznny, and Pawliszyn, which explores WAC as an approach to reconcile the principles of GAC while maintaining analytical functionality. This paper critically examines the principles of WAC, compares existing greenness assessment tools, highlights key regulatory gaps, and proposes a structured approach for incorporating WAC into global standards. Future perspectives, including AI-assisted method optimization and lifecycle assessment (LCA), are discussed to provide a roadmap for regulatory agencies and analytical scientists.

The concept of White Analytical Chemistry (WAC) emerges as a balanced approach to addressing the limitations of both Green Analytical Chemistry (GAC) and Red Analytical Chemistry (RAC). Nowak et al. proposed WAC as a comprehensive framework that ensures environmental sustainability without compromising analytical performance. The increasing demand for sustainable and robust analytical methodologies in pharmaceutical and environmental sectors underscores the need for integrating WAC principles into regulatory frameworks.

**Submitted by: Mrs. M. Sangeetha, Assistant Professor**

# STUDENTS CORNER

## GREEN SYNTHESIS OF SILVER NANOPARTICLES USING HERBAL EXTRACT

Green chemistry expresses an area of research developing from scientific discoveries about pollution awareness and it utilizes a set of principles that reduces or eliminates the use or generation of hazardous substances in all steps of particular synthesis or process. In order to improve atom economy, highly selective catalytic processes should be performed instead of using additional substrates. Theoretical aspects of green chemistry as a modern interdisciplinary conception, which reveals peculiarities to implement sustainable development paradigm in the chemical industry, are studied. The dihydropyrimidinones i.e. 3,4-Dihydropyrimidin-2(1H)-one (DHPMs) that can be synthesized under acidic condition by the condensation of urea, Keto-ester and an aldehyde. These are heterocyclic compounds having immense applications in pharmacology. As our growing concern for the environment demands, the development of an eco-friendly and green procedure for synthesis of dihydropyrimidinone (DHPM) was found to be essential so our objective is to synthesize and implement a “solvent-free and catalyst-free” green methodology for synthesizing DHPM.

Submitted by: **A. Kovidha, Pharm D 3<sup>rd</sup> Year**

## ARTIFICIAL INTELLIGENCE OF ROBOTIC SYSTEM IN HEALTH CARE MONITORING

A benefit of Robotics in Healthcare Using robotics in the medical field enables a high level of patient care, efficient processes in clinical settings, and a safe environment for patients and healthcare workers. Surgical-Assistance Robots As motion control technologies have advanced; surgical-assistance robots have become more precise. These robots help surgeons achieve new levels of speed and accuracy while performing complex operations with AI- and computer vision-capable technologies. Some surgical robots may even be able to complete tasks autonomously, allowing surgeons to oversee procedures from a console. Surgeries performed with robotics assistance fall into two main categories, Robotics also plays a key role in surgeon education. Simulation platforms use AI and virtual reality to provide surgical robotics training. Within the virtual environment, surgeons can practice procedures and hone skills using robotics controls. Medical robots assist with surgeries, streamline clinical workflow and hospital logistics, and enhance patient care and workplace safety.

Submitted by: **Atluri Varsha, Pharm D 4<sup>th</sup> Year**

## SWYER SYNDROME

According to National Organisation For Rare Diseases (NORD) SWYER SYNDROME is a rare disorder characterized by the failure of the sex glands (i. e., testicles or ovaries) to develop. Swyer syndrome was first described in the medical literature by Dr. Swyer in 1955. Swyer Syndrome is classified as a disorder of sex development (DSD). Girls with Swyer syndrome have an XY chromosome instead of XX chromosome. Despite having the XY chromosome, girls with Swyer syndrome look female genitalia and structures including a vagina, uterus and fallopian tubes. Instead of sex glands, women with Swyer syndrome have “GONADAL STREAKS” in which the ovaries do not develop properly and are replaced by function less scar (fibrous) tissue. Because they lack ovaries, girls with swyer syndrome do not produce sex hormones and will not undergo puberty. Individuals are most commonly diagnosed during puberty after menstruation fails to occur (primary amenorrhea). The consequences of Swyer syndrome without treatment: Gonads do not have two X chromosomes, so the breast will not develop, and the uterus will not grow and menstruate until estrogen is administered. This condition can occur as the result of a new gene mutation or can be inherited in an autosomal recessive, X- linked or Ylinked manner.

Submitted by: **K. Nikhila, B. Pharm 3<sup>rd</sup> Year**



# ACADEMIC & CO-CURRICULAR ACTIVITIES

## GUEST LECTURE

4<sup>th</sup> August, 2023



A motivational seminar has been conducted by Dr. Manoj Matnani, Consultant Pediatric Nephrologist, VIHASA INDIA on topic **“A SPIRITUAL APPROACH: VALUES IN HEALTH CARE”** in Block II seminar hall for all the B.Pharm, PharmD, M.Pharm students

24<sup>th</sup> August, 2023



An Industrial exposure seminar has been conducted by R.N.Deepak Varma Senior Manager QA ANNORA PHARMA in Block II seminar hall for all the B.Pharm, final year students.

## National Service Scheme, 10<sup>th</sup> August 2023







## WORKSHOP



8<sup>th</sup>-9<sup>th</sup> September

Two days National Workshop on Clinical Pharmacy Excellence in Patient Safety & Quality of Care in association with AVENIDA innovations was conducted in BLOCK II Seminar hall, for all Pharm D students.

## NATIONAL PHARMACOVIGILANCE WEEK (NPVW) 2023



17<sup>th</sup>-23<sup>rd</sup> September

As a part of NPVW2023 Health Awareness Rally, Elocution, Essay Writing were conducted for all the students .

## ORIENTATION DAY 2023-24



Orientation day AY (2023-24) has been conducted on 29<sup>th</sup> September for B.Pharm, Pharm D, M.Pharm 1<sup>st</sup> yr students at CMR Main Auditorium

## INDUCTION PROGRAMM 2023-2024 BATCH



Induction Programm AY (2023-23) has been conducted for B.Pharm, PharmD, M.Pharm 1<sup>st</sup> yr students at CMR seminar hall

# 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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**Kandlakoya(V), Medchal Road, Hyderabad-501401**

Website: [www.cmrcp.ac.in](http://www.cmrcp.ac.in) E-mail: [principal@cmrcp.ac.in](mailto:principal@cmrcp.ac.in)

