



# VELS



INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS)  
(Deemed to be University Estd. u/s 3 of the UGC Act, 1956)  
PALLAVARAM, THIALAMBUR, PERIYAPALAYAM-CHENNAI  
ACCREDITED BY NAAC WITH 'A++' GRADE

2<sup>ND</sup>  
ICPPR



# TWO DAYS INTERNATIONAL CONFERENCE ON CLINICAL PHARMACY PRACTICE AND RESEARCH - 2025

"TRANSFORMATION IN  
PHARMACY: EMPOWERING  
FUTURE GENERATIONS OF  
PHARMACISTS"

SEPTEMBER 25 & 26, 2025

VENUE: SHIVALAYA AUDITORIUM,  
VISTAS

**CONFERENCE PROCEEDINGS  
OF  
2 ND ICCPPR - 2025**

ORGANIZED BY

DEPARTMENT OF PHARMACY PRACTICE  
SCHOOL OF PHARMACEUTICAL SCIENCES  
VISTAS



RANKED **4** AMONG PRIVATE ENGINEERING INSTITUTES IN TAMIL NADU



GRADED **A1** BY THE INDIAN REGISTER OF SHIPPING (IRS) (NOV-2019)

**RANKED A++** IN BUSINESS INDIA BEST B-SCHOOL SURVEY Business India THE MAGAZINE OF THE CORPORATE WORLD

RANKED **4** IN INDIA TODAY AUG 2023 IN TAMIL NADU AMONG BEST PVT. UNIVERSITIES



ISBN: 978-81-992034-2-6



# ABOUT US



Vels Institute of Science, Technology & Advanced Studies (VISTAS), established in 2008, is committed to shaping individuals into well-rounded professionals with both character and competence, dedicated to nation-building and sustainable development. Recognized as a Deemed to be University by the Ministry of Human Resource Development (MHRD), Government of India, and the University Grants Commission (UGC), VISTAS offers a diverse range of undergraduate, postgraduate, and Ph.D. programs.

As a multidisciplinary university in Tamil Nadu, VISTAS provides academic programs across various fields, including Arts, Science, Engineering, Medicine, Nursing and Allied Health Sciences, Technology, Management Studies, Pharmaceutical Sciences, Physiotherapy, Maritime Studies, Education, Law, Hotel and Catering Management, Aviation, Agriculture, Music, and Fine Arts. All programs at VISTAS are accredited by the relevant statutory regulatory bodies, including the All India Council for Technical Education (AICTE), National Medical Commission (NMC), Indian Nursing Council (INC), Pharmacy Council of India (PCI), Bar Council of India (BCI), National Council for Teacher Education (NCTE), and the Directorate General of Shipping (DGS). The institution has been awarded an "A++" grade by the National Assessment and Accreditation Council (NAAC) and has been granted 12-B status by the UGC. Additionally, eleven programs have received accreditation from the National Board of Accreditation (NBA). In the NIRF University Rankings 2024, VISTAS secured a position in the 101-150 range, demonstrating its commitment to excellence in education and research. It has also been ranked in the 1201-1500 band in the Times Higher Education (THE) World University Rankings 2025 and has achieved a Diamond rating in the QS I-Gauge University Rating.

## ABOUT SCHOOL



The School of Pharmaceutical Sciences was started by the Vels Educational Trust in the year 1992 as Vels College of Pharmacy and had grown by introducing undergraduate, post graduate and Doctoral programmes in Pharmacy. In the year 2008, the college was added as a member institution to Vels Institute of Science Technology and Advanced Studies (VISTAS), DEEMED TO BE UNIVERSITY ESTD U/S 3 OF THE UGC ACT, 1956.

The School of Pharmaceutical Sciences provides excellent infrastructural facilities to carry out research on par with International standards. The Programmes offered by the school are duly approved by AICTE/UGC/PCI. The School undertakes collaborative research projects with various organizations and hospitals. The B.Pharm degree run in this institution is duly accredited by National Board of Accreditation (NBA). It also has an approved Institutional Animal Ethics Committee framed as per the guidelines of the Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA) and a well-established Animal Room to cater to the experimental needs. The duly constituted Human Ethics Committee strictly follows the guidelines prescribed by ICMR and facilitates research involving human subjects. The School also runs a generic medicine store which provides the drugs at subsidized cost under Pradhan Mantri Janaushadhi Pariyojana (PMBJP) scheme.

## VISION

Evolving the School into a Center of Academic and Research Excellence in Pharmaceutical Education.

## MISSION

**PHARMACEUTICAL CARE:** To meet societal needs for safe and effective drug therapy by imparting advanced knowledge, aptitude and skills.

**QUALITY EDUCATION:** To provide quality education that effectively integrates outcome-based, self-learning strategies and leadership skills through practice and research.

**MORAL AND ETHICAL VALUES:** To inculcate core ethical values and enable the graduates to reflect human values in the health sector.



## EDITOR'S DESK

It is with great pleasure that we present to you the proceedings of the Two Days International Conference on Clinical Pharmacy Practice and Research - 2025 with the theme of "Transformation in Pharmacy: Empowering Future Generations of Pharmacists", held from 25 & 26, September 2025 at the Vels Institute of Science & technology Advanced Studies Shivalaya Auditorium, Pallavaram, Chennai. This Collection represents the culmination of the hard work and dedication of the authors, speakers, and Organizers who have contributed to this significant event.

This conference was marked by the enthusiastic participation of various colleges from across India, reflecting the broad geographical interest and the diverse perspectives that enriched our discussions. The papers included in this volume explore a wide range of topics, capturing the dynamic nature of the field. Each paper has undergone a rigorous peer review process to ensure the highest standards of quality and relevance. The insights and findings shared here not only advance our understanding but also open new avenues for future research and collaboration.

We would like to extend our heartfelt thanks to all the contributors, reviewers, and the organizing committee for their invaluable efforts. Without their commitment, this publication would not have been possible. We also wish to acknowledge the support of our Chief patron, patrons, convenor, Organizing Secretary, co - convenors whose contributions have been vital in bringing this conference to fruition.

As you delve into the proceedings, we hope you find the discussions enriching and the ideas inspiring. It is our collective ambition that the knowledge shared here will contribute meaningfully to the ongoing dialogue in our field and encourage further exploration and innovation.

Thank you for your participation and continued engagement with our community.

## ABOUT CONFERENCE

Two Days International Conference on Clinical Pharmacy Practice and Research - 2025

Theme: "Transformation in Pharmacy: Empowering Future Generations of Pharmacists"

This conference is conceived as a premier academic and professional event dedicated to exploring the dynamic evolution of the pharmacy profession. The event will serve as a critical platform for pharmacists, clinical researchers, academics, and aspiring students to engage in substantive discourse on the paradigm shift occurring within healthcare. The central tenet of the conference is to articulate and advocate for the transformation of the pharmacist's role from a traditional, product-centric function to an indispensable, patient-centric component of interprofessional healthcare teams.

The conference will feature expert-led sessions that underscore the pharmacist's expanding responsibilities in medication therapy management, comprehensive chronic disease management, and proactive public health initiatives. By fostering a collaborative environment, the conference aims to facilitate a robust exchange of knowledge and best practices. The overarching objective is to collectively define and shape the future of pharmacy by equipping the next generation of practitioners with the advanced clinical competencies, research acumen, and leadership skills essential for these expanded roles.

## CONFERENCE HIGHLIGHTS & KEY TOPICS

- **Advance Clinical Practice:** Showcase innovations and best practices to optimize patient care.
- **Promote Research:** Provide a platform to present research, foster collaboration, and discuss future directions.
- **Enhance Professional Development:** Offer opportunities for pharmacists to update knowledge and skills.
- **Highlight Emerging Roles:** Explore expanding roles in areas like pharmacogenomics and digital health.
- **Facilitate Networking:** Create an environment for professional networking and idea exchange.
- **Foster Global Partnerships:** Strengthen partnerships among institutions, healthcare systems, and industry.



## ICPPR-VISTAS

Abstract Proceedings – 2025

Message from the Chancellor's desk

*Dr. IshariK, Ganesh,  
Founder-Chancellor,  
VISTAS.*



First, I would like to congratulate the Department of Pharmacy Practice, School of Pharmaceutical Sciences, for organizing Two Days International Conference on Clinical Pharmacy Practice and Research - 2025 "Transformation in Pharmacy: Empowering Future Generations of Pharmacists" on 25th – 26th September 2025.

The International Conference on Clinical Pharmacy Practice and Research serves as a crucial platform for professionals, researchers, and stakeholders from around the globe to converge, exchange knowledge, and discuss advancements in the field of healthcare. This esteemed gathering brings together experts from various disciplines within medical and health sciences, including but not limited to medicine, nursing, pharmacology, public health, and biomedical sciences.

I believe this event will serve as a platform for students and faculties to interact and learn about recent advancements in the field. I extend my warmest wishes and greetings to all the organizers, delegates, and participants of ICCPPR- 2025, VISTAS

Message from the Pro Chancellor's desk

*Dr. Arthi Ganesh,  
Pro Chancellor (Academics),  
VISTAS.*



It is indeed an immense pleasure for me to thank the organizers for conducting the Two Days International Conference on Clinical Pharmacy Practice and Research - 2025 "Transformation in Pharmacy: Empowering Future Generations of Pharmacists" on 25th – 26th September 2025.

Such conferences typically feature keynote speeches by eminent researchers, panel discussions on cutting-edge research findings, and presentations of original research papers and posters. Participants benefit not only from the opportunity to present their work but also from networking with peers, fostering collaborations, and gaining insights into emerging trends and challenges in healthcare.

Remember to enjoy the experience and take this opportunity to learn from your fellow participants. You never know where inspiration may strike or what new ideas you may gain from networking with others.

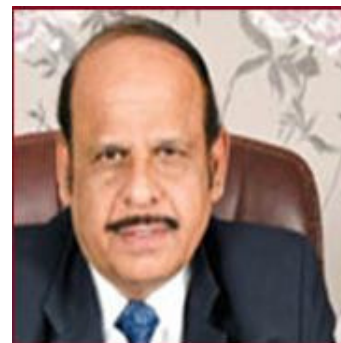
I wish you all the very best of luck and hope that you have a successful and full filling ICCPPR-2025, VISTAS

## ICCP-PR-VISTAS

Abstract Proceedings – 2025

Message from the Pro Chancellor's desk

*Dr. A. Jothi Murugan,  
Pro Chancellor (Planning & Development),  
VISTAS.*



It gives me immense pleasure to encapsulate the Two Days International Conference on Clinical Pharmacy Practice and Research - 2025 "Transformation in Pharmacy: Empowering Future Generations of Pharmacists" on 25th – 26th September 2025. It is a platform for shaping the future of Clinical Pharmacy Practice and Research by facilitating the dissemination of new ideas, innovations in healthcare technologies, and evidence-based practices

I encourage each and every one to utilize this opportunity and share your knowledge and network with industry professionals, and learn about the latest developments in your field.

I wish you all the very best for your presentations and hope that you will find ICCPP-PR- 2025, VISTAS as a valuable and rewarding experience. I wish the event a grand success.

ICPPR-VISTAS  
Abstract Proceedings – 2025

Message from the Vice President desk

*Dr. Preethaa Ganesh,  
Vice President,  
Vels Group of Institutions*



With immense pleasure, we welcome you all to the Two Days International Conference on Clinical Pharmacy Practice and Research - 2025 "Transformation in Pharmacy: Empowering Future Generations of Pharmacists" on 25th – 26th September 2025. Organizing such an event at this point in time reinforces provides platform for researchers, scientists, healthcare professionals, and academicians to present their latest research findings and innovations. This facilitates the exchange of knowledge and ideas among participants from around the world.

VISTAS has borne the mantle of excellence, committed to ensuring the students their own space to learn, grow and broaden their horizon of knowledge by indulging in diverse spheres of learning.

These conferences play a pivotal role in shaping the future of Clinical Pharmacy Practice and Research, health sciences by facilitating the dissemination of new ideas, innovations in healthcare technologies, and evidence-based practices. They contribute significantly to the advancement of medical knowledge and ultimately aim to improve global health outcomes through collaborative efforts and shared expertise

I extend my wishes to School of Pharmaceutical sciences for supporting ICCPPR- 2025, VISTAS. I also thank all the delegates and I am confident that this conference would be a rewarding experience for all the participants.

## ICPPR-VISTAS

Abstract Proceedings – 2025

Message from the Pro Vice-Chancellor desk

*Dr. M. Bhaskaran,  
Vice-Chancellor FAC,  
VISTAS*



I congratulate the School of Pharmacy for organizing the Two Days International Conference on Clinical Pharmacy Practice and Research - 2025 "Transformation in Pharmacy: Empowering Future Generations of Pharmacists" on 25th – 26th September 2025. I take this opportunity to sincerely appreciate the efforts and enthusiasm shown by the faculty for being very thoughtful to highlight the Clinical Pharmacy Practice and Research.

Indeed, this conference will embark the students to gain insights into cutting-edge research, emerging trends, and innovative practices in medical and health sciences.

I am sure that not only the students but also the faculties can get updated with the latest advancements, research findings, and innovations in their fields. Attending presentations, workshops, and seminars allows them to enhance their knowledge and skills, which they can subsequently incorporate into their teaching.

I convey my best wishes and support to all the participants of the ICCPPR-2025, VISTAS

## ICPPR-VISTAS

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Message from the Registrar desk

*Dr. P. Saravanan*

*Registrar*

*VISTAS*



I am delighted to note that the Schools of Pharmaceutical Sciences of VISTAS are organizing Two Days International Conference on Clinical Pharmacy Practice and Research - 2025 "Transformation in Pharmacy: Empowering Future Generations of Pharmacists" on 25th – 26th September 2025. I certainly believe this essence, the International Conference on Clinical Pharmacy Practice and Research stands as a cornerstone event in the field, promoting dialogue, collaboration, and progress towards addressing current health challenges and achieving better healthcare for all.

The multidisciplinary areas of Science have wide applications in daily walk of life. I trust that new knowledge and findings through this conference would invariably bring scientific solutions for the day to day problems of the society.

I wish the Organizing team all the very best. I hope that this address the current challenges, emerging trends, and issues in medical and health sciences. Through discussions, panels, and presentations, participants can explore potential solutions and strategies to tackle these challenges.

ICCPPr-VISTAS

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Message from the convenor desk

*Dr. P. Shanmugasundaram*  
*Dean,*  
*School of Pharmaceutical Sciences,*  
*VISTAS*



It is our pleasure to announce the Two Days International Conference on Clinical Pharmacy Practice and Research - 2025 "Transformation in Pharmacy: Empowering Future Generations of Pharmacists" on 25th – 26th September 2025. organized by our School of Pharmaceutical sciences, VISTAS

The basic aim on this conference is to create a common platform for exchange of knowledge and research experience among the healthcare professionals. The focus is mainly on the Knowledge Exchange and Dissemination, Collaboration and Networking, Professional Development, Addressing Global Health Challenges, Promoting Research and Innovation, Policy Influence, Education and Capacity Building, Global Perspective

This conference will provide an opportunity to interact with eminent personalities to acquire the current development and challenges in the Global Scenario.

I welcome you to VISTAS - A center for learning and hope that this conference will challenge and inspire you, and result in new knowledge and collaborations.

## ICPPR-VISTAS

Abstract Proceedings – 2025

Message from the Organizing Secretary desk

*Dr. K. Karthickeyan,  
Prof & Head,  
Department of Pharmacy Practice,  
School of Pharmaceutical Sciences,  
VISTAS*



Greetings from the School of Pharmaceutical Sciences, VISTAS.

The main motto of our Two Days International Conference on Clinical Pharmacy Practice and Research - 2025 "Transformation in Pharmacy: Empowering Future Generations of Pharmacists" on 25th – 26th September 2025. is to impart the knowledge of novel development in Clinical Pharmacy Practice and Research. VISTAS is always pioneer in enhancing a novel ideas.

This two days International Conference is to address the needs of the budding scientists, eminent academics and structure in inculcating a necessity to share the research outcome in order to improve the knowledge and advance research in the field of Medical and health Sciences.

Hence, I expect all the delegates to cherish themselves in the research aspects. VISTAS is glad to host you all for this two days International Conference.

Message from the Co- Convenor desk

*Dr. C. Ronald Darwin,  
Prof & Head,  
Department of Pharmacology,  
School of Pharmaceutical Sciences,  
VISTAS*



It is with great pleasure and anticipation that I extend a warm welcome to each of you to the Two Days International Conference on Clinical Pharmacy Practice and Research - 2025 "Transformation in Pharmacy: Empowering Future Generations of Pharmacists" on 25th – 26th September 2025.

This conference serves as a pivotal platform for researchers, practitioners, and educators alike to exchange knowledge, share groundbreaking discoveries, and foster collaborations that will shape the future of healthcare.

I encourage each of you to actively participate, engage in discussions, and leverage this opportunity to forge lasting connections with peers who share our dedication to advancing Clinical Pharmacy Practice and Research.

ICCP-PR-VISTAS

Abstract Proceedings – 2025

Message from the Co- Convenor desk

*Dr. M. Sumithra,  
Prof & Head,  
Department of Pharmaceutical chemistry  
and analysis,  
School of Pharmaceutical Sciences,  
VISTAS*



Dear Esteemed Colleagues and Participants, It is with immense pleasure and enthusiasm that I extend a warm welcome to all participants, esteemed speakers, and collaborators to the Two Days International Conference on Clinical Pharmacy Practice and Research - 2025 "Transformation in Pharmacy: Empowering Future Generations of Pharmacists" on 25th – 26th September 2025. organized by our School of Pharmaceutical sciences, VISTAS

As Co- Convenor of this distinguished gathering, I am honored to be part of an event that brings together leading minds and experts from around the world to delve into the latest advancements, challenges, and innovations in Clinical Pharmacy Practice and Research.

Our conference serves as a vital platform for exchanging knowledge, forging partnerships, and driving forward the frontiers of healthcare excellence.

Together, let us harness the power of collaboration to address the complex challenges facing our field and to pave the way for a healthier future for all.

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Message from the Co- Convenor desk

*Dr. D. Akiladevi,  
Prof & Head  
Department of Pharmaceutics,  
School of Pharmaceutical Sciences,  
VISTAS*



It is our pleasure to invite you all for this scientific occasion for the Two Days International Conference on Clinical Pharmacy Practice and Research - 2025 "Transformation in Pharmacy: Empowering Future Generations of Pharmacists" on 25th – 26th September 2025.

We are delighted to welcome all our national and international delegates to participate, interact and enrich their knowledge in the field of Clinical Pharmacy Practice and Research. We have taken special interest in our delegate and hence we have organized a scientific session (Oral & Poster presentation). We have received more than 150 research abstracts. We are extremely pleased with the interest shown by our delegates to exhibit their scientific findings before the eminent scientists.

I welcome you all to use this opportunity to learn from established experts, present their research, and engage in discussions with peers.

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Abstract Proceedings – 2025

Message from the Co- Convenor desk

*Dr. Malarkodi Velraj,  
Prof & Head,  
Department of Pharmacognosy,  
School of Pharmaceutical Sciences,  
VISTAS*



It is with great pleasure that I extend a warm welcome to the Two Days International Conference on Clinical Pharmacy Practice and Research - 2025 "Transformation in Pharmacy: Empowering Future Generations of Pharmacists" on 25th – 26th September 2025 organized by our School of Pharmaceutical sciences, VISTAS

Over the course of this conference, we will explore a diverse array of topics, ranging from cutting-edge research findings to practical applications that impact global health outcomes. I am confident that the discussions and interactions among our esteemed participants will spark new ideas, collaborations, and initiatives that will shape the future of medical and health sciences.

I look forward to the productive discussions, impactful outcomes, memorable experiences enriching exchanges and meaningful collaborations that will undoubtedly emerge from our time together.

**ICPPR-VISTAS**

**Abstract Proceedings – 2025**

**BOOK EDITED AND PUBLISHED BY**

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**Abstract Proceedings Released By:** September 2025

**Book Name:** Transformation in Pharmacy: Empowering Future Generation of Pharmacists at 2nd ICCPPR2025

**ISBN number for ICCPPR - 2025-VISTAS-Abstract Proceedings:**

978-81-992034-2-6

\*(Authors are solely responsible for their respective Abstract)

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ABSTRACT NO: *ICCPR-001***Telepharmacy: Expanding Access to Healthcare in Rural Communities****Deshika Karunanithi, Kavinila Tamilselvan, Senthil Kumar krishnan****Kamalakshi Pandurangan college of pharmacy, Ayyampalayam Tiruvannamalai ,  
Tamilnadu**[deshikaruna2003@gmail.com](mailto:deshikaruna2003@gmail.com)**ABSTRACT**

Rural and underserved populations face limited access to qualified healthcare professionals, resulting in poor medication adherence, treatment delays, and inadequate patient counseling. Telepharmacy, through digital platforms, has emerged as a practical solution to bridge this gap and provide timely pharmacy services. This study aims to explore the impact of telepharmacy in improving accessibility, optimizing medication use, and enhancing patient outcomes in rural communities. A review of recent literature, case studies, and reports was conducted to evaluate various telepharmacy models. Emphasis was placed on patient satisfaction, cost-effectiveness, and the role of pharmacists in remote monitoring and counseling. Telepharmacy improved medication adherence, reduced prescription errors, and enhanced patient counseling services. It minimized travel burden for patients, ensured timely access to medicines, and enabled pharmacists to provide therapy monitoring and interventions remotely. Integration with telemedicine platforms further strengthened interprofessional collaboration, particularly in chronic disease management. Telepharmacy is a transformative approach that addresses healthcare disparities in rural regions. Its success depends on regulatory support, digital infrastructure, and pharmacist training. By expanding pharmacy services beyond physical barriers, telepharmacy empowers future pharmacists and contributes to equitable healthcare delivery.

**Keywords:** Telepharmacy, Rural Healthcare, Patient Counseling, Digital Health



ABSTRACT NO: *ICCPR-SPS-001*

**THE INTEGRAL ROLE OF PHARMACISTS IN MANAGING PSYCHIATRIC  
COMORBIDITIES IN EPILEPTIC PATIENTS: A COMPREHENSIVE REVIEW**

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**ABSTRACT**

Epilepsy, a chronic neurological disorder characterized by recurrent seizures, frequently coexists with psychiatric comorbidities, including depression, anxiety, and bipolar disorder. The complex interplay between epilepsy and mental health necessitates a multidisciplinary approach, wherein pharmacists emerge as indispensable contributors to patient care. This scientific publication reviews the pivotal role of pharmacists in the management of psychiatric comorbidities in epileptic patients. Pharmacists, as medication experts, play a critical role in ensuring optimal drug therapy outcomes. They collaborate with healthcare teams to assess potential drug interactions, monitor medication adherence, and address side effects. Moreover, pharmacists engage in patient education, emphasizing the importance of adherence to prescribed regimens and recognizing early signs of psychiatric symptom exacerbation. This review explores the current literature on the pharmacist's involvement in epilepsy care, highlighting their impact on improving overall patient well-being and fostering a holistic approach to managing the intricate healthcare needs of individuals with epilepsy and psychiatric comorbidities.

***Keywords:*** Epilepsy, psychiatric comorbidities, pharmacists, depression, anxiety, bipolar disorder.



ABSTRACT NO: *ICCPR-002*

**“Intranasal Route (Non-invasive) Fosphenytoin loaded Nano Lipid Carriers (NLC)**

**Formulation, Drug release, and In vitro permeation studies**

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**ABSTRACT**

Status epilepticus is a life-threatening condition that has to be treated by an emergency manner. The second-line therapeutic drug for the immediate management of status epilepticus is IV Fosphenytoin sodium. Intranasal administration of Fosphenytoin sodium in the form of nano lipid carriers (NLCs) appears to hold promise for the treatment of acute seizures. NLCs, as the second generation, are modified from SLNs to overcome some of their drawbacks. The major difference between SLNs and NLCs is their lipid components. SLNs are prepared from solid lipids, whereas NLCs are modified by adding liquid lipids. According to the systematic review, formulation techniques can improve olfactory absorption, and phenytoin sodium NLCs with the necessary particle sizes (50 nm) show promise for direct delivery of phenytoin sodium through the nose to the brain in the treatment of acute epileptic convulsions.

**Keywords :** Fosphenytoin, Intranasal, Nano lipid carriers, Status epilepticus.



ABSTRACT NO: ICCPPR-003

**Total Flavonoids, Total Phenolics and Targeted HPTLC Profile for Quantification of Quercetin in *Wedelia chinensis* and *Cassythia filiformis***  
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## ABSTRACT

This study quantitatively determined the total phenolic and flavonoid contents in hydroalcoholic extracts of *Wedelia chinensis* and *Cassythia filiformis* using a spectrophotometric method. We also performed an HPTLC profile for both plant extracts to determine the quantity of quercetin. A sensitive and reliable high-performance thin-layer chromatographic method has been developed to quantify quercetin in dried whole plant powder. The hydroalcoholic extracts of *Wedelia chinensis* and *Cassythia filiformis* were chromatographed on silica gel 60 F254 plates. The linear ascending development was carried out in a twin-trough glass chamber (CAMAG, Muttentz, Switzerland) using a mobile phase of Toluene: acetone: Formic Acid (4.5:4.5:1) (v/v/v). Total phenolic content was found to be (155 mg of GAE/g of crude extract) in the *Wedelia chinensis*, and the lowest was in the *Cassythia filiformis* extract (52.01 mg of GAE/g). *Wedelia chinensis* also had the highest total flavonoid content ( $72.3 \pm 0.233$  mgQE/g), while the lowest was in the *Cassythia filiformis* ( $3.19 \pm 0.256$  mgQE/g). In this research, the R<sub>f</sub> values of quercetin were found to be 0.75 and 0.76 in *Wedelia chinensis* and *Cassythia filiformis*, respectively.

**Keywords:** Hydroalcoholic, Phenolics, Flavonoids, Quercetin, HPTLC



ABSTRACT NO: ICCPPR-004

***Tribulus terrestris* fruit for the identification, characterization, and quantification of analytical markers**

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**Objectives:**

The present study was undertaken to explore *Tribulus terrestris* fruit for the identification, characterization, and quantification of analytical markers. The project aimed to evaluate physicochemical parameters, perform secondary metabolite analysis (flavonoids, polyphenols, saponins), develop chromatographic fingerprints (HPTLC and HPLC), isolate bioactive chemical markers, and apply advanced characterization using LC-MS/MS and HPLC-ELSD to standardize the plant as per quality guidelines.

**Methods:**

Physicochemical tests were conducted on dried powder of fruits, including loss on drying (LOD), total ash, acid-insoluble ash, and extractive values. Total flavonoids and polyphenols were estimated by UV spectrophotometry, while total saponins were estimated by gravimetric methods. High-performance thin-layer chromatography (HPTLC) was carried out under optimized solvent system with diosgenin as standard marker. HPLC methods were developed for separation and quantification of flavonoids (UV @ 354 nm) and saponins (HILIC-ELSD mode). Bioactive markers were isolated by preparative HPLC and further characterized using LC-MS/MS.

**Results:**

The study confirmed the presence of steroidal saponins (protodioscin, diosgenin, dioscin), alkaloids (harmine, harman), flavonoids (quercetin, kaempferol, rutin), and phenolic acids. Physicochemical data showed LOD 8.09% w/w, total ash 14.3% w/w, water-soluble extractive 12.2% w/w, alcohol soluble extractive 8.7% w/w, and total saponins ~3% w/w. HPTLC revealed absence of visible diosgenin band in crude test sample when compared with standard. HPLC-UV quantified rutin at 0.04% w/w. HPLC-ELSD confirmed diosgenin-related total saponin content at 3.88% w/w. UV and LC-MS/MS confirmed flavonoid and saponin fragmentation patterns. This dissertation confirms *Tribulus terrestris* fruit as a rich source of steroidal saponins (diosgenin-based), minor flavonoids, and alkaloids. Validated HPLC and gravimetry methods offer reproducible quantification. These markers provide a reliable basis for plant standardization, quality assurance, and future pharmacological investigations.

**Keywords:** *Tribulus terrestris*, Gokshura, saponins, flavonoids, diosgenin, HPTLC, HPLC, LC-MS/MS

ABSTRACT NO: *ICCP 2ND-SPS-002***Targeted Pharmacotherapy in Pulmonary Arterial Hypertension (PAH)****Ashok. G. R <sup>1</sup>Pharm D (PB) III Year, Co-author****School of Pharmacy practice, SPS, VISTAS, Pallavaram, Chennai-600117 Tamilnadu.**

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**Abstract**

**Objectives:** Pulmonary arterial hypertension (PAH) is a chronic and progressive disease marked by increased pulmonary vascular resistance, right heart failure, and high mortality. This review aims to evaluate the effectiveness of targeted pharmacotherapies, summarize evidence from clinical trials, and highlight emerging treatment strategies. A literature search was conducted in PubMed, Embase, Cochrane, and Google Scholar using keywords such as pulmonary arterial hypertension, endothelin receptor antagonists, phosphodiesterase-5 inhibitors, prostacyclin analogs, riociguat, selexipag, and sotatercept. Randomized controlled trials, meta-analyses, and guideline-based recommendations were included. Three major therapeutic pathways are targeted in PAH management: the endothelin pathway (bosentan, ambrisentan, macitentan), nitric oxide–cGMP pathway (sildenafil, tadalafil, riociguat), and prostacyclin pathway (epoprostenol, treprostinil, iloprost, selexipag). Clinical trials such as BREATHE-1, SUPER-1, SERAPHIN, PATENT-1, GRIPHON, and AMBITION demonstrated improved exercise capacity, hemodynamics, and delayed disease progression. Early combination therapy (e.g., ERA + PDE-5i) is now guideline-recommended, while triple therapy benefits advanced cases. Novel agents like sotatercept show promise as disease-modifying therapies.

**Conclusions:**

Targeted pharmacotherapy has significantly improved survival and quality of life in PAH, yet challenges remain including high costs, adverse effects, and incomplete disease control. Future research should focus on innovative therapies and precision medicine approaches.

**Keywords:** pulmonary arterial hypertension, endothelin antagonists, PDE-5 inhibitors, prostacyclin analogs, riociguat, selexipag.



ABSTRACT NO: *ICCP-SPS-003*

## **POSTPARTUM MENTAL DISORDERS**

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### **Abstract**

Postpartum mental disorders represent a significant public health concern, affecting the psychological well-being of mothers and the developmental outcomes of their infants. These disorders encompass a spectrum of conditions, including postpartum depression, anxiety disorders, obsessive–compulsive symptoms, and in rare but severe cases, postpartum psychosis. Their onset is typically within the first year after childbirth and is influenced by biological, psychological, and social factors such as hormonal fluctuations, prior psychiatric history, lack of social support, and stressful life events. Postpartum mental disorders are often underdiagnosed due to stigma, cultural barriers, and limited screening practices, yet their impact can be profound, leading to impaired maternal functioning, strained family relationships, and developmental risks for the child. Early identification and timely intervention — through screening, counselling , pharmacological treatments, and psychosocial support—are crucial for improving maternal and infant outcomes. Greater awareness, routine screening in perinatal care, and integration of mental health services into maternal healthcare are essential to address this pervasive issue.

ABSTRACT NO: *ICCPR-SPS-004***Optimizing Therapy through Pharmacogenomics: A Pharmacist's Role in Precision Care****S Yogeshwari Pharm D Intern****SPS, VISTAS, Pallavaram, Chennai-600117 Tamilnadu.****Abstract:**

Pharmacogenomics, the study of how genetic variations influence drug response, is a cornerstone of personalized medicine, which aims to tailor therapy to individual patient characteristics. Pharmacists play a critical role in integrating pharmacogenomic information into clinical practice, ensuring that medication therapy is safe, effective, and individualized. They interpret genetic test results to guide the selection and dosing of medications, thereby minimizing the risk of adverse drug reactions and therapeutic failure. Pharmacists also counsel patients on the significance and implications of pharmacogenomic testing, helping them understand how their genetic profile may affect treatment outcomes. In addition, pharmacists utilize electronic health records and clinical decision-support systems to provide real-time guidance to prescribers, flagging potential gene-drug interactions and optimizing therapeutic regimens. Beyond clinical practice, pharmacists contribute to research and development in pharmacogenomics, participate in clinical trials, and help establish evidence-based guidelines for personalized therapy. They also play an essential role in educating healthcare professionals and advocating for policy development to incorporate pharmacogenomic testing into standard care. By leveraging genetic information, pharmacists help transform healthcare from a “one-size-fits-all” approach to precision medicine, ultimately improving patient safety, efficacy, and overall treatment outcomes.

**Keywords:** Pharmacogenomics, personalised medicine, pharmacist role, genetic testing, adverse drug reactions, clinical decision support, patient counselling, evidence-based guidelines.

ABSTRACT NO: *ICCPR-SPS-005***Beyond the Refill Reminder: Deploying Digital Tools for Advanced Pharmacist-Led Adherence Monitoring****Suryanarayanan V Pharm D Intern****SPS, VISTAS, Pallavaram, Chennai-600117 Tamilnadu****Abstract:**

The persistent challenge of medication non-adherence severely impacts patient health and places a massive financial strain on our healthcare system. Historically, the pharmacy profession's approach to this issue has been largely reactive. This session will introduce a new, proactive practice model that utilizes mobile health (mHealth) technologies to fundamentally change the pharmacist's role in managing adherence.

We will detail a practical strategy for pharmacists to recommend and oversee the use of digital adherence aids. These tools, including smart packaging that records doses and companion smartphone applications, generate immediate, actionable data on a patient's medication-taking patterns. Access to this information allows pharmacy teams to spot issues early, respond to automated alerts, and provide personalized support through calls or texts at the precise moment it is needed. This moves our focus from simply recognizing a problem when a prescription is late to be refilled to actively preventing that problem from occurring.

Finally, we will discuss the essential steps for building this service, from choosing the right technology and adapting workflow to understanding how to secure payment for these clinical services. Adopting this role is how pharmacists will drive better patient outcomes, demonstrate their value in new ways, and cement their status as essential caregivers in a modern healthcare system.

**Keywords:** Medication Adherence, mHealth (mobile health), Pharmacist-Led, Digital Health Tools, Proactive Management, Smart Packaging, Real-Time Data, Remote Monitoring, Patient Engagement, Value-Based Care, Intervention, Therapeutic Outcome

ABSTRACT NO: *ICCPR-SPS-006*

**Receptor Based Docking Analysis to Assess the Anti-Obesity Potential of  
10-trans,12-cis Conjugated Linoleic Acid**

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**Abstract:**

Globally, obesity is a complex and growing health problem that is closely linked to metabolic disorders and a significant decrease in life expectancy. Important neuroendocrine receptors, particularly ghrelin and leptin, are essential for controlling hunger and energy homeostasis. The interaction profile of 10-trans, 12-cis conjugated linoleic acid (CLA) with appetite-modulating receptors, particularly the leptin receptor (Leptin-R; PDB ID: 3V6O) and a ghrelin receptor antagonist (6ZXF), was examined in this study using a structure based molecular docking approach. To assess the relative binding efficacy of CLA, comparative docking analyses were performed using common anti-obesity pharmaceutical drugs such as Vildagliptin, Rosuvastatin, and Metformin. Auto Dock Vina was used for all computational simulations. PyMOL and BIOVIA Discovery Studio were used for post-docking visualization, binding site prediction, and thorough ligand and receptor optimization. Additionally, pharmacokinetic characteristics and possible biological activities were predicted using computational techniques including pkCSM, SwissADME, and the PASS online platform. Although CLA's binding affinities were not as high as those of Vildagliptin and Rosuvastatin, the docking results showed that it can form stable complexes with both Leptin-R and Ghrelin receptor targets. When taken as a whole, our results highlight the molecular underpinnings of CLA's interactions with important appetite-regulating targets and point to its potential use in obesity intervention techniques, deserving of more experimental and clinical verification.

**Keywords:**

Conjugated Linoleic Acid (CLA), Molecular Docking, Leptin Receptor, Ghrelin Receptor, Anti-Obesity Agents

ABSTRACT NO: *ICCPPr-SPS-007***MNetwork Pharmacology, Molecular docking and in vitro evaluation of herbal drug loaded in Solid lipid nanoparticle****Kandanagolla Sumalatha, R. Gandhimathi****<sup>1</sup>School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai, Tamil Nadu 600117.**

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**Abstract:**

The study explores the prospects of solid lipid nanoparticles, beta-carotene encapsulated, as a therapeutic agent for the target treatment of breast cancer. With the help of network pharmacology, molecular docking, and dynamics simulations, the interaction of the examined oncogenic proteins and beta-carotene was studied where the beta-carotene was found to block the spread of cancer cells and start apoptosis. The pharmacokinetic properties of beta-carotene were determined from ADMET analysis to justify its candidature as a therapeutic molecule. The SLNs were found to have encapsulation efficiency of  $84 \pm 1.12\%$  and drug loading capacity of  $8.47 \pm 0.93\%$ . The in vitro release of beta-carotene from SLNs obeyed the first order kinetic model; with 40.21% (pH 5.2) and 27.11% (pH 7.5) of release at 5 h. The IC<sub>50</sub> value in MCF-breast cancer cell line was obtained as 22.82  $\mu\text{g/mL}$ , which showed moderate cytotoxicity. This study signals the potential of the SLNs loaded with beta-carotene as a novel bioavailable drug delivery system that would help in creating more effective natural breast cancer treatments. Encapsulation process increases the stability and bioavailability of beta-carotene which makes it a good candidate for breast cancer therapy. More research on the stability of the formulation, release kinetics, and therapeutic efficacy of the formulation is recommended to maximize its potential as a clinical application.



ABSTRACT NO: ICCPPR-SPS-008

## MULTIFUNCTIONAL HYBRID NANOSYSTEMS FOR SYNCHRONIZED DELIVERY OF CYTOTOXIC DRUGS AND GENETIC MODULATORS

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### Abstract:

Colorectal cancer (CRC) continues to be a leading cause of cancer-related morbidity and mortality globally, calling for novel approaches to efficient management. Traditional chemotherapeutic regimens are constrained by poor solubility, non-targeted distribution, systemic side effects, and drug resistance. Recent technological improvements in drug delivery systems and formulation sciences have provided novel opportunities for targeted, controlled, and patient-comfortable CRC therapy. Nanotechnology-based carriers like polymeric nanoparticles, liposomes, niosomes, dendrimers, and micelles provide increased bioavailability, tumor-specific localization by passive and active targeting, and controlled drug release. Further, stimuli-responsive systems, pH-sensitive, enzyme-triggered, and redox-responsive formulation, provide site-specific delivery of drugs in the colorectal tumor microenvironment. Hydrogel scaffolds, 3D bioprinting, and implantable drug delivery devices also enhance localized therapy with reduced systemic exposure. Conjugation of nanotechnology with biological ligands (e.g., folic acid, antibodies, peptides) increases receptor-mediated uptake, whereas synergy approaches involving chemotherapeutics with siRNA, CRISPR gene editing, and immunomodulators yield synergistic therapeutic outcomes. Additionally, intelligent colon-targeted oral drug delivery, such as polysaccharide-based coatings and microbiota-stimulated carriers, is under investigation for non-invasive and patient-friendly treatment. These developments underscore the paradigm shift from traditional systemic chemotherapy towards precision medicine, in which novel formulation-based technologies are conceived to enhance therapeutic index, minimize side effects, and finally improve survival rates in patients with colorectal cancer.

**Keywords:** Colorectal cancer, Chemotherapy, Immunotherapy, Tumors, Colonoscopy



ABSTRACT NO: *ICCPR-005*

**Impact on Clinical Decision Support Tools and its role on DVT-Related Outcomes in a Hospitalized Patients - A cross-sectional study**

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**Abstract**

Hospital-acquired Deep Vein Thrombosis (DVT) is a notable and preventable contributor to morbidity and mortality among hospitalized patients. Even though there are clear clinical practice guidelines for DVT prophylaxis, there are still problems with incomplete risk assessment and not following the right prophylactic steps. When Clinical Decision Support Tools (CDSTs) are added to electronic health records (EHRs) and order-entry systems, they could help fill these gaps by automatically sorting patients by risk, sending reminders in real time, and suggesting preventive strategies based on evidence. In hectic hospitals where doctors and nurses have to make quick decisions for many patients, CDSTs can help them provide care that is consistent and follows the rules. In order to ensure that fewer patients develop DVT, this study closely examines how digital assistants, or Clinical Decision Support Tools (CDSTs), can complement human expertise. This study aims to evaluate the impact of CDST integration on DVT risk assessment rates, adherence to thromboprophylaxis guidelines, and incidence of in-hospital DVT among adult inpatients. The cross-sectional study recruiting adult patients who are all admitted over a six-month period in a tertiary hospital using an EHR-based CDST for DVT risk evaluation will be included. Data collected will include demographics, risk stratification documentation, thromboprophylaxis orders, and clinically confirmed DVT events. Compliance rates and DVT incidence will be compared between patient admissions with and without proper CDST intervention, using multivariable logistic regression for adjusted odds ratios. It is expected that CDST implementation will significantly increase the proportion of patients receiving timely DVT risk assessments and guideline-compliant prophylaxis. The incidence of hospital-acquired DVT is hypothesized to be lower in patients with CDST-guided interventions. Integrating CDSTs within hospital workflows can improve quality metrics for VTE prevention and may meaningfully reduce clinical events of DVT. This study will provide actionable insights for hospital administrators and clinicians aiming to optimize patient safety through digital innovation.

**Keywords** - Deep Vein Thrombosis (DVT), Clinical Decision Support Tools (CDSTs), electronic health records (EHRs), Venous thrombo embolism (VTE).



ABSTRACT NO: *ICCP-006*

## ACUTE MASTITIS CARCINOMATOSA: CLINICAL PHARMACY PERSPECTIVES IN THERAPY OPTIMIZATION

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### ABSTRACT

#### BACKGROUND:

Acute Mastitis Carcinomatosa is an infrequent and aggressive form of breast carcinoma presenting with a rapid onset of inflammation, erythema, and edema, hence deceptively appearing like any other infectious mastitis. The longer the diagnosis is delayed, the poorer the prognosis; therefore, it is necessary to intervene in time. In such complex conditions of oncology, clinical pharmacy services are becoming more relevant in structuring treatment strategies, in the prevention of drug-related problems, and in improving patient outcomes. To evaluate the clinical pharmacy perspectives in optimizing therapy for patients with Acute Mastitis Carcinomatosa, focusing on individualized pharmacotherapy, supportive care, and multidisciplinary collaboration. A narrative review with the published case reports, clinical studies, and oncology pharmacy interventions was performed. These included a focus on therapeutic optimization strategies in chemotherapeutic regimen choice of therapy, dose adjustments, drug–drug interaction management, and supportive care (pain, infection, neutropenia), as well as counseling of patients. Clinical outcomes and quality-of-life improvement resulting from pharmacist-driven interventions were assessed. Clinical pharmacists contributed significantly in promoting rational chemotherapy use, lowering the incidence of drug adverse reactions, and improving supportive care measures. Early identification of drug-related problems and preventive measures helped improve patient adherence to treatment, reduce treatment interruptions, and maximize clinical benefits. Pharmacists joined tumor boards for decision making on individualized therapy and continuity of care.

Acute Mastitis Carcinomatosa must be dealt with urgently and in a multidisciplinary approach due to its aggressive nature. Addressing problems related to therapy by clinical pharmacists shall help in improving efficacy of treatment and nurturing patient-oriented care. The integrated clinical pharmacy services of oncology could help in improving clinical outcomes and the life of the patients. **KEYWORDS:** Acute Mastitis Carcinomatosa, Clinical Pharmacy, Therapy Optimization, Breast Carcinoma, Pharmacist Intervention



ABSTRACT NO: *ICCPR-007*

**ABIRATERONE-INDUCED INTERSTITIAL LUNG DISEASE IN A PATIENT WITH PROSTATE CANCER AND CKD: A CASE REPORT**

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**ABSTRACT**

Abiraterone acetate, a selective inhibitor of androgen biosynthesis, is widely used in the treatment of metastatic prostate cancer. Although it is generally well tolerated, rare but serious adverse effects such as interstitial lung disease (ILD) have been documented. We report a case of a 55-year-old male with a background of systemic hypertension, benign prostatic hyperplasia (BPH), chronic kidney disease (CKD), and multiple myeloma on chemotherapy, who developed severe respiratory distress following abiraterone therapy. The patient was admitted with complaints of acute urinary retention, fever with chills, and progressive shortness of breath. He had been receiving abiraterone for the past three months. On examination, he exhibited signs of hypoxia and required supplemental oxygen. High-resolution computed tomography (HRCT) of the chest revealed bilateral ground-glass opacities, consistent with interstitial lung involvement. Extensive evaluation ruled out infectious, cardiac, and fluid overload causes. Given the temporal association and exclusion of other differential diagnoses, a diagnosis of abiraterone-induced ILD was made. Abiraterone was discontinued, and the patient was started on oral prednisolone at a dose of 0.5 mg/kg/day. Clinical and radiological improvement was observed within two weeks of initiating corticosteroid therapy. This case emphasizes the importance of recognizing rare pulmonary toxicities associated with abiraterone. Timely identification and management are essential to prevent morbidity and mortality.

**KEYWORDS:** Abiraterone acetate, Interstitial lung disease, Prostate cancer, Urinary retention, CKD, Prednisolone, Drug-induced lung injury



ABSTRACT NO: *ICCP-SPS-009*

## **EMERGING TREATMENT AND VACCINATION IN RABIES**

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### **Abstract**

Rabies the invariably viral infection from canines which has more that 59000 people die annual by rabies where India is being the largest country of rabies encounter and deaths almost 20,000 people die from rabies Although rabies is a preventable disease annual it has high mortality rate when the virus reaches the CNS . Currently there is not treatment to cure but there are vaccine to prevent the disease.The symptomatic cure for rabies is quite complicated Because the virus will be axon and moves to cns the anti viral drugs are not effective to cross BBB .Therapy has also been used and in clinical trails like Milwaukee Protocol,rna based therapy which are under developed still in pre clinical trials .Research are being developing to cure and simplify the Rabies vaccines.This review article is based On the new emerging treatment and vaccine for rabies.Since Currently the post exposure Prophylaxis is effective. It requires multiple vaccine doses to build immunoglobulin against rabies. As an advanced alternative such as self replicating rna vaccine Such as vaccine RB 14000 entered early Clinical trails and Show Protective immune response with single low doses along with the vaccine like rabishield and twinrab .The USU research team also developed a monoclonal antibody which effectively blocked the rabies virus. Strain of Australian bat lyssavirus in rat but such trails on humans and so on vaccine like CL184 , R172 , RVC 20 +RVC 58,GR1801. Collectively these research mainly focus on rabies prevention aiming to simplify vaccine schedules .The cure for rabies like continued expand access in endemic regions .A continued research affordability and implementation will be critical to achieve the global target of elimination dog mediated human rabies death in future



ABSTRACT NO: *ICCPPr-SPS-010*

## **EMERGING TREATMENT AND COMPLICATION IN HYPERTENSION**

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### **ABSTRACT**

Hypertension is the most frequent chronic and non communicable disease all over the world with about 1.5 billion affected individuals worldwide. Despite current management strategies, many patient do not achieve adequate blood pressure (BP) control. Hypertension related cardio vascular mortality rates or rising in tandem with the increasing global prevalence of chronic kidney disease, diabetes mellitus and obesity. When it is not treated properly or poorly controlled it may lead to complications of stroke, myocardia infraction, heart failure chronic kidney disease and hypertensive retinopathy. The uses of four major classes of drugs for the management of hypertension or ACE Inhibitors, Angiotensin II Receptor Blockers, Calcium Channel Blockers and Diuretics. The Emerging Treatment in hypertension are Non Steroidal Mineralocorticoid Receptor Antagonist (nsMRA), Aldosterone Synthase Inhibitors (ASIs). Mineralocorticoid Receptor are protein inside cell thar are mainly activate by aldosterone (a hormone from the adrenal gland). If the aldosterone binds with MR, it causes sodium and water retention in kidney, potassium excretion, fibrosis and inflammation in heart and kidney. Aldosterone Synthase Inhibitors selectively blocks the synthesis of aldosterone synthase (CYP11B2). Were CYP11B2 converts into 11-deoxycorticosterone → corticosterone → 18-hydroxycorticosterone → aldosterone. ASIs blocks this pathway, reducing aldosterone production. Non Steroidal Mineralocorticoid Receptor Antagonist (nsMRA) are chemically different (not steroid based) fewer hormonal side effects (do not block androgen/ progesterone receptor). Strong Anti inflammatory and Anti fibrotic action. Were the both drugs will decreases the sodium and water retention in our body and decreases BP. Decreases cardiac and renal fibrosis and protects heart and kidney importantly from the heart failure and chronic kidney disease.



ABSTRACT NO: *ICCP-SPS-011*

**Targeting signaling pathways of natural bioactives in cardiovascular disorders: Mechanistic basis, clinical evidence, and future perspectives.**

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### **Introduction**

Natural bioactives are plant- and food-derived compounds that extend beyond nutrition to influence molecular signaling relevant to cardiovascular health. Notable representatives include curcumin, resveratrol, quercetin, epigallocatechin gallate (EGCG), berberine, and omega-3 fatty acids. These molecules exhibit antioxidant, anti-inflammatory, anti-thrombotic, and lipid-regulatory activities. Unlike conventional single-target drugs, bioactives often modulate multiple signaling cascades, making them valuable as supportive strategies in cardiovascular disease (CVD) prevention and management.

CVD progression is strongly linked to oxidative stress, endothelial dysfunction, and chronic low-grade inflammation. Natural compounds act on these pathological drivers through diverse mechanisms: Curcumin inhibits NF- $\kappa$ B, downregulates pro-inflammatory cytokines, and improves endothelial nitric oxide bioavailability. Resveratrol activates the SIRT1/AMPK axis, improves mitochondrial function, and enhances vascular elasticity. Quercetin exerts antihypertensive effects via renin-angiotensin system modulation and reduces LDL oxidation. EGCG suppresses MAPK signaling, reduces vascular smooth muscle proliferation, and delays atherosclerotic plaque formation. Berberine upregulates LDL receptor expression, enhances insulin sensitivity, and stabilizes atherogenic plaques. Omega-3 fatty acids lower triglycerides, inhibit platelet aggregation, reduce arrhythmic risk, and improve survival in heart failure.

The integration of bioactive compounds with standard therapy offers a multi-targeted approach for managing hypertension, dyslipidemia, and ischemic heart disease. Ongoing research is focused on: nanoformulations to enhance absorption and bioavailability; synergistic combinations of multiple bioactives with drugs to reduce dosage burden and side effects; Natural bioactives provide a mechanistically diverse and clinically promising adjunct to cardiovascular therapeutics. Strengthening the evidence base through advanced delivery systems and large-scale trials will be essential for their integration into routine clinical practice.

### **Keywords**

bioactive compounds; cardiovascular disease; signaling pathways; curcumin; resveratrol; quercetin; EGCG; berberine; omega-3 fatty acids; endothelial function; anti-inflammatory agents.



ABSTRACT NO: ICCPPR-SPS-012

**DEVELOPMENT AND IN VITRO CHARACTERIZATION OF GASTRO RETENTIVE FLOATING MICROBALLOONS OF DIACEREIN**

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**ABSTRACT**

The research work was mainly focused on the formulation and *in vitro* evaluation of floating microballoons of Diacerein as to retain the formulation for a prolonged period of time and deliver the drug to the site of absorption. The microballoons were prepared by non-aqueous solvent evaporation method using polymers such as different concentrations of ethyl cellulose and HPMC K4M, in different ratios and Diacerein in each formulation. The prepared microballoons were characterized by polymers compatibility (FTIR), The FTIR spectra of drug and different polymers showed no shift in peak, hence no interaction. Micrometric properties such as Bulk density, Tapped density, Carr's index and Angle of repose. Other properties including percentage of floating buoyancy, drug entrapment efficiency, percentage of yield, *in vitro* drug release and SEM studies. The prepared floating microballoons were found to produce the percentage of yield was in the range of 82.7 - 98.5 %, drug entrapment efficiency was 68 %-98.9 %, percentage of floating buoyancy was 70.2 - 80.6 % and *in vitro* drug release was 94.67 % per 12hrs. Scanning electron microscopy (SEM) confirmed their spherical size, perforated smooth surface and a hollow cavity in them. The best drug release, entrapment efficiency and percentage of floating buoyancy profiles were seen with formulation F10 at the ratio of drug to polymers (HPMC K4M) of 1:5.

**Keywords:** Diacerein, Ethyl cellulose, Floating buoyancy, Floating microballoons, Hydroxy Propyl Ethyl Cellulose, *In vitro* drug release studies.



ABSTRACT NO: *ICCPR-SPS-013*

## PHARMACIST FACILITATED EDUCATION ON CHILDHOOD IMMUNIZATION AMONG PREGNANT WEOMEN

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### ABSTRACT

**Aim:** The aim of our study was to determine the impact of pharmacist provided counselling to pregnant women regarding childhood immunization

**Objectives:** To assess the knowledge and attitude of pregnant women towards childhood immunization

**Material and methods:** A prospective hospital based interventional study was conducted among pregnant women selected hospitals of Kalburagi, Karnataka. The data was collected using data collection form and questionnaires. After a gap of one month followed by education post test scores were taken. The pre and post data were compared using paired t- test and ANOVA.

**Result:** Out of 120 pregnant women surveyed, the knowledge score of pre-test was 46.5%, whereas post- test the score was 92.7%. The attitude score of pre-test was 80.5%, while the post-test score was 96% respectively. This shows a clear indication of improvement, followed by education, the practice score of pre-test was 82.3% and post-test score was 98%.

**Conclusion:** Although majority of pregnant women had satisfactory knowledge and positive attitude and practice towards immunization, certain factors (Educational status) plays a major impact in vaccination uptake. Hence efforts should be focused on improving their practice.

**Keywords:** Childhood immunization, pregnant women, knowledge and attitude practice.



ABSTRACT NO: ICCPPR-SPS-015

**BLOCKCHAIN IN PHARMACY: EMPOWERING FUTURE PHARMACISTS THROUGH TRANSPARENCY AND TRUST****<sup>1</sup>R. AKSHAYA , <sup>2</sup>P. MAHESHWARI***<sup>1</sup>Pharm.D, 3<sup>rd</sup> year, School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies.**<sup>2</sup>Associate professor, Department of Pharmacy practice, School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies.*

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**ABSTRACT**

Counterfeit and substandard medicines remain a critical global health challenge, causing treatment failures, antimicrobial resistance, and loss of public trust. Traditional supply chain systems often lack transparency, leaving patients and healthcare providers vulnerable.

Blockchain technology, a decentralized and tamper-proof digital ledger, offers an innovative solution by ensuring authenticity and traceability of medicines across the entire supply chain. Exploring the transformative potential of blockchain in pharmacy practice and highlight how it empowers future pharmacists as guardians of medicine safety and patient trust. Blockchain records every step in a drug's journey—from manufacturing to dispensing—in an immutable, transparent system. This enables pharmacists to verify authenticity, track cold-chain storage for biologics and vaccines, and rapidly respond to product recalls.

Beyond supply chain management, blockchain secures clinical trial data and enhances the confidentiality of patient health records. By adopting blockchain-based systems, pharmacists can evolve from traditional dispensers to digital health leaders who ensure transparency, accountability, and patient trust. Integrating blockchain education into pharmacy practice will prepare future pharmacists to lead digital healthcare innovations. By embracing this technology, pharmacists can transform medicine distribution into a transparent, trustworthy process, ultimately safeguarding public health.

**KEYWORDS:** *Blockchain, Pharmacy practice, Counterfeit medicines, Supply chain transparency, Patient safety, Healthcare innovation.*



ABSTRACT NO: *ICCP-SPS-016*

## SAFETY AND EFFECTIVENESS OF NEWER ORAL ANTI-COAGULANTS IN INTENSIVE CORONARY CARE UNIT PATIENTS

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### **Abstract**

This study evaluated the clinical efficacy, safety, and patient satisfaction associated with Warfarin, Apixaban, and Dabigatran in patients requiring long-term anticoagulation therapy. A comparative analysis was conducted using a randomized study design involving three patient groups. Key clinical parameters, including thrombotic events, bleeding complications, hypersensitivity reactions, and treatment compliance, were analyzed. Descriptive statistics were used to report mean values and frequencies, while inferential statistics, including ANOVA and chi-square tests, were employed to determine significant differences between the groups. Apixaban and Dabigatran demonstrated superior safety profiles, with lower incidences of major bleeding events and higher patient compliance compared to Warfarin. Laboratory findings revealed significant improvements in coagulation markers among patients treated with Apixaban and Dabigatran. Hypersensitivity reactions and dropout rates were lowest in the Apixaban group, reinforcing its favorable safety profile. The study confirmed the hypothesis that direct oral anticoagulants (DOACs) offer enhanced safety and patient satisfaction over Warfarin, supporting the growing clinical preference for these newer agents. The results underscored the importance of individualized treatment strategies to optimize anticoagulation outcomes. The study's findings have broad clinical implications, suggesting that Apixaban and Dabigatran may serve as preferred options in long-term anticoagulation therapy due to their enhanced safety, improved patient adherence, and favorable clinical outcomes. These insights provide a foundation for refining anticoagulation guidelines and advancing patient-centered care strategies in managing thrombotic disorders.

### **Keywords**

Anticoagulants, Thrombotic events, Clinical efficacy, Patient satisfaction, Coronary Artery Disease (CAD), Oral Anticoagulants, Apixaban, Dabigatran, Warfarin, Thrombotic Events, Adverse Drug Reactions (ADRs), Pharmacovigilance



ABSTRACT NO: *ICCPR-008*

**Prescribing Pattern of Second-Generation Antipsychotics in a Tertiary Psychiatry  
Department**

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**Abstract**

Rational prescribing of antipsychotics is critical for optimising therapeutic outcomes and minimising metabolic risks. Understanding the drug utilisation pattern can guide formulary decisions and clinical protocols. The distribution of second-generation antipsychotic (SGA) prescriptions among 23 drug-naïve psychiatric patients enrolled in the study. Patients were initiated on Amisulpride, Quetiapine, or Lurasidone based on clinical judgment. Quetiapine and Lurasidone were the most frequently prescribed agents, each accounting for 39% of prescriptions, while Amisulpride accounted for 22%. The nearly equal distribution of Quetiapine and Lurasidone suggests a therapeutic preference for agents with balanced efficacy-tolerability profiles. Amisulpride use was comparatively lower, possibly reflecting its more targeted indication spectrum. The prescribing pattern indicates a shift toward broader use of Quetiapine and Lurasidone, likely due to their favourable safety and efficacy profiles. These findings may assist clinicians in evaluating current prescribing trends and encourage periodic review of antipsychotic use to ensure rational pharmacotherapy.

ABSTRACT NO: *ICCP-SPS-017*

## **Emerging Role of Gelatin Nanocarriers in Enhancing the Delivery of Poorly Soluble and Low Permeable Therapeutics: A Comprehensive Review**

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### **Abstract**

The effective delivery of poorly water-soluble drugs remains a significant challenge in pharmaceutical formulation, due to their low bioavailability, variable absorption, and unsatisfactory therapeutic outcomes. Nanotechnology-based systems, particularly polymeric nanocarriers, have emerged as powerful strategies to overcome these limitations. Among natural polymers, gelatin has attracted growing interest owing to its biodegradability, biocompatibility, amphiphilic nature, and low cost, making it highly suitable for the fabrication of nanocarriers. This review provides a comprehensive overview of gelatin-based nanocarriers in enhancing the solubility, dissolution rate, and bioavailability of poorly soluble therapeutics, particularly those classified as Biopharmaceutics Classification System (BCS) Class II and IV drugs. Key formulation methods such as desolvation, coacervation, and nanoprecipitation are discussed, along with their influence on particle size, encapsulation efficiency, and drug release behaviour. Recent advances, including surface functionalization, hybrid nanocarriers, and stimuli-responsive systems, are highlighted for their role in achieving targeted and controlled delivery. Special emphasis is given to therapeutic applications of gelatin nanocarriers in cancer therapy, anti-inflammatory treatment, antimicrobial delivery, and central nervous system targeting, where improved pharmacokinetic profiles and site-specific action are crucial. Preclinical and clinical findings are also summarized, demonstrating the translational relevance of these systems. Overall, this review emphasizes the potential of gelatin-based nanocarriers as versatile, safe, and effective platforms to address solubility-associated challenges in modern drug delivery.

**Keywords:** Gelatin nanocarriers, poorly soluble drugs, targeted delivery, cancer therapy, controlled release

ABSTRACT NO: *ICCPR-SPS-018***Development of Posaconazole loaded Nanostructured Lipid Carriers for improved antifungal efficacy in Mucormycosis.****Mr. Shubham Vijay Chavan, Dr. Mohamed Zerein Fathima****Department of Pharmaceutical Chemistry and Analysis.****Vels Institute of Science Technology and Advanced Studies Pallavaram, Chennai,****Tamilnadu, India.****EMAIL ID:shubchavan808@gmail.com****Abstract:**

Lipid-based drug delivery systems have the potential capacity to entrap both hydrophobic and hydrophilic molecules, enhance the bioavailability of poorly aqueous soluble drugs, and protect them from untimely degradation. Nanostructured lipid carriers (NLCs), the second generation innovative lipid nanoparticle that act as a bioactive carrier system. Nanostructured lipid carriers are biocompatible drug carriers used for hydrophilic as well as hydrophobic drugs. NLCs are high permeability, better physical stability, huge loading capacity and most affordable (less expensive than polymeric/surfactant based carriers). Many antifungal drugs currently available in market exhibit solubility and permeability problems and mostly belongs to BCS class-II and IV drugs so bioavailability is the major cause and could be resolved by formulating Posaconazole loaded NLCs. NLCs have the usual particle diameter ranging 10-1000 nm. Posaconazole loaded NLCs were successfully formulated using the melt homogenization technique combined with ultrasonication. The rapid emergence and spread of the Covid-19 pandemic in India has highlighted the country's health-care system's failure to cope with the increasing number of cases. At its peak, over 400,000 cases were reported each day, and the country was not able to provide adequate resources to address the needs of its patients. Although the situation is now under control, the country is now facing a health emergency due to a type of fungal infection known as mucormycotic. Mucormycosis is caused by a group of molds known as mucormycetes. The most common species of these organisms is the Mucor and the Rhizopus. As of June 2021, there were over 40,000 cases of this disease in India. The NLCs were formulated using melt homogenization followed by ultrasonication, resulting in nanoparticles with a mean particle size of 300 to 400 nm and a positive zeta potential of 28 mV to 34 mV, confirming nanoscale dimensions suitable for ocular delivery with good stability against aggregation. The formulation exhibited the entrapment efficiency 74.23 % to 95.99%, indicating excellent drug incorporation, which is critical for ensuring sustained drug release and therapeutic efficacy. The formulation of Posaconazole NLCs was optimized using Box-Behnken design by considering surfactant concentration and lipid concentration as independent variables and particle size, entrapment efficiency and drug loading as dependent variables.

**Keywords:** Nanostructured Lipid Carriers, Posaconazole, Melt Emulsification, and Mucormycosis.

ABSTRACT NO: *ICCP 2ND-SPS-019*

## **Digital Twins in Pharmacology: The Billion-Dollar Breakthrough Simulating Virtual Patients for Dose Optimization and Toxicity Prediction**

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### **Abstract:**

The continuously rising cost of clinical trials—\$1–2 billion or more per drug candidate—is one of contemporary pharmacology’s central bottlenecks. Such strategies of approach by means of trials, though irreplaceable, are constrained by sluggish time scales, moral concerns, and failure to embrace patient-specific heterogeneity. The new digital twin technology, whereby dynamic computation replicas of patients are created, is emerging as a disruptive successor. Through combination of pharmacokinetic (PK) and pharmacodynamic (PD) simulations, digital twins are in a position to simulate drug absorption, distribution, metabolism, and excretion while predicting dosing optimization as well as toxicity—long in advance of first-in-clinical exposure. This review examines more than a decade of recent research (2020–2025) highlighting fruitful applications in oncology, cardiovascular therapy, and metabolic disease, wherein patient-centered models increased therapeutic selectivity and reduced trial-and-error dosing. Of specific merit, integration of PK curve visualizations and in-silico models, perhaps generated by means of Python, Google Colab, and Streamlit, could increase worldwide availability among scientists. In spite of challenges such as data richness, computation, and regulatory clarity, digital twins are not only a technological innovation, but also a revolution of pharmacology. In cost-cutting, adverse events reduction, and accelerated innovation, they promise a future wherein drug development will be swifter, safer, and more personal.

**Keywords:** Clinical trial cost, pharmacokinetics, simulated medicine, simulation, digital twin.



ABSTRACT NO: *ICCP-SPS-020*

**Dual Action in Diabetes Management: A Comprehensive Review on the Synergistic Role of Melatonin and Metformin Combination Therapy in Glycemic control and Metabolic Regulation**

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**ABSTRACT:**

The management of Type 2 Diabetes Mellitus (T2DM) involves a multifaceted approach that typically includes lifestyle modifications and pharmacological interventions. Among the emerging therapeutic strategies, the combination of melatonin and metformin has garnered attention due to their potential synergistic effects in glucose control and metabolic regulation. Melatonin, a pineal gland-derived hormone, is known for its role in regulating circadian rhythms but has also demonstrated anti-inflammatory and antioxidant properties. Recent studies suggest melatonin's potential to improve insulin sensitivity and reduce blood glucose levels, making it a promising adjunct to traditional diabetes therapies. On the other hand, metformin, the first-line pharmacotherapy for T2DM, works by enhancing insulin sensitivity, reducing hepatic glucose production, and improving peripheral glucose uptake.

**Objective**

The mechanistic basis for combining melatonin and metformin in diabetes management, including their complementary effects on insulin signaling, inflammation, and oxidative stress.

**Method and Result**

The dual action of melatonin and metformin could lead to more comprehensive control of hyperglycemia through the modulation of both circadian and metabolic pathways. Preclinical and clinical evidence supporting their combined use is discussed, with particular attention to their potential benefits in regulating glucose homeostasis, improving insulin sensitivity, and minimizing complications associated with T2DM. Furthermore, the safety, dosing, and pharmacokinetic considerations of such a combination therapy are evaluated.

**Conclusion**

This abstract reviews the combination of melatonin and metformin and presents a novel avenue for enhancing diabetes management, particularly in individuals with disrupted circadian rhythms or insufficient glycemic control despite monotherapy. However, further large-scale clinical trials are warranted to validate the efficacy and safety of this combination in diverse patient populations.

**Key words:** Melatonin, Metformin, Diabetes Management, Drug combination



ABSTRACT NO: *ICCPPr-SPS-021*

**The Future of Pharmaceuticals : AI and CRISPR Gene editing**

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**ABSTRACT**

The pharmaceutical sector is undergoing a major upheaval, owing to the convergence of artificial intelligence (AI) and gene-editing technologies such as CRISPR-Cas. AI is expediting drug discovery by allowing for the quick analysis of complicated biological data, the optimization of molecular structures, and the prediction of treatment responses at unprecedented speeds and precision. Meanwhile, CRISPR provides a strong, adaptable, and cost-effective tool for precise genome alteration, paving the path for medicines that directly address the underlying causes of genetic illnesses. Together, these technologies have the potential to lower the time and cost of drug development while expanding therapy options for previously intractable diseases. AI models are increasingly being utilized to design guide RNAs, forecast off-target effects, and accelerate clinical trial design, thereby improving the safety and efficacy of CRISPR-based treatments. CRISPR is also pushing the boundaries of personalized medicine by allowing for targeted therapies based on individual genetic profiles. However, integrating AI and CRISPR presents ethical, legal, and safety concerns, such as data privacy, unforeseen genetic implications, and equal access to new therapeutics. As these technologies evolve, their combination has the potential to reshape the future of pharmaceuticals, changing the focus from symptom management to curative and preventive genetic interventions.

**Keywords:** Artificial intelligence, CRISPR gene editing, pharmaceuticals, personalized medicine, drug discovery.

ABSTRACT NO: *ICCPDR-SPS-022*

## **Beyond Blood Sugar: An AI-Driven Lifestyle Assessment Tool for Estimating Type 2 Diabetes Risk in Young Adults**

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### **Background**

India is passing a significant increase in Type 2 diabetes cases among youthful grown-ups, multitudinous of whom remain undetected until serious complications arise Current netting styles largely concentrate on measuring blood sugar, constantly ignoring vital life factors similar as sleep quality, stress situations, physical exertion, and healthy habits. There's an immediate need to Transition from reactive styles to prophetic strategies for diabetes prevention.

### **Methodology**

A digital check was conducted among 150 council scholars aged 18 to 30. Actors handed tone- reported information on various life factors, including body mass index ( BMI), exercise habits, screen time, stress situations, salutary patterns, sleep duration, and family history of diabetes. Using this data, a machine learning model predicated on the Random Forest algorithm was developed to classify individuals into low, moderate, and elevated trouble groups for Type 2 diabetes. Also, a user-friendly interface was created to present substantiated results and offer adapted health recommendations.

### **Results**

The model effectively linked 27 of the actors as high-trouble, despite the absence of current symptoms. Significant trouble factors included short sleep, a sedentary life, and elevated stress situations. The algorithm achieved a delicacy rate of over 80% when validated against standard ADA( American Diabetes Association) trouble assessments. The maturity of addicts indicated that the tool eased reflection on their habits and encouraged them to make small yet poignant changes for better health.

### **Conclusion**

By integrating AI with life data, this tool presents a new approach to prognosticating diabetes risks beforehand, ahead they escalate into clinical issues. This strategy is particularly applicable for the tech-expert immature generation and can be readily executed in educational institutions and workplaces. With timely interventions, we could potentially help thousands of unborn diabetes cases.

### **Keywords**

Type 2 Diabetes, Lifestyle Risk, Artificial Intelligence, Prevention, Youth Health.



ABSTRACT NO: *ICCP-SPS-023*

**DUAL ROLE AMPK (ACTIVATED AMP PROTEIN KINASE ) IN CANCER :**

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**Abstract**

**Methodology:**

This complexity stems from culture and in vivo environments differences. For example, in a petri dish, cells are constantly supplied nutrients and oxygen, and a drug dealing with a pathway like AMPK can easily be described. It suggests, that in a petri dish AMPK's functionality is a pathway that supports catabolism and suppress cell proliferation. However, with a tumor, we know, is in the tumor microenvironment (TME) that has a lack of oxygen, compromised bloodflow, & interactions with the immune as well as stromal cells. In this environment a constantly stimulated AMPK can permit rewire metabolism that favors cell growth, stress resistance, as well as allow survive. For example AMPK can stimulate the entry of glucose to the pentose phosphate pathway (PPP) — that is, transform glucose into intermediate which are necessary for the synthesis of nucleotides and is known as NADPH. Furthermore, it can stimulate the process called autophagy, where the cell destroys its own components to recycle the energized nutrient content stored within the cell during a state of starvation.

**Conclusion :**

The first place, the use of therapies aimed at AMPK is further complicated by the duality of its biology. On the one hand, AMPK activators and metformin in particular may prove helpful in some tumors by blocking mTOR and helping AMPK to inhibit some more cancer cells, and on the other, they may inadvertently help tumor cells cope with stress. On the other hand, AMPK inhibitors such as the experimental drug BAY-3827 may block such escape mechanisms at least in preclinical models of prostate cancer. However the systemic AMPK inhibition poses a risk of disruption of important energy balance and homeostasis in host tissues such as the heart and brain. Thus, the decision to inhibit AMPK and the particular drug to be used, whether AMPK activator, or inhibitor, depend on the type of tumor, its metabolic state, and the environment of its microenvironment. These features, along with p-AMPK and other metabolic flux markers, serve as important characteristics in deciding whether AMPK will be activated by modulation in a particular patient.

**Keywords:** Metformin , type 2 diabetes mellitus , AMPK( activated AMP protein kinase ), mTOR (mechanistic target of rapamycin),TME ( tumor microenvironment)



ABSTRACT NO: *ICCPR-SPS-024*

## **Beyond Blood Sugar: An AI-Driven Lifestyle Assessment Tool for Estimating Type 2 Diabetes Risk in Young Adults**

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### **ABSTRACT**

**Introduction:** Parkinsons Disease is a neurodegenerative brain disorder that progresses slowly in most people. It has characterized by degradation of dopamine-carrying neurons in the substantia nigra. The main aim of the Present study is to Formulate and evaluate hecogenin loaded Phycocyanin nanosponges against Parkinsons Disease.

**Methodology:** Docking studies were Performed with MAO B and Synuclein against Hecogenin, Factorial Design by Box Behnken Design for optimization of hecogenin loaded Phycocyanin nanosponges, Formula tion of nanosponges by Solvent Diffusion method and Charecetriztion of formulated nanosponges by FTI R, XRD, SEM, DSC, and Invitro Drug release Studies.

**Result:** Docking Scores of Hecogenin, Moldock score -128.46 compared with levodopa moldock score -10 0.80. Optimization results shows that F4 (Drug polymer ratio 1:2) is the best formulation with particle size  $193\pm 4.6$  nm, Zetapotential  $32.2\pm 1.4$  mV, Polydisperse index  $0.12\pm 0.6$ , Entrapment efficiency  $88.5\pm 1.6\%$ , P ercentage Drug release  $80.5\pm 2.4$ . with the optimization result best formulation were prepared by Solvent dif fusion method and performed characterization by FTIR shows drug and polymer has good Compatibility. S EMImages shows well defined particles (Particle size  $\sim 193$  nm), XRD analysis confirms successful transfor mation of crystalline hecogenin to Soluble Amorphous form. DSC analysis Confirms amorphization of Hecogenin within the nanosponge matrix, enhancing solubility and stability. Invitro drug release shows 80.5 % of drug release. In -vivo studies are under Progress.

**Keywords:** Parkinsonss, Nanosponges, MAO B, Synuclein, hecogenin.



ABSTRACT NO: ICCPPR-009

## Glycaemic Response Profile Associated with Contemporary Antipsychotic Therapies

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### Abstract

Disturbances in glucose metabolism are a major concern during antipsychotic therapy, predisposing patients to diabetes and metabolic syndrome. Understanding early glycaemic shifts can guide therapeutic selection and preventive measures. Fasting blood glucose levels were measured at baseline and after four weeks in patients receiving Amisulpride, Quetiapine, or Lurasidone. Paired t-tests were used to determine statistical significance, with  $p < 0.05$  considered significant. Quetiapine caused a significant rise in fasting blood glucose ( $85.33 \pm 7.88$  mg/dL to  $89.44 \pm 6.36$  mg/dL;  $p = 0.00011$ ), suggesting an early diabetogenic potential. In contrast, Amisulpride significantly reduced glucose levels ( $81.4 \pm 7.25$  mg/dL to  $79.4 \pm 8.11$  mg/dL;  $p = 0.0031$ ), indicating a potentially favourable effect. Lurasidone showed no change ( $85.22 \pm 8.07$  mg/dL to  $85.22 \pm 8.68$  mg/dL;  $p = 0.5$ ), confirming its neutral glycaemic impact. Glucose monitoring is critical in patients initiated on Quetiapine due to its glycaemic elevation. Amisulpride may benefit patients with baseline hyperglycaemia, whereas Lurasidone maintains stable glucose levels, making it a safer choice for metabolically vulnerable individuals.

### Keywords

Fasting blood glucose; Contemporary antipsychotic therapy; Glycemic regulation; Metabolic monitoring; Antipsychotic-induced diabetes



ABSTRACT NO: *ICCP-SPS-025*

**ADJUNCTIVE USE OF INHALED NITRIC OXIDE IN  
CYANOTIC CONGENITAL HEART DISEASE REPAIR  
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**Abstract**

***Background:***

Pulmonary hypertension is a frequent challenge after corrective surgery for cyanotic congenital heart disease (CCHD), often contributing to hemodynamic instability, low cardiac output and organ dysfunction. Inhaled nitric oxide (iNO) has been used to selectively reduce pulmonary vascular resistance, but its benefits in this population remain under investigation.

***Methods:***

Children with tetralogy of fallot, double outlet right ventricle, or pulmonary atresia with ventricular septal defect who underwent corrective repair was retrospectively analysed. Patients received either standard postoperative care or standard care with iNO. Propensity score was performed to balance baseline and surgical characteristics. The primary objective was low cardiac output syndrome (LCOS) within 24 hours after surgery. Secondary objective included renal replacement therapy, ventilation duration, ICU/hospital stay, and in-hospital mortality.

***Results:***

As a result, the iNO group had a lower incidence of LCOS within 24 hours and reduced need for renal replacement therapy compared with standard care. Favourable trends toward shorter ventilation time and ICU stay were observed, while mortality was not significantly different. No major adverse effects of iNO were reported.

***Conclusions:***

Adjunctive iNO was associated with improved early postoperative outcomes in children with CCHD and PH. Larger prospective studies are needed to confirm its benefits and define optimal use.

***Keywords:***

Cyanotic congenital heart disease, Pulmonary hypertension, Inhaled nitric oxide, Retrospective analysis, Low Cardiac Output Syndrome.



ABSTRACT NO: ICCPPR-SPS-026

## POSITIONING CEFEPIME–ENMETAZOACTAM AGAINST THE LAST RESTORE ANTIBIOTIC

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Under the Guidance of

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### ABSTRACT

#### Objective:

To assess the antimicrobial potential of cefepime–enmetazobactam, an emerging  $\beta$ -lactam/ $\beta$ -lactamase inhibitor (BL/BLI) combination, against multidrug-resistant Gram-negative pathogens, particularly *carbapenem-resistant Enterobacterales* (CRE) and *Pseudomonas aeruginosa*.

#### Methods:

Cefepime–enmetazobactam efficacy, resistance mechanisms, pharmacokinetic/pharmacodynamic (PK/PD) concerns, and safety results were assessed by reviewing recent in vitro investigations, clinical assessments, and comparative registry analyses.

#### Results:

Cefepime–enmetazobactam showed promising but selective action against subsets of CRE, especially class A  $\beta$ -lactamases like *klebsiella pneumoniae carbapenemase* (KPC). The activity was restricted against class B metallo- $\beta$ -lactamases, such as *New Delhi metallo- $\beta$ -lactamase* (NDM) and *Verona Integron-encoded Metallo- $\beta$ -lactamase* (VIM). Clinical studies showed it works well in treating complicated urinary tract infections (cUTI), bloodstream infections, and hospital-acquired pneumonia, with outcomes better or comparable to standard therapies. Importantly, its safety profile was similar to other  $\beta$ -lactam antibiotics, with no new major side effects reported.

#### Conclusion:

Cefepime–enmetazobactam represents a promising addition to the antimicrobial armamentarium, particularly effective against **ESBL- and KPC-producing Enterobacterales**, making it a strong **carbapenem-sparing alternative** in cUTI, bacteremia, and HAP/VAP.

**KEYWORDS:** *Cefepime–enmetazobactam, multidrug-resistant Gram-negative pathogens, klebsiella pneumoniae carbapenemase, Enterobacterales*



ABSTRACT NO: ICCPPR-010

## A Effect of Atypical Antipsychotic Medications on LDL-Cholesterol Concentrations

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### Abstract

Low-density lipoprotein cholesterol (LDL-C) is a major contributor to atherogenesis and cardiovascular morbidity. Atypical antipsychotic medications can influence LDL-C, necessitating vigilance during therapy. LDL-C levels were assessed at initiation and follow-up in patients prescribed Amisulpride, Quetiapine, or Lurasidone. Statistical significance was tested using paired t-tests ( $p < 0.05$  threshold). Quetiapine exhibited a significant elevation in LDL-C ( $107.33 \pm 13.25$  mg/dL to  $111.3 \pm 12.10$  mg/dL;  $p = 0.0017$ ), whereas Amisulpride showed a modest increase ( $107.4 \pm 16.2$  mg/dL to  $108.6 \pm 16.77$  mg/dL;  $p = 0.032$ ). Lurasidone demonstrated a negligible change ( $104.11 \pm 23.78$  mg/dL to  $103.66 \pm 24.27$  mg/dL;  $p = 0.38$ ). These findings indicate a differential impact of atypical antipsychotics on LDL-C levels, with Quetiapine posing a higher dyslipidaemia risk. Therapy with Quetiapine is associated with clinically significant LDL-C elevation and warrants regular lipid monitoring. Amisulpride causes a mild increase, whereas Lurasidone may be preferable for patients with pre-existing dyslipidaemia.

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**Keywords:** Atypical antipsychotics; Dyslipidemia; Cardiovascular risk; Lipid monitoring



ABSTRACT NO: ICCPPR-SPS-028

***Unicentric Castleman's Disease Presenting as Cervical Lymphadenopathy: A Rare Case Report***

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**Abstract**

**Background:** Castleman's disease, or Angio follicular lymph node hyperplasia, is a benign lymphoproliferative disorder of undetermined etiology that rarely occurs. Due to its appearance like more common conditions, like lymphoma or tuberculosis, diagnosis usually is difficult. Early diagnosis is significant because treatment and prognosis vary so much.

**Case presentation:** A 32-year-old presented with a solitary, painless swelling over left neck that was of three-month duration. Clinical workup raised suspicion of lymphoma, and tuberculosis was left in the differential. Haematological investigations of a routine nature came back normal. Radiological workup indicated a solitary cervical lymph node that was enlarged with no systemic illness. Excisional biopsy was performed; histopathology showed features in Favor of Angio follicular lymph node hyperplasia, establishing unicentric Castleman's disease.

**Management and outcome:** Excision of involved lymph node was surgically done. Post-operative period was normal, and there was no recurrence at follow-up. No systemic symptoms and no further lymphadenopathy developed.

**Conclusion:** Castleman's disease is a rare, significant, cause of cervical lymphadenopathy. The case is representative of the diagnostic challenge as it resembled lymphoma and tuberculosis. Histopathological examination is still the gold standard in diagnosis, and surgical excision provides good prognosis in unicentric disease. awareness of this disease aids early diagnosis and proper management.

**Keywords:** Castleman's disease, angiofollicular lymph node hyperplasia, cervical lymphadenopathy, unicentric Castleman's disease, rare case report.



ABSTRACT NO: *ICCPPr-011*

**From Gut to Heart: The Role of Microbial Metabolites in Atherosclerosis in South Indian Population – An Exploratory Study**

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**Abstract**

**Introduction:** The gut microbiota-derived metabolites, such as trimethylamine-N-oxide, bile acids, and polyphenols, play a pivotal role in maintaining healthy cardiovascular function, and when dysregulated, can potentially lead to CVD.

**Aim and Objectives:** The study was conducted to assess the level of Trimethylamine N-oxide (TMAO) expression and atherosclerotic plaque formation in the South Indian population and to validate and assess TMAO as a biomarker for atherosclerosis.

**Methodology:** The prospective exploratory study was conducted at JSS Hospital, Mysuru, focusing on the South Indian population of 13 participants.

**Results and Discussion:** The study concluded that patients having the habit of alcoholism, non-vegetarian, and smoking have an elevated level of TMAO resulting in atherosclerosis.

**Conclusions:** The study unveiled the role of TMAO as a significant biomarker in the risk and development of atherosclerosis and also provided valuable insights about how the microbiome influences cardiovascular diseases.

**Keywords:** Gut, TMAO, Atherosclerosis, Cardiovascular diseases, Biomarker



ABSTRACT NO: ICCPPR-012

**SFTPD Expression in COPD versus Healthy Lung Tissue: An RNA-Seq Analysis****Anusha Sundararaman<sup>1</sup>, Pharm.D****Thangavel Mahalingam Vijayakumar<sup>1</sup>, M.Pharm., Ph.D.****<sup>1</sup>Department of Pharmacy Practice, SRM College of Pharmacy, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu 603203, India**

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**Abstract****Background:**

Chronic obstructive pulmonary disease (COPD) is a leading global cause of morbidity and mortality. Surfactant protein D (SP-D), encoded by the SFTPD gene, plays a key role in pulmonary host defense and has been implicated in COPD through genetic and protein-level associations. However, whether SFTPD expression is dysregulated in lung tissue remains unclear.

**Methods:**

We performed a retrospective transcriptomic analysis using publicly available RNA-seq data from COPD patients (n = 9) and healthy controls (n = 9) (NCBI BioProject PRJNA1151128). Data underwent quality control, trimming, rRNA removal, alignment to the human reference genome (HISAT2), and quantification with StringTie v3.0.0. Differential expression was assessed using edgeR with false discovery rate (FDR) correction (FDR < 0.05,  $|\log_2FC| \geq 1$ ).

**Results:**

Sequencing quality was high (mean Q30 = 95.3%) with alignment rates averaging 95.5%. The differential expression results identified 114 upregulated and 104 downregulated genes. But SFTPD was not identified to be a differentially expressed gene. SFTPD expression was stable between groups ( $\log_2FC = 0.316$ ; fold change = 1.24; FDR = 0.421), with a small effect size (Cohen's d = 0.42). Power analysis indicated 80% power to detect  $\geq 2.1$ -fold changes, but only 23% power for the observed effect size.

**Conclusion:**

Despite strong genetic and protein-level evidence linking SP-D to COPD, our findings indicate no significant transcriptomic dysregulation of SFTPD in lung tissue. These results suggest that COPD-associated alterations in SP-D may occur through post-transcriptional or systemic mechanisms rather than mRNA expression. Future studies using single-cell or spatial transcriptomics and integrative multi-omics approaches are needed to clarify SP-D regulation in COPD.

**Keywords:** COPD, SFTPD, surfactant protein D, transcriptomics, RNA-seq



ABSTRACT NO: *ICCP 2ND-SPS-029*

## **Machine Learning Models for Personalized Nutrition and Pharmacotherapy in Chronic Disease**

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### **ABSTRACT**

#### **INTRODUCTION**

Nutritional supplements and nutraceuticals—such as vitamins, minerals, probiotics, phytochemicals, and antioxidants—are gaining importance as supportive tools in the management of chronic diseases. Unlike broad dietary changes, these agents act through specific biological effects, including modulation of molecular pathways, reduction of treatment-related side effects, and enhancement of pharmacotherapy. For instance, vitamin D improves insulin sensitivity, probiotics restore gut microbiome balance, and omega-3 fatty acids provide anti-inflammatory and cardioprotective benefits. However, patient responses vary due to genetics, metabolic status, and potential supplement–drug interactions. **ML MODELS AND THE ALGORITHM BASED ON THE DISEASE:** Machine Learning (ML) now enables precision supplementation by processing complex data sources such as genomics, metabolomics, electronic health records, and wearable device outputs. Random Forest models have been applied in Type 2 Diabetes Mellitus (T2DM) to predict which patients achieve improved glycemic control with vitamin D or probiotics. Neural Networks, trained on metabolomic and imaging datasets, have identified subgroups of Parkinson’s disease (PD) patients who respond favorably to Coenzyme Q10 and omega-3 fatty acids, slowing disease progression. In Chronic Kidney Disease (CKD), Support Vector Machines (SVMs) have been used to distinguish patients likely to benefit from vitamin D analogs and probiotics, helping delay renal decline. More recently, Reinforcement Learning models such as PrescDRL are being tested for supplement optimization. Positioning supplements at the center of ML-driven precision medicine creates new opportunities for managing chronic conditions such as T2DM, PD, and CKD. By combining nutraceutical science, pharmacy, and artificial intelligence, this approach advances beyond symptom control to long-term, semi-permanent management, offering safer, more effective, and individualized care.

#### **Keywords**

Supplements; nutraceuticals; pharmacotherapy; machine learning; random forest; neural networks; support vector machine; reinforcement learning; natural language processing; Type 2 Diabetes Mellitus; Parkinson’s disease; Chronic Kidney Disease; precision medicine



ABSTRACT NO: ICCPPR-SPS-030

## POSITIONING CEFEPIME–ENMETAZOACTAM AGAINST THE LAST RESTORE ANTIBIOTIC

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### Abstract

#### Objective:

To assess the antimicrobial potential of cefepime–enmetazobactam, an emerging  $\beta$ -lactam/ $\beta$ -lactamase inhibitor (BL/BLI) combination, against multidrug-resistant Gram-negative pathogens, particularly *carbapenem-resistant Enterobacterales* (CRE) and *Pseudomonas aeruginosa*.

#### Methods:

Cefepime–enmetazobactam efficacy, resistance mechanisms, pharmacokinetic/pharmacodynamic (PK/PD) concerns, and safety results were assessed by reviewing recent in vitro investigations, clinical assessments, and comparative registry analyses.

#### Results:

Cefepime–enmetazobactam showed promising but selective action against subsets of CRE, especially class A  $\beta$ -lactamases like *klebsiella pneumoniae carbapenemase* (KPC). The activity was restricted against class B metallo- $\beta$ -lactamases, such as *New Delhi metallo- $\beta$ -lactamase* (NDM) and *Verona Integron-encoded Metallo- $\beta$ -lactamase* (VIM). Clinical studies showed it works well in treating complicated urinary tract infections (cUTI), bloodstream infections, and hospital-acquired pneumonia, with outcomes better or comparable to standard therapies. Importantly, its safety profile was similar to other  $\beta$ -lactam antibiotics, with no new major side effects reported.

#### Conclusion:

Cefepime–enmetazobactam represents a promising addition to the antimicrobial armamentarium, particularly effective against **ESBL- and KPC-producing Enterobacterales**, making it a strong **carbapenem-sparing alternative** in cUTI, bacteremia, and HAP/VAP.

**KEYWORDS:** *Cefepime–enmetazobactam, multidrug-resistant Gram-negative pathogens, klebsiella pneumoniae carbapenemase, Enterobacterales*



ABSTRACT NO: *ICCPR-SPS-031*

## **GEMCITABINE : A NUCLEOSIDE ANALOG IN CANCER TREATMENT**

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### **ABSTRACT**

Gemcitabine is a nucleoside analog widely used in chemotherapy for various cancers, including pancreatic, breast, ovarian, and non-small cell lung cancer. Its mechanism of action involves inhibiting DNA synthesis, thereby slowing or stopping cancer cell growth. Gemcitabine is administered intravenously and is often used in combination with other medications to enhance its efficacy. Common side effects include nausea, fatigue, and neutropenia, which are manageable with appropriate medical care. Monitoring of blood counts and liver function is essential during treatment to minimize adverse effects.

Gemcitabine's role in cancer treatment has been established through numerous clinical trials, demonstrating its effectiveness in improving survival rates and quality of life for patients. Ongoing research explores its potential use in combination with other therapies, such as targeted therapy and immunotherapy, to further enhance its efficacy. As a well-tolerated and effective chemotherapy agent, gemcitabine remains a valuable treatment option for patients with various types of cancer

**KEYWORDS** : Gemcitabine, nucleoside analog, cancer treatment, chemotherapy, pancreatic cancer, breast cancer, ovarian cancer, non-small cell lung cancer, DNA synthesis inhibition



ABSTRACT NO: *ICCPPr-SPS-032*

**Serum Uric Acid-to-HDL Cholesterol Ratio as a Predictor of Poor Glycemic Control and Cardiometabolic Risk in Type 2 Diabetes Mellitus: A Cross-Sectional Study in a Tertiary Care Hospital in Southern India**

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### **Background**

Type 2 diabetes mellitus carries a high burden of poor glycemic control and cardiometabolic risk. The serum uric acid-to-HDL cholesterol ratio (UHR) combines a pro-oxidant marker and an anti-atherogenic lipid measure and may reflect metabolic dysfunction more robustly than individual biomarkers. However, evidence from Indian T2DM population is still limited.

### **Objectives**

To evaluate the association between UHR and glycemic control (HbA1c) and to assess UHR's correlation with cardiometabolic risk — operationalized by lipid-based indices and blood pressure, in adults with T2DM.

### **Methodology**

A cross-sectional study was conducted among 370 adults with T2DM. Clinical and biochemical data including fasting plasma glucose, HbA1c, lipid profile, and serum uric acid were collected. UHR was calculated, and its relationship with glycemic control (HbA1c  $\geq 7\%$  vs  $< 7\%$ ) and cardiometabolic risk markers (atherogenic dyslipidaemia, hypertension, and clustering of  $\geq 2$  risk factors) was analysed using logistic regression model.

### **Results**

Patients with poor glycemic control (HbA1c  $\geq 7\%$ ) had significantly higher UHR values compared to those with controlled T2DM. Elevated UHR was also strongly associated with atherogenic dyslipidaemia, hypertension, and the coexistence of multiple cardiometabolic risk factors. Logistic regression confirmed UHR as an independent predictor of poor glycemic control.

### **Conclusion**

The study demonstrated that UHR could serve as a simple, inexpensive, and clinically practical biomarker to identify T2DM patients with increased risk of poor glycemic control and cardiometabolic complications.

**Keywords:** Serum uric acid, HDL – cholesterol, cardiometabolic risk, type 2 diabetes mellitus, atherogenic dyslipidaemia

ABSTRACT NO: *ICCPR-SPS-033*

## **Implementation of a Color-Coded ADR Alert Card/Sticker System Linked to Root Cause Analysis of Serious Preventable Adverse Drug Reactions**

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### **Abstract**

#### **Background:**

Serious adverse drug reactions (ADRs) remain a leading cause of preventable morbidity in hospitals. Traditional pharmacovigilance systems focus on detection and reporting but often fail to ensure that identified risks are communicated effectively to patients and healthcare providers, leading to repeated exposures.

#### **Methods:**

A prospective observational study was conducted in a tertiary-care teaching hospital. All serious ADRs were screened by the pharmacovigilance unit. Causality was determined using the Naranjo algorithm and WHO-UMC criteria. Preventability was assessed using the Schumock and Thornton scale. Root cause analysis (RCA) was performed with multidisciplinary panels, and fishbone diagrams were used to categorize contributory factors (prescribing, monitoring, patient-related, system-level). Patients with confirmed culprit drugs were issued color-coded ADR alert cards/stickers: **red** for life-threatening reactions, **orange** for serious organ-damaging ADRs, **yellow** for moderate reactions requiring caution, and **green** for mild ADRs. These cards were provided to patients and attached to hospital records for future reference.

#### **Results:**

Preliminary findings demonstrate that RCA identified common preventable factors such as lack of dose adjustment in renal impairment and insufficient monitoring. The alert card system was well accepted by patients and clinicians, facilitating quick recognition of high-risk drugs and preventing inadvertent re-prescription.

#### **Conclusion:**

Combining root cause analysis with a color-coded ADR alert card/sticker system enhances patient safety by both identifying and preventing recurrence of serious ADRs. This dual approach closes the loop between pharmacovigilance and clinical practice.

**Keywords:** Adverse drug reaction, Root cause analysis, Fishbone diagram, Pharmacovigilance, Alert card, Preventability



ABSTRACT NO: *ICCPPr-SPS-034*

**From hormones to oncology: linking activin and inhibin to Transforming Growth Factor -  
Beta targeted therapies.**

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**ABSTRACT:**

Activin and inhibin are dimeric glycoprotein hormones belonging to the TGF- $\beta$  superfamily. Both regulate follicle-stimulating hormone FSH secretion from the anterior pituitary gland. Inhibin suppresses FSH release, while activin stimulates it. Structurally, inhibins consist of one  $\alpha$ -subunit and one  $\beta$ -subunit  $\beta$ A or  $\beta$ B, forming inhibin A and inhibin B heterodimers. Activins, in contrast, are homo- or heterodimers of  $\beta$ -subunits. Beyond their endocrine functions, these hormones are implicated in cell growth and cancer progression, particularly in ovarian, breast, and testicular malignancies. Inhibin acts as a tumor suppressor by limiting FSH and preventing overstimulation, whereas activin plays dual roles as either a promoter or suppressor depending on tissue context, regulating FSH, reproduction, and cell growth.

Currently, no therapies directly target activin or inhibin. However, several agents inhibit broader TGF- $\beta$  signaling pathways. Examples include: Fresolimumab monoclonal antibody against TGF- $\beta$ 1, - $\beta$ 2, and - $\beta$ 3, Galunisertib ALK5/TGF- $\beta$ RI kinase inhibitor, Trabedersen antisense oligodeoxynucleotide against TGF- $\beta$ 2 mRNA, Bintrafusp alfa bifunctional fusion protein targeting TGF- $\beta$ RII ectodomain, Vactosertib TGF- $\beta$ RI kinase inhibitor, and Pirfenidone TGF- $\beta$ 1 transcription and SMAD2/3 phosphorylation inhibitor, with anti-fibrotic effects. These strategies aim to block TGF- $\beta$ 's tumor-promoting activities, such as enhancing invasion, metastasis, immune evasion, fibrosis, and tumor microenvironment remodeling.

This abstract highlights the intersection of hormone biology and oncology, where activin and inhibin serve as key regulators, yet TGF- $\beta$  remains the most clinically actionable target. Advances in biomarker research and targeted therapies hold promise for innovative treatments in hormone-related cancers.

**Keywords:** Activin, Inhibin, TGF- $\beta$ , ovarian cancer, breast cancer, testicular cancer, targeted therapy.



ABSTRACT NO: *ICCP-SPS-035*

**GlyTwin: Patient-Centric Counterfactual Digital Twin for Predicting Glycemic Outcomes in Type 1 Diabetes**

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**ABSTRACT**

Frequent and long-term exposure to hyperglycemia increases the risk of chronic complications such as neuropathy, nephropathy, and cardiovascular disease. Existing continuous subcutaneous insulin infusion (CSII) and continuous glucose monitoring (CGM) technologies, along with current digital twin approaches in diabetes management, are primarily confined to simulating physiological processes and cannot provide alternative treatment scenarios that could guide proactive behavioural interventions for optimal diabetes management.

To address this gap in research, GlyTwin is proposed as a novel digital twin framework that incorporates counterfactual explanations to simulate optimal treatments for glucose control. This approach guides patients and caregivers on modifying behavioural pathways like carbohydrate intake and insulin dosing to proactively prevent abnormal glucose events and significantly reduce the occurrences and duration of hyperglycemic events. GlyTwin also integrates stakeholders' preferences into its intervention-generation process, ensuring personalized and patient-centric behavioural treatments.

The framework was extensively evaluated on AZT1D, a new dataset constructed from 21 patients with Type 1 Diabetes (T1D) on automated insulin delivery (AID) systems, monitored for 26 days. Results demonstrate that GlyTwin outperforms state-of-the-art methods for generating counterfactual explanations, achieving 76.6% valid explanations and 86% effectiveness in preventing hyperglycemia events as evaluated using historical data. GlyTwin underscores the potential of counterfactual-enhanced digital twins to unlock a new dimension of personalized healthcare for improved patient outcomes through optimal and personalized simulated interventions.

**Keywords:** Counterfactual explanations, Hyperglycemia Management, Digital twin, Type 1 Diabetes, Personalized healthcare, Patient-Centric Interventions



ABSTRACT NO: *ICCP-SPS-036*

**Theranostic Strategy: Padina australis Loaded Quantum Dots for Neurodegenerative Disorder**

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**ABSTRACT:**

Neurodegenerative disorders such as Alzheimer's and Parkinson's disease represent one of the most pressing challenges in modern healthcare due to their progressive nature and the lack of curative therapies. Pathological mechanisms including oxidative stress, neuroinflammation, and protein misfolding drive neuronal death, highlighting the need for novel therapeutic strategies. Marine macroalgae have recently attracted attention as a sustainable source of bioactive compounds with neuroprotective potential. *Padina australis*, a brown seaweed, is particularly rich in phenolics, flavonoids, and fucoidans, which demonstrate strong antioxidant and anti-inflammatory effects that could modulate key pathways implicated in neurodegeneration. However, its clinical translation is limited by poor solubility, instability, and inability to cross the blood–brain barrier (BBB). Quantum dots (QDs), a class of nanoscale semiconductors, offer unique advantages for overcoming these barriers through their tunable size, photostability, and capacity for surface functionalization. Integrating *Padina australis* bioactives into biocompatible, cadmium-free QDs such as carbon or graphene-based platforms could enable sustained release, improved bioavailability, and precise neuronal targeting via receptor-mediated transport across the BBB. Furthermore, the intrinsic optical properties of QDs allow for real-time imaging, providing a theranostic approach that combines therapy with simultaneous monitoring of drug distribution and treatment outcomes. This dual functionality not only enhances therapeutic efficiency but also reduces systemic toxicity by enabling targeted delivery. The combination of a marine-derived phytopharmacological agent with an advanced nanocarrier system represents a highly innovative strategy that aligns with the evolving paradigm of precision medicine. Harnessing the neuroprotective potential of *Padina australis* within a QD-based delivery system could redefine future interventions for neurodegenerative disorders, positioning pharmacists and pharmaceutical scientists at the forefront of integrating natural product pharmacology with nanotechnology for patient-centered care.

**KEYWORDS:** *Padina australis*, Quantum Dots, Neurodegeneration, Marine Pharmacology, Theranostics.



ABSTRACT NO: ICCPR-SPS-037

**A RETROSPECTIVE COHORT STUDY EXAMINING THE SAFETY AND EFFECTIVENESS OF HYDROXYCHLOROQUINE IN PREGNANT INDIVIDUALS WITH IgA NEPHROPATHY**

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**Abstract**

**Introduction:** Hydroxychloroquine (HCQ) is used in IgA Nephropathy to lower protein levels in the urine (reduce proteinuria) and help protect kidney function. IgA nephropathy (often called IgAN or Berger's disease) is a kidney disorder where the body's immune system makes too much of an antibody called immunoglobulin A (IgA). This study compares the kidney health and pregnancy outcomes of pregnant women with IgAN, who took HCQ to those who did not. It also examined whether HCQ is safe for both mother and baby.

**Methods:** A retrospective analysis of singleton gestations and pregnant patients with biopsy-proven IgAN treated at St. Isabel's Hospital from 2022 to 2024 was conducted. Pregnancy outcomes, renal function, and clinical features were compared between women who received and did not receive HCQ.

**Outcomes:** Proteinuria and renal function did not significantly differ between the two groups before or after pregnancy. But at the time of kidney biopsy, the HCQ (+) group had higher proteinuria (2.04 [1.26, 2.56] g/d vs. 0.80 [0.44, 1.11] g/d,  $P < .001$ ); at the start of HCQ therapy, the proteinuria level was also higher than at the start of pregnancy (1.87 [1.30, 2.59] g/d vs. 1.08 [0.75, 1.50] g/d,  $P = .001$ ). While there was no difference in preterm birth, birth weight, preeclampsia, or postpartum haemorrhage, the HCQ (+) group had a larger percentage of patients with a history of spontaneous abortion than the HCQ (-) group (48.0% vs. 20.6%,  $P = .010$ ). An indicator of obstetrical problems was the eGFR (regression coefficient, 0.981; 95%CI 0.964-0.998).

**Results:** HCQ provides kidney protection without worsening pregnancy outcomes, is safe in pregnant women with IgA nephropathy, and efficiently lowers proteinuria. It may also help women who have had previous spontaneous abortions.

**Keywords:** *Hydroxychloroquine, IgA Nephropathy, Proteinuria, Retrospective analysis, Spontaneous abortions.*



ABSTRACT NO: *ICCPPr-013*

**RP–HPLC ANALYTICAL METHOD DEVELOPMENT AND VALIDATION FOR  
DAPAGLIFLOZIN IN BULK AND PHARMACETICAL DOSAGE FORM.**

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**Abstract**

Dapagliflozin, a selective sodium–glucose co-transporter-2 (SGLT2) inhibitor, is extensively used in the management of type 2 diabetes mellitus. An accurate and validated analytical method is essential for its routine quantification in bulk and pharmaceutical formulations. The present work reports the development and validation of a simple, precise, and robust reverse-phase high-performance liquid chromatography (RP-HPLC) method for the estimation of Dapagliflozin. Chromatographic separation was achieved using a C18 column under optimized conditions with a mobile phase consisting of acetonitrile and phosphate buffer in isocratic mode, at a flow rate of 1.0 mL/min, and detection carried out at 230 nm. The method was validated according to ICH Q2(R1) guidelines and demonstrated excellent linearity over the tested concentration range with a correlation coefficient ( $r^2$ ) > 0.999. Accuracy was confirmed through recovery studies, while intra- and inter-day precision results indicated high reproducibility. The limits of detection (LOD) and quantification (LOQ) were within acceptable ranges, signifying the sensitivity of the method. The developed RP-HPLC method is simple, reliable, and suitable for routine quality control analysis of Dapagliflozin in bulk drug.

**Keywords:** Dapagliflozin, RP-HPLC, method development, validation.

ABSTRACT NO: *ICCP-SPS-038***Predicting Drug-Nutrient Interactions Using Machine Learning****J.Jona Sniffa, G.Rousso****Department Of Pharmaceutical chemistry and analysis****School Of Pharmaceutical Science, VISTAS**Email: [jonajolji@gmail.com](mailto:jonajolji@gmail.com)**ABSTRACT*****Aim***

This project aims to create machine learning models that predict how drugs and nutrients might interact with one another. The goal is to help make medicine safer and more effective by identifying these interactions before they cause problems.

**Methods**

Various methods were used to develop these prediction models. Some focused on chemical properties of drugs and nutrients, such as molecular fingerprints, using machine learning algorithms like XGBoost and Random Forest. Others created knowledge graphs to illustrate how drugs, nutrients, enzymes, and pathways connect, then applied embedding methods to discover new interactions. Some models employed deep learning techniques, such as graph neural networks and autoencoders, to capture complex patterns in the data. Methods like feature selection and interpretability tools, such as SHAP, made the models easier to understand.

**Results**

The models demonstrated good accuracy in predicting drug-nutrient interactions when tested on datasets that combined DrugBank and FooDB data. Tree-based models were quite accurate and simpler to interpret, while graph-based and deep learning models identified more complex interactions. The knowledge graph method also helped uncover potential new interactions through integrated data.

**Conclusion**

Machine learning offers a promising approach to predict drug-nutrient interactions. Combining different types of data enhances how well these models perform, which can help doctors and patients prevent harmful effects. Future research could involve real patient data and explore more types of interactions for improved results.

**Keywords**

Drug-nutrient interaction, machine learning, drug-food interaction, chemical features, knowledge graphs, deep learning, DrugBank, FooDB.

ABSTRACT NO: *ICCPR-014*

## **Unicentric Castleman's Disease Presenting as Cervical Lymphadenopathy: A Rare Case Report**

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### **Abstract**

**Background:** Castleman's disease, or Angio follicular lymph node hyperplasia, is a benign lymphoproliferative disorder of undetermined etiology that rarely occurs. Due to its appearance like more common conditions, like lymphoma or tuberculosis, diagnosis usually is difficult. Early diagnosis is significant because treatment and prognosis vary so much. Case presentation: A 32-year-old presented with a solitary, painless swelling over left neck that was of three-month duration. Clinical workup raised suspicion of lymphoma, and tuberculosis was left in the differential. Haematological investigations of a routine nature came back normal. Radiological workup indicated a solitary cervical lymph node that was enlarged with no systemic illness. Excisional biopsy was performed; histopathology showed features in Favor of Angio follicular lymph node hyperplasia, establishing unicentric Castleman's disease. Management and outcome: Excision of involved lymph node was surgically done. Post-operative period was normal, and there was no recurrence at follow-up. No systemic symptoms and no further lymphadenopathy developed.

**Conclusion:** Castleman's disease is a rare, significant, cause of cervical lymphadenopathy. The case is representative of the diagnostic challenge as it resembled lymphoma and tuberculosis. Histopathological examination is still the gold standard in diagnosis, and surgical excision provides good prognosis in unicentric disease. Awareness of this disease aids early diagnosis and proper management.

**Keywords:** Castleman's disease, angiofollicular lymph node hyperplasia, cervical lymphadenopathy, unicentric Castleman's disease, rare case report.

ABSTRACT NO: *ICCPR-015*

## **Pharmacovigilance of Psychotropic Medications: Patterns and Burden of Adverse Drug Reactions in Psychiatric Patients**

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### **Abstract**

#### **Background:**

Psychotropic medications are a cornerstone in psychiatry, but they frequently cause adverse drug reactions (ADRs) that can compromise adherence and clinical outcomes. Pharmacovigilance studies provide vital insights into their safety profiles.

#### **Objectives:**

To determine the spectrum, frequency, and clinical impact of ADRs among psychiatric patients.

#### **Methodology:**

A prospective observational study was carried out in a psychiatry department. Patients were followed during treatment, and ADRs were identified, classified by type (A–F), and linked to suspected drug classes.

#### **Results:**

Most ADRs were **predictable and dose-related (Type A, 72%)**, while chronic, time-dependent reactions (Type C) formed about one-fourth of the cases. Unpredictable reactions were infrequent. Antipsychotics were implicated in the vast majority, followed by antidepressants and mood stabilizers. Neurological disturbances such as tremors and rigidity predominated, alongside notable metabolic outcomes like weight gain and galactorrhea.

#### **Conclusion:**

The predominance of preventable ADRs emphasizes the importance of vigilant monitoring. Integrating pharmacovigilance into psychiatric care improves early recognition, timely intervention, and safer therapeutic outcomes.



ABSTRACT NO: ICCPPR-016

**Impact of Second-Generation Antipsychotics on Serum Total Cholesterol: Short-Term Follow-Up**

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**Abstract**

Second-generation antipsychotics (SGAs) are known to influence lipid metabolism, predisposing patients to dyslipidaemia. Early detection of changes in serum total cholesterol can help mitigate long-term cardiovascular risk. Total cholesterol was measured at baseline and after four weeks of therapy with Amisulpride, Quetiapine, or Lurasidone in 23 drug-naïve psychiatric patients. Mean changes were analysed using paired t-tests, with significance defined at  $p < 0.05$ . Quetiapine significantly elevated mean total cholesterol from  $152.66 \pm 53.23$  mg/dL to  $157.77 \pm 22.58$  mg/dL ( $p = 0.00019$ ). Amisulpride showed a statistically significant reduction from  $150 \pm 58.45$  mg/dL to  $147 \pm 15.46$  mg/dL ( $p = 0.0025$ ), whereas Lurasidone exhibited negligible change ( $136.44 \pm 20.57$  mg/dL to  $136.55 \pm 25.75$  mg/dL;  $p = 0.477$ ). These findings suggest a differential effect of SGAs on lipid homeostasis, with Quetiapine demonstrating the highest risk for early dyslipidaemia. Quetiapine is associated with early rises in total cholesterol, warranting baseline and follow-up lipid monitoring. Amisulpride may offer a modest cholesterol-lowering effect, whereas Lurasidone appears metabolically neutral, supporting its use in patients with pre-existing dyslipidaemia.

**Keywords**

Dyslipidemia; Lipid monitoring; Cardiometabolic risk



ABSTRACT NO: *ICCPR-017*

**The prevalence of CIPN and its influence on HRQOL among various cancer patients.**

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**Abstract**

**Background:** Cancer patients' Health-Related Quality of Life (HRQOL) could be substantially impaired by Chemotherapy-Induced Peripheral Neuropathy (CIPN). Hence, the present study is aimed to assess the prevalence of CIPN and its influence on HRQOL among various cancer patients.

**Materials and Methods:** The study was a prospective observational cross-sectional study conducted in the Department of Medical Oncology, Sri Ramachandra Institute of Higher Education and Research (DU) from Jan 2023 to July 2023. A total of 125 patients treated with various chemotherapeutic drugs were included as per inclusion and exclusion criteria. Patients were evaluated for CIPN using a validated Self-Administered Leeds Assessment of Neuropathic Symptoms and Signs (SLANSS) questionnaire and the health-related quality of life was evaluated by using the European Organization for Research and Treatment of Cancer Chemotherapy-Induced Peripheral Neuropathy (EORTC-CIPN20) questionnaire.

**Results:** The prevalence of chemotherapy-induced peripheral neuropathy was found to be 12%. Patients receiving chemotherapy experienced a significantly higher number of peripheral neuropathy-related complaints ( $p < 0.001$ ). Overall, the patients expressed that peripheral neuropathy had a detrimental impact on their quality of life, particularly with sensory and motor functions.

**Conclusion:** Chemotherapeutic drug has the potential to cause the adverse effect of peripheral neuropathy. Particularly, antimetabolites and platinum derivative combination had reported a higher incidence of peripheral neuropathy (94.7%). Consequently, it has a detrimental impact on the health-related quality of life among cancer patients.

**Keywords:** CIPN, Platinum, Taxane, Cisplatin, Paclitaxel, Vincristine.



ABSTRACT NO: *ICCP 2ND-SPS-039*

## THE DOUBLE-EDGED SWORD OF ANTIBIOTICS: OVERUSE AND UNDER-ACCESS IN INDIA

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### ABSTRACT

**Objective:** To examine the dual challenges posed by antibiotic overuse and inadequate access in India, and to highlight their combined impact on antimicrobial resistance (AMR) among rural and low-income populations.

**Methodology:** We performed a literature review of recent studies from India focusing on antibiotic prescribing practices, resistance patterns, and socio-economic and geographic determinants of access. Key studies include surveys of community-level AMR in both rural and urban settings, assessments of antibiotic misuse by informal providers, and environmental “One Health” studies of resistance in human, animal, and water sources.

**Results:** Findings reveal high rates of resistance in pathogens from rural communities—resistance to quinolones, cephalosporins, aminoglycosides, and even carbapenems—often exceeding 25-45% in some samples. Misuse is common: Antibiotics are over-prescribed, courses terminated early, self-medication practiced, and prescriptions often do not match local sensitivity patterns. Conversely, many rural and low-income populations suffer poor access to essential antibiotics, diagnostic services, and timely medical care, compounding mortality from otherwise treatable infections.

**Discussion:** The coexistence of antibiotic overuse/misuse and inadequate access creates a paradox: resistance advances where antibiotics are used improperly, but lack of access causes preventable deaths. National guidelines often derive from tertiary-care settings and may not align with local rural resistance profiles. There is a need for tailored stewardship, awareness campaigns, regulation of informal providers, and improved diagnostics in rural and marginalized settings.

**Conclusion:** Addressing the double-edged sword of antibiotics in India requires a dual strategy: reducing misuse and over prescription, and simultaneously ensuring affordable, equitable access to effective antibiotics and diagnostics. Only then can antibiotic efficacy be preserved and public health safeguarded.

**Keywords:** Antibiotic resistance; Overuse; Under-access; Rural health; India; Antimicrobial stewardship; Informal healthcare providers; One Health.



ABSTRACT NO: ICCPPR-020

## SCREENING OLFACTORY DYSFUNCTION IN HEALTHY VOLUNTEERS: A COMPARATIVE EVALUATION

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### Abstract

#### Introduction:

Olfactory dysfunction (OD) is a significant yet often under-recognized condition that adversely affects nutrition, social interaction, and overall quality of life. Importantly, it is an early marker of neurodegenerative diseases such as Parkinson's and Alzheimer's. Standard olfactory assessment tools like Sniffin' Sticks are costly and not culturally adapted to the Indian population. This study compares the Self Mini Olfactory Questionnaire (MOQ) with the South Indian Smell Kit (SISK), a locally developed, affordable, and culturally relevant screening tool.

#### Materials and Methods:

A cross-sectional study was conducted on 100 healthy volunteers aged 18–80 years at Sri Ramachandra Medical Hospital, Chennai. Olfactory screening was performed using the MOQ (five-item self-assessment, maximum score 5) and SISK (10 essential oil-based odor pens, divided into identification, discrimination, and detection tasks; maximum score 30).

#### Results and Discussion:

While 99.4% of participants reported normal smell function on the MOQ, only 24% achieved full scores on the SISK, revealing a discrepancy between self-perception and objective testing. Most participants (73%) were aged 20–40 years, and 62% were male. SISK detection scores were high (92% scored full marks), but identification and discrimination were lower, highlighting difficulty in recognizing and categorizing odors. These findings support existing evidence that self-reported smell often overestimates true olfactory capacity. The SISK demonstrated greater reliability and cultural suitability compared to self-assessment, underscoring the importance of validated, accessible tools in olfactory screening.

#### Conclusion:

The South Indian Smell Kit (SISK) is a practical, cost-effective, and culturally adapted tool for detecting olfactory dysfunction. This study emphasizes the gap between subjective reporting and objective testing and highlights the need for reliable diagnostic methods in community and clinical practice. Future research should focus on validating SISK in diverse populations and exploring its role in early identification of neurodegenerative disorders.

**Keywords:** Olfactory dysfunction, Smell screening, Self Mini Olfactory Questionnaire, South Indian Smell Kit, Neurodegenerative disease



ABSTRACT NO: *ICCP-021*

## **Bioprinting of Personalized Human Tissues for Drug Testing: A Novel Approach to Revolutionize Pharmaceutical Safety and Efficacy**

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### **Abstract**

#### **Introduction**

This study introduces a groundbreaking method for drug testing using personalized, multi-organ 3D bioprinted models. Traditional drug testing is often inaccurate because it fails to account for genetic diversity and complex multi-organ interactions. Our approach uses a patient's own cells (iPSCs) to create genetically tailored, interconnected tissues -like liver, heart, and kidney-on a single chip. By testing drugs on these customized models, we can more accurately predict their safety and effectiveness, paving the way for safer, more effective therapies and advancing the field of personalized medicine.

#### **Methodology:**

**Patient-Specific iPSCs:** Somatic cells (e.g., fibroblasts or blood cells) will be collected from patients and reprogrammed into iPSCs, ensuring that the resulting cell lines reflect specific genetic traits and variations relevant to drug response.

**Differentiation into Target Organoids:** The iPSCs will be differentiated into specific organoid models (e.g., hepatocytes for the liver, cardiomyocytes for the heart) using directed differentiation protocols.

**3D Bioprinting:** These differentiated cells will be used to create bioinks, which will then be bioprinted into 3D tissue structures. Multiple organ models will be printed separately and integrated into a multi-organ-on-a-chip system to simulate inter-organ interactions.

#### **Conclusion**

This innovative platform represents a major step forward in drug development. By creating genetically tailored, interconnected models, our research offers a superior alternative to traditional testing. It will

ABSTRACT NO: *ICCPR-SPS-042***PERSONALISED TREATMENT FOR CANCER BY PHARMACOGENOMICS: a comprehensive review****Tomsy Maryann<sup>1</sup> Dr.T.S.Shanmugarajan<sup>2</sup>****Department of pharmacy practice, School of Pharmaceutical Sciences, Vels Institute of Science Technology and Advanced Studies (VISTAS), Pallavaram, Chennai-600117**

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**Abstract****Background:**

Considerable interindividual variability exists in both the efficacy and toxicity of anticancer therapies. While multiple factors contribute to this variability, genetic differences play a pivotal role by affecting drug pharmacodynamics and pharmacokinetics. For example, Tamoxifen, a selective estrogen receptor modulator used in breast cancer treatment, requires activation by the enzyme CYP2D6. Genetic polymorphisms in CYP2D6 can lead to reduced enzyme activity, resulting in lower drug efficacy or increased toxicity.

**Objective:**

To review the role of pharmacogenomics in developing personalized anticancer therapies aimed at improving efficacy and minimizing adverse drug reactions.

**Methods and Results:**

An extensive literature review was conducted, focusing on pharmacogenomics applications in cancer therapy. Studying individual genotypes enables targeted therapies for those most likely to benefit, improving risk evaluation, toxicity prediction, and prognosis assessment. Because chemotherapy response is likely multigenic, the genome-wide approach better identifies subtle gene variations conferring drug sensitivity and can reveal a single polymorphism with a large effect, supporting precise therapy selection.

**Conclusion:**

Pharmacogenomics holds the potential to revolutionize cancer treatment by offering personalized therapeutic strategies that increase drug efficacy and reduce toxicity. Implementing genome-wide analysis supports the advancement of precision oncology and patient-centered care.

**Keywords:** Pharmacogenomics, Personalized Medicine, Cancer Therapy, Biomarkers, Targeted Therapy

ABSTRACT NO: *ICCP 2ND*-SPS-043

## **Antisense Technology and Pharmacotherapeutics: A Mechanism-Based Exploration of Targeted Gene Silencing in Drug Development**

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### **Abstract**

#### **Background:**

Antisense technology, which targets mRNA transcripts to precisely silence genes, is a quickly developing area of molecular pharmacology. This novel method has important ramifications for the treatment of viral infections, cancers, neurodegenerative diseases, and genetic disorders. Its pharmacotherapeutic development is still shaped by issues like immune activation, delivery barriers, and off-target effects, despite its potential.

#### **Objective:**

In order to assess the pharmacological action, clinical uses, and therapeutic limitations of antisense oligonucleotide (ASO) therapies in contemporary drug development and personalised medicine, this abstract attempts to present a mechanistic and case-based overview of these treatments.

#### **Results:**

Nusinersen highlighted intrathecal delivery as a pharmacokinetic challenge by demonstrating high target specificity and a notable improvement in motor function in paediatric patients. Eteplirsen generated controversy regarding surrogate endpoint reliance despite demonstrating a modest dystrophin restoration. Although Inotersen demonstrated efficient TTR suppression, the risk of thrombocytopenia and glomerulonephritis necessitated close monitoring. While delivery systems continued to be a key focus for maximising therapeutic outcomes, chemical modifications (such as phosphorothioate backbones and 2'-O-methoxyethyl modifications) improved stability and affinity across all agents.

#### **Conclusion:**

Antisense technology has the potential to revolutionise pharmacotherapeutics, particularly for diseases for which there are no effective treatments. To advance this modality, a deeper comprehension of tissue targeting, off-target mitigation, and ASO design is necessary. Pharmacists and physicians need to be aware of how gene-targeted medications are developing in order to monitor side effects, guide customised treatment and support efforts in precision medicine.

**Keywords:** pharmacogenomics, targeted therapy, antisense oligonucleotides, gene silencing, RNA therapeutics .



ABSTRACT NO: *ICCP-SPS-044*

## **ELI-002 7P: A Peptide-Based Immunotherapy Targeting Mutant KRAS in Solid Tumors**

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### **Abstract**

#### **Background:**

Mutations in the KRAS oncogene are among the most common drivers of solid tumors, especially pancreatic and colorectal cancers, and are strongly associated with poor prognosis and therapeutic resistance. ELI-002 7P is a novel peptide-based immunotherapy designed to activate T-cell responses against multiple KRAS mutations, addressing a critical unmet clinical need.

#### **Objectives:**

- To assess the safety and tolerability of ELI-002 7P in patients with high-risk, post-surgical solid tumors.
- To evaluate the induction of KRAS mutation-specific immune responses.
- To examine preliminary signs of disease control and extended disease-free survival.

#### **Methods and Results:**

A Phase 1a clinical trial enrolled patients with KRAS-mutant solid tumors. Patients were treated with ELI-002 7P, and safety, immunogenicity, and clinical outcomes were systematically monitored. Initial findings indicate that ELI-002 7P is safe and well-tolerated. Patients demonstrated robust KRAS mutation-specific T-cell responses, and early evidence suggests encouraging disease control with extended disease-free survival in some cases (As per literature data).

#### **Conclusion:**

ELI-002 7P leverages the immune system to provide targeted, durable anti-tumor activity and shows potential to reduce relapse in KRAS-driven cancers. Ongoing studies aim to optimize dosing, expand coverage across diverse KRAS mutations, and assess long-term clinical outcomes. If validated, ELI-002 7P may represent a significant step forward in personalized immunotherapy for KRAS-associated malignancies.

**Keywords:** ELI-002 7P, KRAS mutations, Solid tumors, Peptide immunotherapy, Cancer vaccine



ABSTRACT NO: ICCPPR-022

## Evaluation of Platelet-Leucocyte Ratio and Neutrophil Lymphocyte Ratio in Patients Taking Aspirin During Pregnancy

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### **Aim & Objective:**

The primary aim of this research was to examine the effects of low-dose Aspirin on inflammatory indicators namely, the neutrophil-lymphocyte ratio (NLR), and platelet-lymphocyte ratio (PLR) in pregnant women. Additionally, the study sought to determine whether these markers could serve as potential indicators for cardiovascular risks and pregnancy-related complications.

### **Methodology:**

A prospective observational study was carried out over five months in the Department of Obstetrics and Gynecology at Sri Ramachandra Hospital and Medical Centre, Chennai. Forty pregnant women aged 18–45 years with risk factors for complications such as preeclampsia, hypertension, or diabetes were enrolled. Participants were allocated into two groups: Group A (n=20) received low-dose aspirin (81 mg daily), whereas Group B (n=20) did not receive aspirin. Blood samples were obtained at the 5<sup>th</sup> and 24<sup>th</sup> weeks of gestation to assess platelet-to-lymphocyte ratio (PLR) and neutrophil-to-lymphocyte ratio (NLR). These biomarkers were analyzed for their association with pregnancy complications, including preeclampsia, gestational hypertension, cardiovascular risks and pregnancy-related complications.

### **Results:**

Among the study population, gastrointestinal symptoms ( $p=0.001$ ), allergic reactions ( $p=0.0001$ ), and fatigue ( $p=0.005$ ) were significantly more frequent in the aspirin group compared to controls, suggesting a clear association between aspirin use and these adverse effects. However, no statistically significant differences were observed in edema, headache, or visual disturbances, indicating that aspirin did not exacerbate these common pregnancy-related symptoms. Analysis of inflammatory biomarkers showed that PLR values were consistently lower in the aspirin group at both 5 and 24 weeks, with the difference at 24 weeks approaching significance ( $p=0.111$ ), indicating a potential anti-inflammatory effect. Overall, aspirin was generally well tolerated with predictable and clinically manageable side effects, while showing favourable trends in modulating PLR and NLR, supporting their potential role as biomarkers of systemic inflammation in pregnancy complications, including preeclampsia, gestational hypertension and cardiovascular risks and warranting further evaluation in larger studies.

### **Keywords:**

Low-dose aspirin, Pregnancy, Pre-eclampsia, Platelet-lymphocyte ratio, Neutrophil-lymphocyte ratio, Pregnancy complications.



ABSTRACT NO: ICCPPR-SPS-045

## The Renaissance of Phage Therapy: Reviving Viruses as Precision Tools Against Antimicrobial Resistance

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### Abstract

#### Introduction:

Antibiotic resistance is one of the most pressing global health challenges of the 21st century. The alarming rise of antimicrobial resistance (AMR) has rendered many conventional antibiotics ineffective, creating an urgent need for alternative therapeutic strategies. Bacteriophages, viruses that specifically target and lyse bacteria, are being re-explored as precision antimicrobials. They offer host specificity, reduce collateral damage to commensal microbiota, and adaptability against evolving defences.

#### Methods:

This review synthesizes results from bacteriophage analysis, clinical trials, and experimental investigations. Delivery methods, phage–antibiotic synergy, and naturally occurring and manufactured phages are highlighted. The use of synthetic biology techniques to enhance phage efficacy and the application of bioinformatics tools for phage–host prediction were investigated. Examples of effective compassionate-use therapies for infections resistant to multiple drugs demonstrate the advancements in translation.

#### Conclusion:

Phage therapy represents a promising adjunct or alternative to antibiotics in the fight against AMR. While regulatory hurdles, standardization issues, and phage resistance remain challenges, recent advancements in genomics, synthetic biology, and personalized medicine are driving a modern revival. With robust research and carefully designed clinical trials, phages may become vital precision tools in reshaping infectious disease management in the post-antibiotic era.

**Keywords:** *Phage therapy, antimicrobial resistance, bacteriophages, precision medicine, synthetic biology*



ABSTRACT NO:ICCP 2ND-SPS-046

**Uncovering Epigenetic Modulation of Antibiotic Resistance in Escherichia coli: A Novel Perspective on Non-Genetic Adaptation**

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**Abstract**

**Introduction:**

While genetic mutations and horizontal gene transfer are well-established drivers of antibiotic resistance, the potential role of epigenetic mechanisms in modulating bacterial response to antibiotics remains underexplored. This study investigates how DNA methylation and small regulatory RNAs (sRNAs) contribute to non-genetic, reversible resistance phenotypes in *Escherichia coli* under antibiotic stress.

**Methods:**

*E. coli* K-12 strains were exposed to sub-inhibitory concentrations of ciprofloxacin and tetracycline across defined intervals. Whole-genome bisulfite sequencing was performed to identify DNA methylation changes, while RNA-seq revealed differentially expressed sRNAs. Candidate methylation sites and sRNAs were modulated using epigenetic editing tools (dCas9-DNMT and CRISPRi). Antibiotic susceptibility was assessed through minimum inhibitory concentration (MIC) assays and time-kill curves. Additionally, biofilm formation and efflux activity were measured to evaluate phenotypic outcomes.

**Conclusion:**

Our findings reveal that antibiotic exposure induces distinct epigenetic signatures in *E. coli*, correlating with increased expression of efflux pump genes and biofilm-associated pathways. Manipulation of specific methylation sites and sRNAs reversed resistance phenotypes without altering the genome, confirming the functional role of epigenetic regulation. This study provides the first direct evidence of epigenetic modulation as a driver of adaptive resistance in *E. coli* and suggests potential targets for epigenetic-based antimicrobial strategies

**Keywords:** *Epigenetic regulation, Antibiotic resistance, Escherichia coli, DNA methylation, Small regulatory RNAs, Efflux pumps, Biofilm formation*



ABSTRACT NO: *ICCPR-SPS-047*

**Bell's Palsy: Bridging Etiology, Latest Lines of therapy, and Long-term Sequelae – A Systematic Review of Peripheral Facial Paralysis**

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**Abstract**

**Background:**

Bell's palsy is the most common acute peripheral facial nerve paralysis, characterized by sudden unilateral facial weakness without a clear underlying cause. Although its exact etiology remains uncertain, viral infections, vascular ischemia, and autoimmune mechanisms have been implicated. Early recognition and timely management are critical, as most patients recover completely, while a subset may develop long-term sequelae.

**Methodology:**

This review integrates data from randomized controlled trials, observational studies, and clinical guidelines to compare current management strategies for Bell's palsy. Emphasis was placed on evaluating the efficacy of corticosteroids, antivirals, and physiotherapy in terms of recovery rates and prevention of long-term complications.

**Conclusion:**

Bell's palsy remains a clinical diagnosis of exclusion with a generally favorable prognosis. Corticosteroids are established as the first-line therapy, while the role of antivirals remains controversial. Adjunctive physiotherapy and emerging treatment modalities may further improve outcomes. Future research should aim at clarifying etiological mechanisms and optimizing individualized treatment strategies.

**Keywords:** Bell's palsy; Facial nerve paralysis; Corticosteroids; Antivirals; Rehabilitation; Prognosis.



ABSTRACT NO: *ICCPR-SPS-048*

**Antioxidant and therapeutic potential of *Capparis grandis* and  
*Lepidagathis pungens* in the management of Diabetes mellitus**

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**Abstract**

Diabetes mellitus is associated with oxidative stress, contributing to complications such as cardiovascular and renal diseases. This study investigates the antioxidant properties of *Capparis grandis* and *Lepidagathis pungens*, plants traditionally used in medicinal systems. Both plants demonstrated significant radical scavenging abilities in superoxide, hydroxyl, and lipid peroxidation assays. The results suggest that the antioxidant activities of these plants could help mitigate oxidative damage in diabetic patients. The presence of phenolic compounds, flavonoids, and carotenoids highlight their potential as natural antioxidants. Further research is needed to isolate active compounds and explore their clinical efficacy in diabetes management.



ABSTRACT NO: *ICCPPr-SPS-049*

## ANTIMICROBIAL RESISTANCE: THE NEXT PROBABLE PANDEMIC

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### **Abstract**

We all know that antibiotics are used for various medical treatments including organ transplant, cancer treatment because they are dependent on active antibiotics like penicillin, Amoxicillin, tetracycline. The global health community is slowly recognising AMR. AMR appears when bacteria, virus, fungi no longer respond to medicine and acquiring the capacity to be resistant to therapy. In 2014 WHO gave the report on Nepal. It is about the antibiotics and bacterial pathogens, for example 64% of isolated E.coli were resistance to fluoroquinolones, 38% were resistance to 3rd generation cephalosporins. The key reasons behind AMR are the inappropriate prescribing, insufficient diagnosis that accelerates the resistance. For example in hospital half of the admitted patients elicit no response to administered antibiotics that indicates the inappropriates. We have the tools to recognise the antimicrobial resistance like bioinformatics, but we need to improve the education and knowledge about antibiotics and treatment for infections. ASP programme was started because of high use of antibiotics due to poor understanding of difference between bacterial and viral infection. WHO conducted the world antibiotic awareness week in this programme they create the awareness to encourage the proper usage and policy response. Many infections are curable with antibiotic, for example Amoxicillin for strep throat, cold. For medical students and doctors, preserving the effectiveness of antibiotics is central to the health of the future generations.

**Key words:** Antimicrobial resistance (AMR), Nepal, Antibiotics.



ABSTRACT NO: *ICCP-SPS-050*

**Nanotechnology-based Nutraceuticals: Innovations in Drug and Nutrition Delivery**

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**Abstract**

**Introduction:**

Curcumin, the active component of turmeric, has antioxidant and anti-inflammatory properties. Though it possesses potent therapeutic potential, its medicinal application is limited due to its poor solubility, instability, and poor absorption within the body. Nanotechnology provides an opportunity to bypass such issues, and one of the most potential delivery systems is nanoemulsions.

**Methodology:**

A nanoemulsion of curcumin was created with oil, surfactant, and co-surfactant and then processed to stable powder by spray drying with lactose. The product was characterized for particle size, stability, and encapsulation efficiency. Dissolution tests revealed significantly faster release of curcumin than with the crystalline type. Additional animal experiments verified increased 5.5-fold bioavailability (blood levels of curcumin) compared with the traditional form.

**Conclusion:**

This research demonstrates that nanoemulsion + spray drying has the potential to enhance significantly the absorption, stability, and pharmacological activity of curcumin. Such nanotechnology-based techniques could make nutraceuticals such as curcumin effective and useful clinically.

**Keywords:** *Curcumin; nanoemulsion; spray drying; bioavailability; nutraceuticals; nanotechnology; drug delivery.*



ABSTRACT NO:ICCP-SPS-051

## **CXCL12 Neutralizing Antibody Promotes Hair Growth in Androgenic Alopecia and Alopecia Areata**

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### Abstract

The expression and function of C-X-C Motif Chemokine Ligand 12 (CXCL12) throughout the hair cycle progression were previously examined by us. In stromal cells like dermal fibroblasts (DFs), CXCL12 was abundantly expressed, and inhibiting CXCL12 promoted hair development. Therefore, we looked into the underlying molecular mechanism for treating alopecia areata (AA) and androgenic alopecia (AGA) and whether a CXCL12 neutralizing antibody ( $\alpha$ CXCL12) is effective for both conditions. CXCL12 is substantially expressed in DFs in the AGA model. In AGA mice,  $\alpha$ CXCL12 subcutaneous injection markedly increased hair growth, and in hair organ culture,  $\alpha$ CXCL12 therapy reduced androgen-induced hair damage. Through the androgen receptor (AR), androgens enhanced the release of CXCL12 from DFs. Hair loss in AGA was caused by the enhanced expression of the AR and C-X-C Motif Chemokine Receptor 4 (CXCR4) in dermal papilla cells (DPCs) by secreted CXCL12 from DFs. Similarly, AA mice have higher expression levels of CXCL12, but  $\alpha$ CXCL12 injections prevented hair loss and decreased the quantity of CD8<sup>+</sup>, MHC-I<sup>+</sup>, and MHC-II<sup>+</sup> cells in the skin. Furthermore,  $\alpha$ CXCL12 injection decreased the quantity of CD8<sup>+</sup> cells and stopped the beginning of AA. Through the signal transducer and activator of transcription 3 (STAT3) pathway, interferon- $\gamma$  (IFN $\gamma$ ) treatment enhanced the production of CXCL12 from DFs, while  $\alpha$ CXCL12 therapy shielded the hair follicle from IFN $\gamma$  in hair organ culture. All of these findings point to the involvement of CXCL12 in the development of AGA and AA, and the potential of CXCL12 antibody therapy in the treatment of hair loss.

### Conclusion:

Our findings demonstrate that CXCL12 plays a central role in the pathogenesis of both androgenic alopecia and alopecia areata by mediating androgen- and immune-related pathways through dermal fibroblasts. Neutralization of CXCL12 with  $\alpha$ CXCL12 not only restores hair growth in AGA by suppressing AR–CXCL12–CXCR4 signaling but also protects against immune-mediated follicular damage in AA by reducing inflammatory cell infiltration and IFN $\gamma$ -induced STAT3 activation. These results highlight CXCL12 as a critical therapeutic target and suggest that  $\alpha$ CXCL12 is a promising candidate for the development of novel treatments for diverse forms of hair loss. **Keywords:** Dermal fibroblasts, Neutralizing Antibody, Androgenic Alopecia, Alopecia Areata, and CXCL12.

ABSTRACT NO: *ICCPR-SPS-052*

## **Pharmacist-Led Medication Reviews and Deprescribing: Strategies to Tackle Polypharmacy in Older Adults**

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### **Abstract**

Polypharmacy remains a major problem among older adults, and has become a global risk factor for geriatric patients. Polypharmacy refers to the use of five or more medications at the same time, and although it may be necessary in the elderly population due to multiple comorbidities and age related pathological changes, inappropriate polypharmacy can result in an increased risk of adverse effects, drug interactions and medication non-adherence. Especially in geriatric patients, it can lead to cognitive decline, hospitalizations, and increased healthcare expenditures. Pharmacist-led interventions such as medication reviews and deprescribing are very useful in detecting various drug related problems that may occur due to inappropriate polypharmacy. It also reduces the possible medication burden. The aim of this review is to provide a current update on the benefits, and barriers associated with pharmacist-led medication reviews and deprescribing, and to highlight the clinical impact of such strategies in geriatric patients. A comprehensive literature search was conducted across specific databases such as PubMed, Science Direct, and Google Scholar for studies published in the last seven years, from 2018 to 2025. Pharmacist led medication reviews and deprescribing has shown to significantly improve geriatric health by resolving drug related issues and reducing patient exposure to unnecessary medications. Furthermore, deprescribing not only minimizes harm but also allows for shared decision making between patients, physicians and clinical pharmacists. Implementation of deprescribing could be limited due to different barriers like prescriber resistance, and lack of particular guidelines, but the growing evidence suggests this intervention to be promising.

**Keywords:** polypharmacy, geriatric, pharmacist-led medication review, deprescribing



ABSTRACT NO:ICCPPr-023

## Differential Effect of Second-Generation Antipsychotics on HDL-Cholesterol Levels

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### Abstract

High-density lipoprotein cholesterol (HDL-C) is a protective factor against atherosclerotic cardiovascular disease. Some second-generation antipsychotics (SGAs) have been associated with unfavourable shifts in HDL-C, necessitating early monitoring. HDL-C levels were measured in patients initiated on Amisulpride, Quetiapine, or Lurasidone. Baseline and follow-up mean values were compared using paired t-tests, with  $p < 0.05$  considered statistically significant. Amisulpride demonstrated a substantial increase in HDL-C from  $48 \pm 3.8$  mg/dL to  $50.6 \pm 3.78$  mg/dL ( $p = 0.0004$ ), suggesting a potentially favourable cardiometabolic profile. Conversely, Quetiapine caused a marked reduction from  $47 \pm 8.97$  mg/dL to  $41.66 \pm 8.33$  mg/dL ( $p = 0.004$ ), indicating a reduction in atherogenic risk. Lurasidone showed negligible change ( $48.55 \pm 6.22$  mg/dL to  $48.11 \pm 7.11$  mg/dL;  $p = 0.314$ ), consistent with metabolic neutrality. HDL-C changes vary significantly across SGAs. Amisulpride may confer a modest cardioprotective effect, whereas Quetiapine requires closer lipid surveillance. Lurasidone remains a preferable choice for patients where preservation of lipid profile is crucial.

**Keywords** Antipsychotics; Cardio protection; Metabolic monitoring



ABSTRACT NO:ICCP-024

## **System Organ Classification of ADRs in Psychiatry: Neurological, Metabolic, and Behavioral Outcomes**

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### **Abstract**

#### **Background:**

Psychotropic drug-induced ADRs affect multiple organ systems, and system organ classification provides valuable insights into which body systems are most vulnerable.

#### **Objectives:**

To categorize ADRs based on system organ involvement and analyze their relative frequencies.

#### **Methodology:**

ADRs were grouped into neurological, metabolic/endocrine, gastrointestinal, reproductive, psychiatric/behavioral, hematological, and miscellaneous systems. Frequencies and patterns were assessed.

#### **Results:**

**Neurological ADRs dominated the clinical profile**, with tremors, rigidity, and akathisia being most frequently reported. Metabolic disturbances formed the second-largest group, largely due to weight gain and endocrine alterations. Gastrointestinal symptoms such as constipation and nausea appeared regularly but were less common. Behavioral and reproductive ADRs were observed occasionally, while hematological effects were rare. This classification highlighted the central nervous system and metabolism as the two primary domains most affected by psychotropic medications.

#### **Conclusion:**

Neurological and metabolic systems remain the most vulnerable to psychotropic-induced ADRs. Routine monitoring focused on these domains can significantly improve the safety of psychiatric pharmacotherapy.



ABSTRACT NO:ICCPPr-SPS-053

**VOSTALLY : HYPERTENSION AND CARDIOVASCULAR RISK REDUCTION TREATMENT**SONAL SARATH BABU PHARM . D 3<sup>RD</sup> YEAR , GUIDE : DR . MAHESHWARI

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**Email:** [sonalsarath26@gmail.com](mailto:sonalsarath26@gmail.com)**Abstract:**

Vostally (Ramipril) is an angiotensin-converting enzyme (ACE) inhibitor widely used in the management of hypertension, heart failure, and for cardiovascular risk reduction in high-risk patients. It acts by inhibiting the conversion of angiotensin I to angiotensin II, a potent vasoconstrictor, leading to vasodilation, decreased blood pressure, and reduced cardiac workload. Additionally, ramipril lowers aldosterone secretion, reducing sodium and water retention, thereby contributing to its antihypertensive and cardioprotective effects.

Vostally is indicated for the treatment of essential hypertension, management of heart failure post-myocardial infarction, and reduction of the risk of stroke, myocardial infarction, and cardiovascular mortality in patients with established cardiovascular disease or diabetes with additional risk factors. The drug is administered orally, usually as a once-daily dose, and undergoes hepatic conversion to its active metabolite, ramiprilat.

Regular monitoring of renal function and serum electrolytes is essential during therapy.

Vostally's proven efficacy in reducing blood pressure and preventing major Its use is supported by major clinical guidelines for the treatment of hypertension and heart failure.

**Keywords:** Vostally, Ramipril, ACE inhibitor, Hypertension, Heart failure, Cardiovascular risk, Vasodilation, Aldosterone, Ramiprilat.



ABSTRACT NO:ICCPR-SPS-054

**Ferroptosis in Diabetes – The Forgotten Cell Death Pathway -A comprehensive review****R.Adhvaith<sup>1</sup> Dr.Pallavi Singh<sup>2</sup> Dr.K.Karthickeyan<sup>3</sup>****Department Of Pharmacy Practice, School of Pharmaceutical Science,****Vels institute of Science Technology And Advance Studies (VISTAS)****Pallavaram ,Chennai—600117****Email: adhvaithramanan48@gmail.com****Background**

Diabetes mellitus is a chronic condition of metabolic nature which leads to persistent hyperglycemia due to inadequate insulin response and secretion. Ferroptosis is a newly emerged form of programmed cell death due to excessive production of reactive oxygen species and imbalance of iron homeostasis. Growing evidence suggests that ferroptosis contributes significantly in the development of diabetes and diabetes associated complications. This process contributes to the aggravation of diabetic complications such as diabetic kidney disease, diabetic retinopathy, diabetic neuropathy, and diabetic heart disease by damaging endothelial, nerve, and kidney cells. Seeking the relationship between diabetes and ferroptosis may help unlock the mechanisms of the disease and provide insights for possible therapeutic strategies. Therapy for ferroptosis using antioxidants, iron chelators, and Glutathione peroxidase-4 (GPX4) activators have shown to support cell integrity and reduce complications of diabetes in the long-term.

**Methodology**

Ferroptosis is a form of cell death by oxidative stress and iron overload, in diabetes it contributes to damage to the pancreas, kidney, retina, and blood vessels. Medicinal ferroptosis treatment with Ferrostatin-1, and deferoxamine have shown remarkable improvement however, in the balance of oxidative stress especially with hyperglycemic state, improved secretion of insulin, and decreased damage to the organs. These compounds help restore the balance of the antioxidants GPX4 and glutathione, as well as cutting down on iron overload and the accumulation of toxic lipid peroxides.

**Conclusion**

To summarize, ferroptosis plays an important role in the diabetes mellitus disease continuum and the associated complications. Disturbances in oxidative stress and iron homeostasis render beta, renal, and retinal cells exceedingly vulnerable. There are therapeutic strategies to inhibit ferroptosis with Ferrostatin-1, deferoxamine, and some antioxidant compounds that have shown great promise in preclinical models. Although the results are promising, further research is needed to assess the impact and effectiveness of targeting ferroptosis with diabetes treatment in clinical settings.

**Keywords:** Diabetes, Ferroptosis, Iron-dependent, Insulin resistance, ROS.



ABSTRACT NO:ICCP 2ND-SPS-055

## **Cell-Penetrating Peptides as Novel Carriers for Targeted Drug Delivery Across the Blood-Brain Barrier in Alzheimer's Disease Therapy**

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### **Background**

Alzheimer's complaint(announcement) is a major neurodegenerative complaint marked by  $\beta$ -amyloid accumulation, tau hyperphosphorylation, and progressive cognitive decline. Conventional medicines have limited efficacy due to poor blood – brain hedge (BBB) penetration. Cell- piercing peptides (CPPs) offer a new strategy for transporting remedial motes across the BBB to target pathological mechanisms in announcement.

### **Methodology**

A literature- grounded evaluation was conducted on experimental studies where CPPs were conjugated with remedial agents, including  $\beta$ - amyloid aggregation impediments, tau- targeting peptides, and antioxidant motes. The effectiveness of BBB penetration, neuronal uptake, and neuroprotective issues in cellular and beast announcement models were anatomized.

### **Results**

CPP- conjugated motes demonstrated enhanced cellular uptake and effective delivery across the BBB. In announcement models, they reduced amyloid shrine conformation, dropped tau phosphorylation, and bettered neuronal survival. Some studies reported bettered cognitive performance in treated creatures compared to controls. still, limitations included variable stability of CPPs in vivo and pitfalls of non-specific uptake.

### **Conclusion**

CPPs represent a promising pharmacological tool for developing complaint- modifying curatives in Alzheimer's complaint. By enabling targeted intracellular delivery of remedial agents, CPPs may overcome the limitations of current treatments. farther optimization of stability, particularity, and clinical safety is essential for restatement into mortal curatives.

### **Keywords**

Alzheimer's complaint; Neurodegeneration; Cell- piercing peptides; Blood – brain hedge; medicine delivery; Amyloid; Tau protein



ABSTRACT NO:ICCPPr-SPS-056

**Cyclobenzaprine Sublingual (Tonmya): A New Era in Fibromyalgia Therapy”**

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**Abstract**

Fibromyalgia is a chronic pain disorder characterized by widespread pain, non-restorative sleep, and fatigue. Current therapies offer limited relief, highlighting the need for new options. Tonmya (TNX-102 SL), a sublingual bedtime formulation of cyclobenzaprine hydrochloride, was developed to improve absorption, reduce metabolite exposure, and target both pain and sleep disturbance.

More than 1,000 adults with fibromyalgia were recruited for two Phase III trials (RELIEF and RESILIENT) that were randomized, double-blind, and placebo-controlled. Patients received Tonmya 2.8 mg nightly for two weeks, followed by 5.6 mg nightly, or placebo for 14 weeks. The primary outcome was change in daily pain intensity at Week 14, with secondary variables including sleep quality, exhaustion, function, and patient global impression. Tonmya consistently improved sleep disturbance, tiredness, and functional outcomes while also considerably reducing pain when compared to a placebo. There were no significant safety issues identified, and the adverse effects, which included taste changes, sleepiness, and oral hypoesthesia, were mostly minor and localized. The first non-opioid, sublingual treatment for fibromyalgia to receive FDA approval was Tonmya in August 2025, offering a fresh approach to all-encompassing symptom management.

**Keywords:** Fibromyalgia, Tonmya, TNX-102 SL, cyclobenzaprine, sublingual tablet, non-opioid, chronic pain, sleep disturbance, fatigue.



ABSTRACT NO:ICCP-SPS-057

**Naegleria fowleri -Brain eating ameoba****Aflaha ashraf Dr. Pallavi Singh<sup>2</sup> Dr.Karthickeyan.K<sup>3</sup>****Department of Pharmacy Practice, School of Pharmaceutical Sciences, Vels Institute of Science and Technology and Advanced Studies(VISTAS), Pallavram, Chennai 600117****Email: flflaha@gmail.com****Abstract**

*Naegleria fowleri* is a thermophilic, free-living amoeba that causes primary amoebic meningoencephalitis (PAM), an acute and usually fatal infection of the central nervous system. Infection typically follows forceful nasal exposure to warm freshwater, allowing trophozoites to migrate along the olfactory nerve and trigger a rapidly progressive meningoencephalitis. Although amphotericin B and miltefosine remain the mainstays of therapy, mortality still exceeds 95 %, and early clinical suspicion with rapid wet-mount or PCR confirmation is critical for survival. During 2024–2025, research highlighted new therapeutic leads—such as repurposed drugs and nanoparticle-based agents—while climate-linked warming of freshwater bodies has broadened the organism’s geographic reach. Kerala, India, reported multiple cases and small clusters in this period, including a 5-year-old girl from Malappuram and a community outbreak in Athiyannur, Thiruvananthapuram, where risky practices (forceful nasal inhalation of pond water) contributed to exposure. These events prompted urgent public-health action: pond closures, mandatory chlorination of public pools, and statewide clinical guidelines for early diagnosis and management. The Kerala experience underscores that behavioural factors, environmental change, and delayed recognition remain pivotal drivers of PAM mortality, and illustrates how integrated clinical vigilance and public-health measures can help mitigate the threat posed by *N. fowleri*.



ABSTRACT NO:ICCP 2ND-SPS-058

**Development of a Novel Chromatographic Method for Analysis of Drugs and Formulations****Zain Ul Bashar Khan<sup>1</sup>, Dr. K. Manjuladevi<sup>2</sup>****<sup>1</sup>Ph.D. Scholar, Department of Pharmacology, School of Pharmaceutical Sciences, VISTAS, Chennai – 600117, India****<sup>2</sup>Associate Professor, Department of Pharmacology, School of Pharmaceutical Sciences, VISTAS, Chennai – 600117, India****Email: Zainulbasharkhan97@gmail.com****Abstract**

The pharmaceutical industry requires robust, validated analytical methods for accurate drug quantification and quality control. This study aimed to develop and validate novel stability-indicating chromatographic methods for three therapeutically diverse drugs: Benzgalantamine (Alzheimer's disease), Ensifentrine (COPD), and Tovorafenib (oncology) using advanced chromatographic techniques integrated with sustainable analytical practices. A comprehensive analytical approach was employed utilizing high-performance liquid chromatography (HPLC), ultra-performance liquid chromatography (UPLC), and liquid chromatography-mass spectrometry (LC-MS). The methodology incorporated Analytical Quality by Design (AQbD) principles and green chemistry concepts to optimize analytical performance while minimizing environmental impact. Method development followed ICH Q2(R1) validation guidelines, including assessment of accuracy, precision, specificity, linearity, detection limits, and robustness. Stability-indicating capacity was established through forced degradation studies under varied stress conditions (acid/base hydrolysis, oxidative degradation, photolysis, and thermal stress) as per ICH Q1A(R2) guidelines. The developed chromatographic methods demonstrated exceptional analytical performance across all three drug compounds. HPLC methods successfully achieved baseline separation of parent drugs from their degradation products, confirming stability-indicating capability. UPLC methodology reduced analysis time by approximately 50% compared to conventional HPLC while maintaining superior resolution and significantly decreasing solvent consumption, aligning with green analytical chemistry principles. LC-MS methods provided enhanced sensitivity and selectivity, enabling simultaneous multi-analyte detection with improved specificity for complex formulation analysis. The systematic AQbD approach identified critical method parameters including pH optimization, column temperature control, and mobile phase composition. Design of Experiments (DoE) statistical modeling established optimal parameter ranges, while Method Operable Design Region (MODR) definition ensured robust analytical performance and reproducibility across different laboratory conditions. This research successfully established validated, stability-indicating chromatographic methods for Benzgalantamine, Ensifentrine, and Tovorafenib analysis. The integration of advanced chromatographic techniques with QbD principles and green chemistry considerations resulted in robust, environmentally sustainable analytical methodologies suitable for routine pharmaceutical quality control, stability testing, and regulatory compliance. These methods address a significant analytical gap in the literature while providing a framework for sustainable pharmaceutical analysis.

**Keywords:** HPLC, UPLC, LC-MS, method validation, stability-indicating assay, Quality by Design, green analytical chemistry, pharmaceutical analysis, drug quantification



ABSTRACT NO:ICCPR-SPS-059

**From Classroom to Clinic: Preparing Future Pharmacists for Patient-Centered Care****Kavya M, Pharm D Intern, Department of Pharmacy Practice, Vels Institute of Science Technology and Advanced Studies, Chennai, Tamil Nadu, 600077, India****E-mail: kavyamanokaran1912@gmail.com****Abstract:**

The future of pharmacists involves a significant shift away from the old-style drug dispensing and toward active engagement in patient-centered healthcare. This change necessitates a robust connection between classroom education and clinical practice. The transition prepares future pharmacists with not just basic scientific knowledge but also vital clinical, communication, and problem-solving skills to intervene in complex patient needs. Contemporary pharmacy education focuses on experiential learning in hospital rotations, community practice, simulation, and interprofessional practice, allowing students to directly apply theory to everyday practice. With a focus on individualized medicine, pharmacogenomics, medication compliance, and the management of chronic disease, the pharmacist can be seen as a central figure in enhancing patient outcomes. Despite this, challenges persist, such as inconsistency in education standards, incomplete exposure to clinical practice in some areas, and obstruction of role extension within healthcare systems. Preparation of the future pharmacists for patient-centered care requires curriculum reform, skill acquisition, and embedding digital health innovations. Ultimately, this empowerment of pharmacists translates into empowered patients, enabling the quality and accessibility of care.

**Keywords:** *Pharmacy education, Clinical pharmacy, Patient-centered care, Pharmacist transformation, Experiential learning, Pharmacogenomics, Personalized medicine, Interprofessional collaboration, Digital health, Future pharmacists.*



ABSTRACT NO:ICCP-SPS-060

## **The Role of Pharmacogenomics in Enhancing Clinical Pharmacy Practice**

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**Background:** Pharmacogenomics, the study of how genetic variations influence drug response, has emerged as a pivotal field in personalized medicine. Its integration into clinical pharmacy practice offers a pathway to optimize drug therapy, reduce adverse drug reactions, and improve therapeutic outcomes.

**Objective:** This abstract aims to explore the impact and application of pharmacogenomics in clinical pharmacy, highlighting its role in guiding medication choices and dosage adjustments based on individual genetic profiles.

**Result:** Recent clinical studies demonstrate that incorporating pharmacogenomic data into pharmacy practice leads to improved patient outcomes. Notably, genotype-guided therapy has reduced hospital readmissions, enhanced drug efficacy (e.g., clopidogrel, warfarin, and antidepressants), and minimized adverse effects in diverse patient populations.

**Discussion:** The integration of pharmacogenomics into clinical settings empowers pharmacists to play a central role in personalized medicine. However, challenges remain, including limited access to genetic testing, need for pharmacist training, and ethical considerations related to genetic data. Despite these barriers, ongoing advancements in pharmacogenomic tools and increasing healthcare provider awareness are accelerating adoption in practice.

**Conclusion:** Pharmacogenomics holds transformative potential for clinical pharmacy by enabling precision therapeutics. Its implementation can significantly improve patient care, provided that systemic, educational, and technological gaps are addressed.

**Keywords:** Pharmacogenomics, Clinical Pharmacy, Personalized Medicine, Drug Response, Genotype-Guided Therapy, Pharmacist Role



ABSTRACT NO:ICCP-SPS-061

## Clinical Pharmacist-Led Medication Reconciliation: Reducing Medication Errors and Improving Safety

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### Abstract

**Objective:** Medication errors remain a significant cause of preventable harm, especially during transitions of care. This review aims to evaluate the impact of clinical pharmacist-led medication reconciliation in reducing medication discrepancies, improving patient safety, and optimizing therapeutic outcomes.

**Method:** A narrative review was conducted by analyzing published literature from international and Indian databases, including PubMed, Scopus, and Google Scholar. Relevant studies from 2005 to 2024 focusing on pharmacist-led medication reconciliation and its impact on error reduction, adverse drug events (ADEs), and patient outcomes were included. Data were synthesized to assess the role, effectiveness, and challenges of implementing pharmacist-led interventions.

**Results:** Evidence consistently demonstrates that clinical pharmacist involvement reduces medication discrepancies by 50–80% across hospital settings. Commonly identified errors include drug omissions, duplications, dosing errors, and potential drug–drug interactions. Studies show significant reductions in adverse drug events, hospital readmissions, and healthcare costs. In the Indian context, pharmacist-led reconciliation improved acceptance of interventions by physicians (>80%) and enhanced patient adherence through counseling. However, challenges such as limited staffing, time constraints, and lack of standardized protocols remain barriers to widespread implementation.

**Conclusion:** Clinical pharmacist-led medication reconciliation is a cost-effective, patient-centered strategy that significantly improves medication safety and healthcare quality. Wider integration of pharmacists into multidisciplinary teams, adoption of digital health tools, and development of standardized protocols are essential to maximize its impact on patient outcomes.

**Keywords:** Medication reconciliation, Clinical pharmacist, Medication errors, Patient safety, Adverse drug events, Transitions of care



ABSTRACT NO:ICCP-SPS-062

## Gut Dysbiosis as a Predictor of Diabetic Retinopathy Progression

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### Abstract

Diabetic retinopathy (DR) the most common microvascular complications of diabetes mellitus and a leading cause of blindness globally. Gut dysbiosis is characterized by an imbalance in the composition and diversity of gut microbial communities, is increasingly being linked with the systemic inflammation, metabolic endotoxemia, and oxidative stress associated with diabetes and its complications.

The concept of the "gut-retina axis" describes a close interaction between the gut host-microbiota interface and the retina. It has recently gained attention, proposing that gut-derived metabolites such as short-chain fatty acids (SCFAs), trimethylamine-N-oxide (TMAO), and lipopolysaccharides (LPS) may influence retinal vascular integrity by modulating inflammatory pathways, immune cell activation, and blood-retinal barrier permeability.

This review explores the hypothesis that specific gut microbiota alterations may serve as early and non-invasive predictors of diabetic retinopathy progression. It identifies the key microbial taxa and metabolic markers associated with DR severity, and highlights how dysbiosis-driven systemic inflammation may directly contribute to retinal neurovascular damage.

Additionally, the abstract discusses potential interventions targeting the gut microbiome - such as probiotics, dietary modification, and fecal microbiota transplantation - as novel strategies for the prevention or delay of DR onset.

By elucidating the biological and clinical links between gut microbiome imbalances and diabetic retinopathy, this work underscores the potential of gut microbial profiling as a valuable diagnostic and prognostic tool. It also opens avenues for gut-centered therapies in personalized diabetes care, with the ultimate goal of mitigating microvascular complications and preserving vision in the diabetic patients.

**Keywords:** Diabetic Retinopathy, Gut Dysbiosis, Gut-Retina Axis, Retinal Neurovascular Damage, Microbiota



ABSTRACT NO:ICCP-SPS-064

**A RARE ANTI-CANCER - INDUCED ASEPTIC MENINGITIS****Kishore kumar.B 1 , Mr.Rousso.G 2****Pharm.D(4 th YEAR) 1 , Assistant Professor 2****(Department of Pharmacy Practice) 1 ,(Department of pharmaceutical chemistry & analysis)****School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies, Pallavaram, Chennai 600 117, Tamil Nadu, India.****Email id – kk9382022@gmail.com****Abstract:**

**Background /Objective:** To assess the incidence and clinical outcome of leptomeningeal carcinomatosis (LMC) in advanced breast cancer patients receiving taxane-induced remission, compared with patients treated with non-taxane regimens.

**Methods:** A retrospective review was conducted of 155 advanced breast cancer patients treated with first-line taxane chemotherapy. Outcomes were compared with 155 matched controls managed with non-taxane regimens. The primary endpoint was the incidence of LMC as the first progression. Secondary endpoints included median survival following LMC and treatment response to intrathecal therapy and radiotherapy.

**Results:** LMC developed in 8.1% of taxane-treated patients as the first site of progression, compared with 1.4% in the non-taxane group. Median survival after LMC diagnosis was 3.6 months. While some patients responded to intrathecal methotrexate and radiotherapy, overall prognosis remained poor. The findings suggest that the incidence of LMC is significantly higher following taxane therapy than non-taxane regimens, indicating a potential association between treatment type and central nervous system relapse.

**Conclusion:** LMC after taxane-based chemotherapy is a serious complication associated with poor survival in breast cancer patients. The higher incidence observed in taxane-treated patients highlights the need for further prospective studies to confirm these findings and clarify mechanisms. Development of prophylactic strategies may be essential to reduce the risk of LMC in this vulnerable population.

**Keywords:** Leptomeningeal carcinomatosis, breast cancer, taxane chemotherapy, survival, intrathecal methotrexate, radiotherapy.



ABSTRACT NO:ICCPPr-SPS-065

**Blood cancer prediction model based on deep learning technique****1. S. Davaneshwar, 1. Sri Ram Chandru .A , 2 Rousso.G****School of Pharmaceutical Sciences,****Vels Institute of Science Technology and Advanced Studies, Chennai****Email id – davaneshsree@gmail.com****Abstract**

One of the most serious health problems affecting individuals worldwide is blood cancer, which typically results from environmental and hereditary factors. Given the high death rate linked to it, early detection is crucial to ensuring that treatment success rates are high and mortality rates are low. Using cutting-edge deep learning methods such as ResNetRS50, RegNetX016, AlexNet, Convnext, EfficientNet, Inception\_V3, Xception, and VGG19, this work aims to improve blood cancer diagnosis. Comparing the evaluated models to other state-of-the-arts, ResNetRS50 demonstrated superior accuracy and speed with low error rates. This study will make use of ResNetRS50's capabilities to help diagnose blood cancer early and lessen its negative effects on patients. among the most fatal illnesses in the world today is blood cancer, which is caused by a confluence of non-genetic and genetic variables. In both developed and developing countries, it is one of the main causes of cancer-related mortality. Because it raises the chances of a successful course of treatment and even a cure, early identification of cancer is essential to lowering death rates. By diagnosing blood cancer early, the goal is to reduce death rates and increase the likelihood that people will survive the disease.

**Keywords:** Blood cancer; Classification; Convnext; Medical deep learning; RegNetX016; ResNetRS50; VGG19.



ABSTRACT NO:ICCPR-SPS-066

## KNOWLEDGE ATTITUDE AND PRACTICE STUDY ON THE MENSTRUAL CYCLE AFTER DELIVERY

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### Abstract

**Background:** The return of the menstrual cycle after childbirth is influenced by physiological, hormonal, and lifestyle factors. Understanding women's knowledge, attitudes, and practices (KAP) related to this process is essential for promoting maternal health and timely health-seeking behavior.

**Objective:** To assess the knowledge, attitudes, and practices of postpartum women regarding menstrual cycle resumption after delivery.

**Methods:** A structured KAP questionnaire was administered to postpartum women. Responses were analyzed using descriptive statistics, and results were presented as percentages with graphical representation.

**Results:** The findings revealed partial knowledge gaps. While many participants recognized breastfeeding as a key factor delaying menstruation, awareness of the exact timeframe for return of menses varied widely. Attitudinally, the majority expressed concern about irregular cycles, with over 60% stating they would seek medical advice if menstruation did not normalize within a few months. Practices were generally positive—most participants used maternity or regular pads for bleeding management and more than half reported regularly tracking their menstrual cycles.

**Conclusion:** Overall, the study highlights that postpartum women demonstrate positive attitudes and practices toward menstrual health, but knowledge regarding timing and influencing factors remains inconsistent. Educational interventions tailored to postpartum women may strengthen awareness and support better reproductive health outcomes.



ABSTRACT NO:ICCPDR-025

## Assessment of Extrapyramidal Symptoms in Antipsychotic Therapy Using the Modified Simpson–Angus Scale

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### Abstract

#### Background:

Extrapyramidal symptoms (EPS) are among the most disabling adverse effects of antipsychotics. Early recognition and grading are critical to prevent long-term complications.

#### Objectives:

To evaluate the severity of EPS in psychiatric patients using the Modified Simpson–Angus Scale (MSAS).

#### Methodology:

Patients receiving antipsychotics were monitored for movement-related ADRs, which were graded on the MSAS into normal, minimal, clinically significant, and severe categories.

#### Results:

The majority of patients scored in the **minimal EPS category**, indicating mild but noticeable movement disturbances. A smaller subset had clinically significant scores requiring therapeutic adjustment, while severe cases were rare. Typical antipsychotics were more strongly linked with EPS than atypicals, although the latter were not exempt. These results suggest that routine grading can help distinguish tolerable side effects from those that warrant immediate intervention.

#### Conclusion:

Systematic use of MSAS provides an effective framework for early detection of EPS. Incorporating this tool into routine psychiatric monitoring can minimize disability and optimize antipsychotic therapy.



ABSTRACT NO:ICCP 2ND-SPS-067

## **Trends in the prevalence of kidney stones among U.S. adults with obesity from 2007 to 2020**

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### **Abstract**

**Background:** Kidney stones are a significant health concern in the United States, and their increasing prevalence is linked to increasing obesity rates. This study aimed to assess the trends in kidney stone prevalence among U.S. adults with obesity from 2007 to 2020 using National Health and Nutrition Examination Survey (NHANES) data. **Materials and methods:** This cross-sectional analysis used anonymized NHANES data from six cycles (2007–2020). Prevalences were estimated using NHANES sample weights; age-standardized prevalences were determined using 2020 census data. Survey-weighted multivariate logistic regression and linear regression models were used to assess risk factors and trends, respectively. Subgroup analyses were performed according to sex, race/ethnicity, and poverty-income ratio (PIR). **Results:** The overall age-standardized prevalence of kidney stones increased from 9.4% (2007–2008) to 10.2% (2017–2020). The prevalence among individuals with obesity significantly increased from 11.0% to 12.5% (P for trend = 0.035). The prevalence of kidney stones in females with obesity significantly increased from 8.8% to 11.5% (P for trend = 0.042), whereas males with obesity showed a slight increase (13.4% to 14.0%). Racial/ethnic disparities were evident among those with obesity: non-Hispanic Whites showed a modest increase (12.4% to 14.2%), Hispanics exhibited a notable increase (7.5% to 10.9%; P for trend = 0.017), and non-Hispanic Blacks had a stable prevalence that increased slightly (5.9% to 6.8%; P for trend = 0.304). The prevalence increased (10.2% to 12.9%; P for trend = 0.051) among individuals with obesity and high PIRs and decreased (12.8% to 11.4%) among those with low PIRs. **Conclusions:** This study highlights an upward trend in the prevalence of kidney stones among U.S. adults with obesity, from 2007 to 2020. Our findings emphasize the need for targeted public health strategies to address this issue, especially among populations at higher risk due to obesity and socioeconomic factors. **Keywords:** kidney stones, NHANES, obesity, prevalence,

**Keywords:** kidney stones, NHANES, obesity, prevalence, trend



ABSTRACT NO:ICCPR-SPS-068

**CONGENITAL FACE BLINDNESS NEURODEGENERATION:  
LINKING PROSOPAGNOSIA WITH BRAIN HEALTH**

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**ABSTRACT:**

Prosopagnosia, commonly known as face blindness, is a neurological condition characterized by impaired face recognition despite preserved visual acuity and intelligence. It may present as congenital prosopagnosia- a lifelong developmental disorder without structural brain lesions- or as an acquired deficit due to stroke, trauma, epilepsy, tumors, or neurodegenerative diseases such as Alzheimer's, Parkinson's, and frontotemporal dementia. Understanding prosopagnosia provide unique insight into neural basis of social cognition and visual processing.

This poster explores the continuum of face blindness from congenital origins to its emergence as a clinical marker in neurodegeneration. We highlight structural and function brain alterations, particularly in the fusiform face areas and connected networks, that contribute to impaired face recognition. Furthermore, the application of artificial intelligence (AI) and machine learning tools in modeling face recognition deficits offers novel opportunities for early detection, differential diagnosis, and potential therapeutic interventions. AI- driven models complement traditional diagnostics, while integrated medical, technological, and rehabilitative strategies may guide future precision medicine approach. Therapeutic strategies remain limited but show promise. Non – pharmacological approaches include compensatory strategies, perceptual training, and assistive technologies. Recent case studies emphasize that acquired face blindness may be reversible when its root cause is addressed through AI driven modelling.

By linking congenital and acquired forms of prosopagnosia, and this work underscores its significance not only as a rare cognitive condition but also as a window into broader brain health. Integrating neurological research with AI- driven disease modelling may pave the way for precision medicine approaches in diagnosing and managing neurodegenerative disease.

**KEYWORDS:** Prosopagnosia; Face blindness; Congenital prosopagnosia; Neurological illness; Artificial intelligence; Neurodegenerative disease



ABSTRACT NO:ICCPPr-026

## **Weight Gain and Metabolic Adverse Effects as the Most Common Drug-Induced Outcomes in Psychiatric Treatment**

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### **Background:**

Weight gain and metabolic changes are among the most common and distressing adverse effects of psychotropic therapy, particularly with second-generation antipsychotics. These complications not only reduce adherence but also increase the long-term risk of cardiovascular disease and diabetes.

### **Objectives:**

To analyze the incidence, pattern, and drug association of metabolic adverse reactions in psychiatric patients.

### **Methodology:**

Patients receiving antipsychotics and antidepressants were monitored for metabolic disturbances. Body weight, BMI, glucose changes, and endocrine manifestations such as galactorrhea were recorded. ADRs were mapped to drug classes to identify the most frequent contributors.

### **Results:**

Metabolic adverse reactions accounted for a notable share of the overall burden, with **weight gain emerging as the single most frequent manifestation**. Olanzapine was the principal drug associated with substantial increases in body weight, followed by risperidone. Clozapine was implicated in fewer but clinically significant cases, while SSRIs occasionally contributed to dyslipidemia. Endocrine disturbances such as galactorrhea were reported but remained relatively uncommon.

### **Conclusion:**

Metabolic ADRs are highly prevalent and represent a major barrier to long-term therapy. Lifestyle modification, structured counselling, and when necessary, switching to lower-risk agents should be integral to psychiatric care.



ABSTRACT NO:ICCPR-SPS-069

## **ChronoMedAI: Harnessing Circadian Science and AI for Smarter, Time-Optimized Medication Therapy**

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### **Background**

Precision drug has converted pharmaceutical care by acclimatizing medicine selection and lozenge to individual patient characteristics. still, the timing of medicine administration remains a critical, yet underutilized, factor in optimizing remedial issues. Chronopharmacology demonstrates that circadian measures impact medicine immersion, metabolism, and effectiveness. Despite growing scientific substantiation, time- grounded personalization of drug schedules is infrequently enforced in routine clinical practice.

### **Methodology**

We developed prototype of ChronoMedAI, an AI- driven system designed to optimize drug timing by integrating individual case life data. The system collects crucial inputs similar as sleep and wake cycles, mess timing, diet habits, physical exertion situations, work schedules( including night shifts), life habits like smoking or alcohol input, and the case's prescribed specifics and medical history. ChronoMedAI applies a mongrel approach, combining a knowledge base of pharmacological medicine timing guidelines with prophetic algorithms that acclimate recommended medicine times grounded on case-specific patterns. also, a dynamic feedback system enables the model to acclimatize in real time as patient actions change. For case, the system may recommend taking Atorvastatin at 9 PM after regale to align with peak cholesterol conflation, or Metformin at 8 AM with breakfast to reduce morning insulin resistance.

### **Results**

ChronoMedAI generates a substantiated drug schedule that improves medicine efficacy and safety by aligning medicine input with the case's natural measures. This approach reduces adverse medicine responses, enhances patient adherence through practicable, data- driven schedules, and accommodates cases with irregular sleep or work patterns. original testing with sample case biographies demonstrated that the system successfully provides substantiation- grounded, stoutly streamlined medicine timing recommendations, offering meaningful advancements over traditional fixed- schedule conventions.

### **Conclusion**

ChronoMedAI represents a novel, data- driven result that treats time as an active remedial component. By incorporating pharmacological wisdom, machine literacy, and patient life data, it delivers smarter, safer, and more effective treatment rules. This system islands the gap between chronopharmacology exploration and real- world drugstore practice, paving the way for the future of truly substantiated drug. ChronoMedAI does n't just tell you what to take — it tells you when to take it, because timing is the crucial component in effective pharmacotherapy

**Keywords: Chronopharmacology, Personalized Medicine, Circadian Rhythm, Artificial Intelligence in Healthcare, Drug Timing Optimization**



ABSTRACT NO:ICCPR-027

## **AI-Driven Personalized Cosmetic Formulations: Integrating Skin Profiling, Microbiome Insights, and Environmental Exposure**

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Artificial intelligence (AI) is revolutionizing the field of cosmetic science by providing personalized, data-driven skincare options that take into account various factors influencing skin health. Traditional formulations frequently neglect the combined impact of skin type, physiological stress, microbiome balance, and environmental exposure. This project presents an AI-driven system aimed at creating optimized cosmetic formulations by integrating these different variables. Skin profiling is carried out using convolutional neural networks (CNNs) that are trained on images labelled by dermatologists, while stress levels are monitored through wearable biosensors and evaluated with machine learning models. The composition of the microbiome is included through predictive modelling using publicly available datasets, and environmental exposure metrics—such as UV index, humidity, and pollution—are gathered through APIs. These various data streams are combined using XGBoost and a rule-based expert system to deliver personalized recommendations for ingredients. Preliminary efforts encompass data collection, image preprocessing, and initial training of the CNN model, showcasing the viability of integrating multiple factors. This methodology provides safer, more effective, and fully customized skincare solutions, decreases reliance on animal testing, and aids in adhering to regulatory standards. By linking computational intelligence with cosmetic science, the project establishes a framework for intelligent, adaptive formulations, highlighting the potential of AI to develop innovative products that are scientifically sound and centred around consumer needs.

**Keywords:** Personalized Skincare, Artificial Intelligence, Skin Microbiome, Environmental Exposure, Sustainable Formulations (SDG 12), Good Health & Well-being (SDG 3)



ABSTRACT NO:ICCPR-SPS-070

**“ORAL CONTRACEPTIVES AND THE LIVER:  
CLINICAL PERSPECTIVES ON HEPATOBILARY RISKS”**

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**ABSTRACT:**

Oral contraceptives (OCs) are the most widely used reversible method of birth control. A cornerstone in reproductive health, but remains clinically significant for its hepatic and hepatobiliary effects. Oestrogen-containing formulations influence hepatic protein synthesis, bile composition, and vascular integrity, contributing to complications such as intrahepatic cholestasis, hepatic adenomas, Budd-Chiari syndrome, and gallstone formation. The magnitude of risk is determined by hormonal dose, duration of therapy, genetic susceptibility, and coexisting liver disease. Although modern low-dose OCs have reduced severe adverse outcomes, clinical vigilance is essential. Risk stratification, liver function monitoring, and judicious selection of contraceptive methods form the basis of safe prescribing practices. Understanding the pathophysiological links between OCs and hepatobiliary dysfunction is critical for early recognition, timely intervention, and improved patient outcomes.

A narrative review and retrospective synthesis of clinical trials, observational studies, and case reports published over the last two decades was analysed. Studies examining intrahepatic cholestasis, hepatic adenomas, Budd-Chiari syndrome, and gallstone formation in OC users were included. Hormonal dose, duration of use, and patient risk factors were assessed.

Modern low-dose OCs carry a lower risk of serious hepatobiliary complications. yet, vigilant risk stratification, individualized contraceptive selection, and periodic liver function monitoring remain essential to function monitoring remain essential to ensure safer use and better outcomes.

**KEYWORDS:** Oral contraceptives, Hepatobiliary complications, intrahepatic cholestasis, hepatic adenoma, Budd-Chiari syndrome, contraceptive safety.\



ABSTRACT NO:ICCP-SPS-071

## REPURPOSING OF ANTIFUNGAL DRUGS IN CANCER THERAPY – A FOCUS ON ITRACONAZOLE

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### ABSTRACT

Drug repurposing has emerged as a cost-effective and time-saving approach to identify new therapeutic indications for existing drugs. Among antifungals, itraconazole has shown promising anti-angiogenic and anti-proliferative activity in various cancers. This study explores the potential of itraconazole and other azole antifungals in oncology, highlighting their mechanisms, clinical findings, and future perspective. Beyond its antifungal activity, itraconazole inhibits the Hedgehog signaling pathway, blocks vascular endothelial growth factor receptor 2 (VEGFR2), and suppresses tumor angiogenesis. Preclinical and early clinical studies demonstrate its effectiveness in non-small cell lung cancer, basal cell carcinoma, and prostate cancer. Repurposing such drugs offers an advantage due to their established safety profile, pharmacokinetics, and affordability, which is crucial for resource-limited settings like India. Furthermore, combining itraconazole with conventional chemotherapeutics has shown synergistic effects in reducing tumor progression. Repurposed antifungal agents, particularly itraconazole, represent a novel class of adjuvant therapies in cancer management. Future large-scale randomized trials are warranted to validate these findings and establish their role in standard oncology practice.

**KEYWORDS:** Itraconazole, Drug repurposing , Hedgehog pathway, Angiogenesis, Cancer therapy.



ABSTRACT NO:ICCPPr-028

## EVALUATING THE EFFICACY OF SAROGLITAZAR IN NASH: IMPACT ON FIBROSIS STAGES, TRANSAMINASES, TRIGLYCERIDES AND GLYCEMIC CONTROL

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### ABSTRACT

Non-alcoholic steatohepatitis (NASH) is a progressive form of non-alcoholic fatty liver disease (NAFLD) characterized by hepatic steatosis, inflammation, and varying degrees of fibrosis. Managing NASH is complex due to its association with metabolic syndrome, type 2 diabetes, and dyslipidemia. Saroglitazar, a dual PPAR- $\alpha/\gamma$  agonist, has emerged as a promising therapeutic agent targeting both hepatic and metabolic components of NASH. Clinical studies have shown that Saroglitazar significantly reduces serum triglycerides (TRG) and improves insulin sensitivity. Its action on PPAR- $\gamma$  contributes to better glycemic control, evidenced by reductions in HbA1c levels in patients with coexisting diabetes. Additionally, Saroglitazar has demonstrated beneficial effects on liver enzymes, particularly alanine aminotransferase (ALT) and aspartate aminotransferase (AST), which are often elevated in NASH. Reductions in these markers suggest a decrease in hepatic inflammation and cellular injury. More importantly, Saroglitazar shows potential in halting or reversing liver fibrosis. Improvements in fibrosis staging (F0–F4) have been observed in some trials, with notable regression in early-stage fibrosis and stabilization in more advanced stages. The drug's dual metabolic and hepatic action makes it a unique candidate among current treatment options. Overall, Saroglitazar offers a multifaceted approach to NASH management by improving lipid profiles, liver function markers, glycemic status, and potentially slowing fibrosis progression.

**KEYWORDS** : Non-alcoholic steatohepatitis, Fibrosis score, Insulin resistance, Metabolic syndrome



ABSTRACT NO:ICCP 2ND-SPS-072

5. **Drug- food interactions in CVD therapy : cp perspective focusing on grapefruit - statin, warfarin - vitamin k**

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**Abstract:**

Though many heart patients need medication for the rest of their lives, occasionally food can interfere with how a drug works. Fare that people routinely eat can reduce treatment's defensive shield, or effectiveness, and so doctors and patients should be aware of these reactions. For example, grapefruit juice can inhibit the breakdown of statins and cause their levels in blood to rise, potentially resulting in muscle aching or more serious side effects. Eating large amounts of vitamin K, like spinach and broccoli, can reduce the ability to control warfarin induced blood clotting. Salt adds work to medication High readings could land you on drugs to lower your blood pressure, which is usually a good thing. Eating too much salt can negate the effectiveness of those medications, making it more difficult to keep high blood pressure under control.

These are the types of cases that make us, as clinical pharmacists, explain to patients why they need to be diet educated for therapy. With a solid base of counseling, timely follow-up on treatments and good cooperation among physicians, dietitians and pharmacists. people can use medication safely and achieve better results. Prevention by diet as importantly as drugs (Precaution along the lines of diet as well as medications) is a good way to protect the heart against complications.

**Keywords:** *Drug–food interaction, Grapefruit–statin, Vitamin K–warfarin, Salt–antihypertensive agent, Clinical pharmacist, Patient safety.*



ABSTRACT NO:ICCP 029

## Pharmacological Evaluation of Siddha Formulation in the Management of Snake Bite through In-silico ADME Analysis

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### Introduction

Snake venom disease refers to the condition resulting from the injection of venom by a snake through a bite or sting. Snake venom is a complex mixture of protein and peptides that can have various effects on the human body, ranging from mild symptoms to life-threatening complications. Now a day's treatment for snake venom is harder to prescribe with using available medicine. Hence, this study analysed and identified the literature for innovating medicines to snake venom from ancient system of medicines. *Corallocarpus epigaeus* is mentioned in siddha literature one of the effective herbs for snake bite. *Aakasakarudan kizhangu chooranam* was mentioned for snake venom in Gunapadam Mooligaivakuppu .K.S.Murukesamuthaliyar.

### Methodology

The study was carried out as analytical study. *Raw* drug was purified and prepared medicine according to literature. Preliminary phyto-chemical analysis was done through Thin Layer Chromatography (TLC) subsequently ADME (Absorption, Distribution, Metabolism, and Excretion) analysis was done.

### Result

Beta - sitosterol & Sesquiterpene were identified as lead molecules through Thin Layer Chromatography. In- silico ADMET prediction was performed for virtual screening of phytochemicals to identify potential hits. The selected phytochemicals underwent ADME analysis. Regarding absorption and distribution, both compounds show high intestinal absorption, with Sesquiterpene achieving 100% absorption. However, Beta-Sitosterol demonstrates a higher volume of distribution (1.161 log L/kg) compared to Sesquiterpene (0.311 log L/kg), indicating its broader tissue distribution. In metabolism, Beta-Sitosterol & Sesquiterpene act as inhibitor of CYP3A4 enzyme. Both compounds interact with renal transporters, influencing its elimination through the kidneys.

### Conclusion

The study concluded as *Aakasakarudan kizhangu chooranam* has better ADME profile and effective drug for snake bite.

**Key Words:** Pharmacological, In-silico ADME Analysis, Siddha Formulation, Snake Bite



ABSTRACT NO:ICCPR-SPS-073

## **Management of Type II Achalasia Cardia with Laparoscopic Heller's Myotomy and Dor Fundoplication**

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### **ABSTRACT**

**Background:** Achalasia cardia is a rare primary esophageal motility disorder characterized by impaired relaxation of the lower esophageal sphincter (LES) and absent peristalsis. Patients usually present with progressive dysphagia, regurgitation, and weight loss. Accurate diagnosis and prompt intervention are crucial to avoid nutritional and structural complications.

#### **Case Presentation:**

A 50-year-old female presented with a one-year history of progressive dysphagia, initially to solids and later involving liquids, accompanied by regurgitation, heartburn, nausea, and an 8 kg unintentional weight loss. General examination and routine laboratory investigations were unremarkable. Endoscopy demonstrated a markedly dilated esophagus with retained food residue, while barium swallow revealed a narrowed LES with a classic "bird-beak" configuration. Wet swallow testing confirmed inadequate LES relaxation, consistent with Type II achalasia. The patient was initially stabilized on nifedipine and subsequently underwent laparoscopic Heller's myotomy with Dor fundoplication. Postoperative recovery was uneventful, with progressive diet advancement and complete resolution of dysphagia.

Follow-up assessment at 6 and 12 months confirmed sustained symptomatic relief without reflux

**Conclusion:** this case highlights the clinical importance of early recognition and surgical management of achalasia cardia, ensuring symptom control while minimizing postoperative reflux

**Keyword:** Achalasia cardia, Dor fundoplication, Dysphagia, Heller's myotomy, Regurgitation.



ABSTRACT NO:ICCP-SPS-074

## NANOPARTICLE-BASED DRUG DELIVERY SYSTEMS IN CANCER TREATMENT

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**Objective:** The study aims to evaluate the potential of nanoparticle-based drug delivery systems in enhancing the therapeutic efficacy of chemotherapeutic and targeted agents for brain cancer. Special focus is given to drugs such as temozolomide (TMZ), carmustine (BCNU), lomustine (CCNU), methotrexate, and newer agents including bevacizumab and erlotinib, which are often hindered by limited blood–brain barrier (BBB) penetration, systemic toxicity, and tumor resistance.

**Methods:** A comprehensive review of preclinical and clinical studies was conducted to analyze the use of nanoparticles—including liposomes, polymeric nanoparticles, dendrimers, and lipid-based carriers—in brain cancer therapy. The analysis explored how surface modifications, ligand conjugation, and controlled-release technologies improve drug bioavailability, enhance tumor targeting, and minimize systemic side effects.

**Results:** Nanoparticle-based systems demonstrated superior drug delivery across the BBB compared to conventional formulations. Enhanced accumulation of TMZ, BCNU, and methotrexate within tumor tissues was reported, leading to improved therapeutic indices. Targeted nanoparticles carrying bevacizumab and erlotinib showed promising outcomes in reducing angiogenesis and tumor progression. Additionally, reduced systemic toxicity and minimized off-target drug exposure were observed. Collectively, these findings highlight nanoparticles' potential to overcome resistance mechanisms and achieve sustained therapeutic effects.

**Conclusion:** Nanoparticle-enabled drug delivery represents a promising strategy for brain cancer treatment by improving BBB penetration, enhancing drug accumulation at tumor sites, and reducing systemic adverse effects. Future large-scale clinical trials are required to establish safety, efficacy, and scalability of these systems for clinical translation.

**Keywords:** Nanoparticles, Brain cancer, Blood–brain barrier, Targeted drug delivery, Temozolomide, Bevacizumab, Erlotinib.



ABSTRACT NO:ICCPPr-SPS-075

## NATURAL PRODUCTS AS POTENTIAL MODULATORS OF PRO-INFLAMMATORY CYTOKINES SIGNALLING IN ALZHEIMER'S DISEASE

Jana R

Under the guidance of

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### ABSTRACT

**Objective:** Alzheimer's disease (AD) involves amyloid- $\beta$  accumulation, tau hyperphosphorylation, and chronic microglial activation leading to neuroinflammation. This study aims to summarise evidence for natural phytochemicals (lignans, tannins, kaempferol, flavonoids etc.) that can modulate microglia-mediated inflammatory pathways and other AD hallmarks, assessing their mechanisms, preclinical efficacy, and translational potential.

**Methodology:** A systematic review of recent preclinical and clinical literature was conducted, focusing on lead phytochemicals with antioxidant, anti-inflammatory, anti-amyloidogenic, and acetylcholinesterase-inhibiting properties. Databases searched included PubMed, Google Scholar, Web of Science, focusing on studies that examined microglial activation, ROS generation, NF- $\kappa$ B and related signalling, mitochondrial dysfunction, and gut-brain axis involvement. Key compounds such as curcumin, kaempferol, resveratrol, quercetin and other flavonoids were emphasised.

**Results:** Phytochemicals reduce pro-inflammatory cytokine release (e.g. IL-1 $\beta$ , TNF- $\alpha$ ), suppress NF- $\kappa$ B and MAPK signalling, decrease amyloid- $\beta$  aggregation, preserve mitochondrial function, and in some animal models restore cognitive performance. Kaempferol, for example, shows inhibition of NF- $\kappa$ B/p38 MAPK in microglia and good blood-brain barrier permeability.

**Discussion:** While preclinical data are promising, challenges include poor bioavailability, dosing, safety, and limited human trials. Also, most evidence is from animal or cell models; variability in phytochemical sources and formulations complicates comparisons.

**Conclusion:** Natural phytochemicals targeting microglia-driven inflammation and oxidative stress present a promising multi-target strategy for slowing AD progression. Further well-designed clinical trials are needed to validate efficacy and safety in humans. **Keywords:** Alzheimer's disease; microglial activation; phytochemicals; kaempferol; neuroinflammation; amyloid- $\beta$ ; NF- $\kappa$ B; antioxidant



ABSTRACT NO:ICCPR-SPS-076

**Pharmacist- led Intervention: Reducing Hospital Readmission in Chronic Disease  
Management**

**ICCPR – 2025****School of Pharmaceutical Sciences****Vels Institute of Science Technology and Advanced Studies****V. Vetriselvan****Pharm.D Intern****Email:Vetriselvan02.10.2001@gmail.com****ABSTRACT:**

Hospital Readmission rates 30 days after discharge are universal health care quality measurements linked to higher costs and worse outcomes, especially in chronic patients with heart failure, diabetes, and chronic obstructive pulmonary disease (COPD). It has been shown that clinical pharmacists, as a part of multidisciplinary care teams, have a central role in the optimal utilization of medications and the minimization of preventable readmissions. In this abstract, the narrative review of the pertinent peer-reviewed research, clinical trials, and systematic reviews are provided using the databases of PubMed and Science Direct. It was about interventions by pharmacists in terms of transition of care especially with patients of chronic diseases. The strategies considered were the following: medication reconciliation at discharge, patient-centered counselling, post-discharge follow-ups and the active involvement of pharmacists in multidisciplinary trips through hospitals. There is a consistent literature finding that the interventions are effective in a large reduction of hospital readmissions. As an example, a study indicated a reduction by 39% to 24.8% ( $p < 0.001$ ) of 30-day readmission rates through organized post-discharge follow-ups arranged by pharmacists. Further evidence shows enhanced therapeutic and adherence to medications among patients who have been given direct pharmaceutical care. Moreover, the participation of pharmacists in the inpatient care has been associated with the decrease of adverse drug events and improved suitability of given medications. Based on these findings, the role of pharmacists in transitional care cannot be underrated because of their contributions to medication-related issues, patient adherence, and equipping them with a more pertinent focus when handling chronic diseases. Pharmacist-led models in healthcare systems have the potential to be an evidence-based and practical solution to enhancing care transitions and minimizing avoidable hospital readmissions.

***Keywords:*** *Pharmacist- led Intervention, chronic disease management, Hospital readmission, transitional care and medication adherence*



ABSTRACT NO:ICCP-SPS-077

***Metabolomic profiling by LC-MS/MS and evaluation of the antidiabetic activity of ethanolic stem extract of Ipomoea mombassana Vatke***

**ABSTRACT****Objective:**

*Ipomoea mombassana Vatke* is a lesser-known species of the genus *Ipomoea*, with no prior reports on its phytochemical or pharmacological properties. This study investigated the phytochemical profile, enzyme inhibition, antioxidant activity, and antidiabetic potential of its stem extracts.

**Methods:**

Stems were successively extracted with solvents of increasing polarity, and yields were determined. The ethanolic extract (IMSE) was selected for detailed evaluation. Phytochemical screening was performed, and in vitro  $\alpha$ -amylase and  $\alpha$ -glucosidase inhibition assays (100–500  $\mu\text{g/mL}$ ) were carried out. LC-MS/MS analysis was conducted using an Agilent 1290 Infinity II LC system with 6550 iFunnel Q-TOF in positive ESI mode. In vivo activity was assessed in STZ-induced diabetic rats treated with IMSE (100 and 200 mg/kg) for 21 days, compared with normal, diabetic control, and Metformin groups.

**Results:**

IMSE exhibited strong  $\alpha$ -amylase ( $\text{IC}_{50} = 45.78 \pm 0.18 \mu\text{g/mL}$ ) and  $\alpha$ -glucosidase inhibition ( $42.26 \pm 0.97 \mu\text{g/mL}$ ) compared to acarbose ( $34.4 \pm 0.56$  and  $32.95 \pm 0.45 \mu\text{g/mL}$ , respectively). LC-MS/MS identified 42 compounds, including pilocarpine, maritimetin, and ganoderic acid F. In vivo, IMSE significantly reduced fasting blood glucose from  $344 \pm 1.6 \text{ mg/dL}$  in diabetic controls to  $198 \pm 2.1 \text{ mg/dL}$  at 200 mg/kg ( $p < 0.001$ ). It also improved lipid profiles by lowering total cholesterol, triglycerides, and LDL-c while elevating HDL-c ( $p < 0.01-0.001$ ). Liver enzyme levels were normalized (SGOT:  $71 \pm 1.6 \rightarrow 52 \pm 1.1 \text{ U/L}$ ; SGPT:  $87 \pm 2.2 \rightarrow 55 \pm 1.5 \text{ U/L}$ ;  $p < 0.001$ ). Antioxidant markers were restored, including SOD ( $1.3 \pm 0.03 \rightarrow 5.4 \pm 0.30 \text{ U/mL}$ ) and GSH ( $0.32 \pm 0.056 \rightarrow 1.7 \pm 0.069 \text{ mg/dL}$ ;  $p < 0.001$ ).

**Conclusion:**

The ethanolic extract of *I. mombassana* demonstrated significant enzyme inhibition and hypoglycemic effects, accompanied by improvements in lipid metabolism, hepatic function, and antioxidant defense, supporting its potential as a natural therapeutic for diabetes management.

**Key words:** Antioxidant enzymes, Diabetes mellitus, High-Resolution Liquid Chromatography-Mass Spectrometry, *Ipomoea mombassana Vatke* stem, Metformin and Streptozotocin.



ABSTRACT NO: ICCPPR-SPS-078

## Network Pharmacology and Molecular Docking Analysis of Palmatine: A Comprehensive *in-silico* Investigation

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### ABSTRACT

Palmatine, an isoquinoline alkaloid derived from various medicinal plants including Berberis species, has demonstrated significant therapeutic potential across multiple diseases. This study employed an integrated network pharmacology and molecular docking approach to elucidate the molecular mechanisms underlying palmatine's pharmacological activities and identify potential therapeutic targets. A comprehensive computational analysis was performed using multiple bioinformatics platforms. Target prediction for palmatine was conducted using Swiss Target Prediction database to identify potential protein interactions. Network pharmacology analysis was performed using Cytoscape software to construct and analyze drug-target-disease networks, enabling visualization of complex molecular interactions and pathway enrichment. ADMET (Absorption, Distribution, Metabolism, Excretion, and Toxicity) properties were evaluated to assess drug-likeness characteristics according to Lipinski's Rule of Five and other pharmacokinetic parameters. Molecular docking studies were performed using AutoDock software to investigate binding affinities and interaction modes between palmatine and identified target proteins. Network pharmacology analysis revealed multiple therapeutic targets associated with palmatine, demonstrating its multi-target pharmacological profile. The compound exhibited favorable drug-likeness properties with acceptable ADMET characteristics, including appropriate molecular weight, lipophilicity, and bioavailability parameters. Molecular docking studies demonstrated strong binding affinities between palmatine and target proteins, with favorable interaction energies and stable binding conformations. The integrated analysis revealed potential mechanisms involving inflammatory pathways, oxidative stress regulation, and metabolic processes. This comprehensive *in-silico* investigation provides valuable insights into palmatine's multi-target therapeutic mechanisms including Diabetes, Alzheimer's etc. The favorable ADMET profile and strong protein-ligand interactions support palmatine's potential as a promising therapeutic candidate.

**Keywords:** Palmatine, Network Pharmacology, Molecular Docking, ADMET, Swiss Target Prediction, Cytoscape



ABSTRACT NO:ICCPPR-030

## **Drug Class–Specific Risk Profiles: Antipsychotics, Antidepressants, Mood Stabilizers, and Benzodiazepines**

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### **Abstract**

Different classes of psychotropic medications have distinct safety profiles, and understanding their To compare adverse reaction patterns across four major psychotropic drug All documented ADRs were categorized by drug class, and their clinical presentations were analyzed to identify class-specific risk trends. **Antipsychotics were responsible for the overwhelming majority of ADRs**, predominantly neurological and metabolic in nature. Antidepressants contributed fewer cases, most often gastrointestinal complaints and sexual dysfunction. Mood stabilizers were mainly associated with tremors, alopecia, and mild drowsiness, while benzodiazepines were linked to sedation, ataxia, and vertigo. The overall profile demonstrated that while all classes carry risks, the nature of ADRs varies substantially depending on the drug category.

### **Conclusion:**

Class-specific ADR patterns reinforce the importance of individualized prescribing. Clinicians must balance efficacy with the distinct adverse risk associated with each psychotropic category.



ABSTRACT NO: ICCPPR-SPS-079

**“ADVANCED METABOLITE IDENTIFICATION IN PRECLINICAL DRUG RESEARCH USING HIGH-RESOLUTION MASS SPECTROMETRY”**

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**ABSTRACT:**

The identification of metabolites is essential for deciphering the pharmacokinetics, efficiency and safety of new drug candidates in preclinical research. High-resolution mass spectrometry (HRMS) has emphasized as a sophisticated analytical method, providing excellent sensitivity, mass precision, and structural details crucial for metabolite characterization. This research emphasizes the use of HRMS for the detection of metabolites in in vitro and in vivo systems. Liver microsomes and animal plasma samples underwent preparation through liquid-liquid extraction and protein precipitation methods prior to analysis. Ultra-high performance liquid chromatography unified with time-of-flight (UHPLC-TOF) and Orbitrap mass spectrometers was utilized for precise mass determination, fragmentation pattern assessment, and isotopic distribution analysis. The research productively detected various phase I and phase II metabolites (hydroxylated, glucuronidated, and sulfated variants). The increased mass resolution determined and authorized the identification of low-abundance metabolites and the difference between various isobaric compounds. The above result was determined via HRMS which in turn provides increased sensitivity, reproducibility, and specificity when compared with conventional techniques. thereby integrating HRMS into the pre-drug development stages increases our idea over drug metabolism mechanisms, enables forecasting of side effects, and helps with clinical study and research.

**Keywords:**

High-resolution mass spectrometry, preclinical research, UHPLC-TOF, Orbitrap, drug metabolism, pharmacokinetics, phase I metabolites, phase II metabolites.



ABSTRACT NO:ICCPR-031

## A RARE CASE REPORT ON INFLAMMATORY BOWEL DISEASE AND PRIMARY SCLEROSING CHOLANGITIS

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### ABSTRACT

IBD, including Crohn's disease and Ulcerative colitis, is generally associated with hepatobiliary disorders. PSC is a chronic cholestatic liver disease characterised by inflammation and fibrosis in the bile ducts. This overlap presents different diagnostics and therapeutic challenges. A 41-year-old female patient presented with alterations in bowel habits, dyspeptic symptoms, weight loss, intermittent abdominal pain and mild swelling. The MRCP showed Bile duct strictures suggestive of early PSC also having a positive ANA. Endoscopy reports revealed infective colitis and colonoscopy as Grade III pancolitis, ultimately leading to the confirmed diagnosis of an IBD-PSC overlap syndrome. Initially this condition is treated with antibiotics and a PPI, then started treatment with anti-inflammatory drugs and other supportive treatments. This report highlights the diagnostic challenges, monitoring strategies, and the importance of a multidisciplinary approach in managing this challenging patient population. It also provides a brief overview of the prevalence rates and clinical characteristics of IBD-PSC and PSC-IBD presentations.

**Keywords:** Primary sclerosing cholangitis (PSC), inflammatory bowel disease (IBD), MR-cholangiopancreatogram, ulcerative colitis.



ABSTRACT NO: ICCPPR-SPS-079

**“ADVANCED METABOLITE IDENTIFICATION IN PRECLINICAL DRUG RESEARCH USING HIGH-RESOLUTION MASS SPECTROMETRY”**

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**ABSTRACT:**

The identification of metabolites is essential for deciphering the pharmacokinetics, efficiency and safety of new drug candidates in preclinical research. High-resolution mass spectrometry (HRMS) has emphasized as a sophisticated analytical method, providing excellent sensitivity, mass precision, and structural details crucial for metabolite characterization. This research emphasizes the use of HRMS for the detection of metabolites in in vitro and in vivo systems. Liver microsomes and animal plasma samples underwent preparation through liquid-liquid extraction and protein precipitation methods prior to analysis. Ultra-high performance liquid chromatography unified with time-of-flight (UHPLC-TOF) and Orbitrap mass spectrometers was utilized for precise mass determination, fragmentation pattern assessment, and isotopic distribution analysis. The research productively detected various phase I and phase II metabolites (hydroxylated, glucuronidated, and sulfated variants). The increased mass resolution determined and authorized the identification of low-abundance metabolites and the difference between various isobaric compounds. The above result was determined via HRMS which in turn provides increased sensitivity, reproducibility, and specificity when compared with conventional techniques. thereby integrating HRMS into the pre-drug development stages increases our idea over drug metabolism mechanisms, enables forecasting of side effects, and helps with clinical study and research.

**Keywords:**

High-resolution mass spectrometry, preclinical research, UHPLC-TOF, Orbitrap, drug metabolism, pharmacokinetics, phase I metabolites, phase II metabolites.



ABSTRACT NO:ICCP 2ND-SPS-080

## A Comparative Assessment of Safety, Efficacy, And Cost-Effectiveness of Glipizide-Metformin and Glimpiride-Metformin Combination Therapy in Type-2 Diabetes Mellitus

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### ABSTRACT

**Background:** Type 2 Diabetes Mellitus (T2DM) is a common metabolic syndrome that needs effective long-term glycemic controls. There is wide usage of fixed-dose combinations (FDCs) of metformin with sulfonylureas. Glipizide metformin and glimepiride metformin are among them and these combinations are not effectively compared in terms of clinical and economic outcomes.

**Objectives:** To compare the safety, efficacy and cost-effectiveness of glipizide metformin and glimepiride metformin fixed dose combination therapy in treating patients with T2DM.

**Methods:** A prospective comparative study was done over a period of 6 months in a tertiary care hospital in Chennai on 200 T2DM patients. The patients were randomly grouped into Group A (glimepiride 2 mg + metformin 500 mg) and Group B (glipizide 5 mg + metformin 500 mg) and the efficacy was measured by the changes of fasting blood sugar (FBS), postprandial blood sugar (PPBS), random blood sugar (RBS) and HbA1c. The safety was evaluated with the Naranjo causality scale, whereas cost-effectiveness was determined as the cost per cent reduction in glycemic parameters.

**Results:** Group A showed better glycemic control showing decreases in FBS (36.1%), PPBS (40.2%), RBS (30.1%), and HbA1c (16.8%) than Group B. The adverse drug reactions experienced in both groups were mild and similar. The overall therapy cost was a little higher in Group A but the cost per 1% glycemic reduction was more conducive pointing out to the better cost-effectiveness of the group.

**Conclusion:** The glimepiride metformin combination therapy is more effective and cost-effective with an equal safety margin and should therefore be the choice of therapy in the long-term management of T2DM.

**Key Words:** Type 2 Diabetes Mellitus, Glimepiride, Glipizide, Metformin, Combination Therapy, Cost-Effectiveness, Glycaemic Control, Safety, Efficacy



ABSTRACT NO: ICCPPR-032

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**EFFECT OF LEVOTHYROXINE ON PHYSICAL AND PSYCHOLOGICAL SYMPTOMS IN HYPOTHYROIDISM PATIENTS: AN OBSERVATIONAL STUDY**

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**ABSTRACT**

Hypothyroidism presents with a wide range of physical and psychological manifestations that substantially impair quality of life, and levothyroxine is the standard therapy to restore biochemical euthyroidism. The present study was carried out to assess the effect of levothyroxine on selected physical and psychological symptoms in newly diagnosed hypothyroid patients. A total of 84 patients were enrolled in a prospective observational study at a tertiary care hospital and were assessed using ThyPRO-39 questionnaire. The results demonstrated notable improvement in physical symptoms such as reduction in goitre symptoms and partial relief in fatigue. Psychological domains showed slower or incomplete recovery, with 37% of patients continuing to report moderate to severe depression, while anxiety, emotional susceptibility remained prevalent despite normalization of thyroid function. Therefore, it can be concluded that levothyroxine effectively improves certain physical manifestation but provides limited benefit psychological domains, indicating a multidisciplinary approach to optimize long-term outcomes in hypothyroidism.

**Keywords:** Hypothyroidism, Quality of life, ThyPRO-39



ABSTRACT NO:ICCPPr-033

## IMPACT OF CORTICOSTEROID THERAPY ON LIPID PROFILE IN OAD PATIENTS- A PROSPECTIVE OBSERVATIONAL STUDY

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### ABSTRACT

Obstructive Airway Disorders, which are a group of respiratory conditions that involve blockage or narrowing of the airways, leading to difficulty in breathing. Treatment regimen available for this include bronchodilators (Short acting, Long acting), antibiotics, corticosteroids. Corticosteroids are the backbone in the treatment of OAD which can be given in the form of inhalers, injections and oral tablets. Corticosteroid act by reducing the release of inflammatory mediators. ICS directly target the lungs, allowing for a high local concentration with minimal systemic absorption. This minimizes side effects while effectively reducing airway inflammation. Treatment regimens were uniformly based on oral and systemic corticosteroids such as prednisolone, often combined with inhalational therapies like Budesonide, Formoterol, Salmeterol, Salbutamol or other combinations. A wide range of negative consequences, from minor to severe, can be caused by glucocorticoids due to their diverse mechanisms of action, some of which are inevitable. In this prospective observational study the alteration in lipid profile was monitored after corticosteroid treatment and the findings showed that Lipid profile deteriorated considerably, with significant increase in total cholesterol, LDL and triglycerides, while HDL remained relatively stable.

**KEYWORDS:** OAD, Corticosteroids, Lipid profiles.



ABSTRACT NO: ICCPPR-SPS-081

## **The Role of Pharmacogenomics in Enhancing Clinical Pharmacy Practice**

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Technology & Advanced Studies**

Pharmacogenomics, the study of how genetic variations influence drug response, has emerged as a pivotal field in personalized medicine. Its integration into clinical pharmacy practice offers a pathway to optimize drug therapy, reduce adverse drug reactions, and improve therapeutic outcomes. This abstract aims to explore the impact and application of pharmacogenomics in clinical pharmacy, highlighting its role in guiding medication choices and dosage adjustments based on individual genetic profiles. Recent clinical studies demonstrate that incorporating pharmacogenomic data into pharmacy practice leads to improved patient outcomes. Notably, genotype-guided therapy has reduced hospital readmissions, enhanced drug efficacy (e.g., clopidogrel, warfarin, and antidepressants), and minimized adverse effects in diverse patient populations. The integration of pharmacogenomics into clinical settings empowers pharmacists to play a central role in personalized medicine. However, challenges remain, including limited access to genetic testing, need for pharmacist training, and ethical considerations related to genetic data. Despite these barriers, ongoing advancements in pharmacogenomic tools and increasing healthcare provider awareness are accelerating adoption in practice. Pharmacogenomics holds transformative potential for clinical pharmacy by enabling precision therapeutics. Its implementation can significantly improve patient care, provided that systemic, educational, and technological gaps are addressed.

**Keywords:** Pharmacogenomics, Clinical Pharmacy, Personalized Medicine, Drug Response, Genotype-Guided Therapy, Pharmacist Role

ABSTRACT NO: *ICCP-SPS-083***Impact of Ketofol versus Propofol on Postoperative Cognition and Recovery”****ABUL YASAR.M<sup>1</sup>, DAISY PRIYA.P<sup>2</sup>, DHANUJA.R<sup>3</sup>****School of Pharmaceutical sciences, Vels Institute of Science,  
Technology & Advanced Studies****Email: 20408101@velsuniv.ac.in****Abstract**

**Background:** Postoperative cognitive dysfunction (POCD) is a frequent complication following surgery, often impacting memory, attention, and functional recovery. Anesthetic choice plays a critical role in influencing these outcomes. Propofol, a widely used intravenous anesthetic, has been associated with hemodynamic instability and potential cognitive decline, whereas Ketofol, a combination of ketamine and propofol, is hypothesized to provide improved analgesia and hemodynamic stability with less cognitive impairment.

**Method:** A prospective observational comparative study was conducted at ESIS Hospital, Chennai, from November 2024 to April 2025. A total of 52 patients aged 18–70 years undergoing surgical procedures under general anesthesia were enrolled. Patients were divided into two groups: Propofol (Group P) and Ketofol (Group KP). Cognitive function was assessed using the Mini-Mental State Examination (MMSE) and Montreal Cognitive Assessment (MoCA). Pain was evaluated using the Visual Analog Scale (VAS), and functional recovery was assessed with the Modified Aldrete Scale (MAS) at baseline, 2, 24, and 48 hours postoperatively. Hemodynamic parameters were also monitored.

**Results:** MMSE and MAS scores showed no significant difference between the groups. However, MoCA scores indicated better preservation of higher-order cognitive function in the Ketofol group. Patients receiving Ketofol also reported significantly lower VAS pain scores and required fewer analgesics. Hemodynamic monitoring revealed greater stability in systolic and diastolic blood pressures with Ketofol compared to Propofol.

**Conclusion:** Ketofol demonstrated advantages over Propofol in reducing postoperative pain, maintaining hemodynamic stability, and potentially improving cognitive outcomes. Further large-scale trials are warranted to confirm its neurocognitive benefits.

**Keywords:** Postoperative cognitive dysfunction, Ketofol, Propofol, Pain management, Functional recovery, Hemodynamic stability.



ABSTRACT NO: ICCPPR-SPS-082

**IMPACT OF CYP2C19 GENETIC VARIABILITY ON CLOPIDOGREL RESPONSE: A PHARMACOGENOMIC PERSPECTIVE**

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**Abstract:**

Impact of CYP2C19 Genetic Variability on Clopidogrel Response: A Pharmacogenomics Perspective. Clopidogrel, a widely used antiplatelet agent, requires metabolic activation by cytochrome P450 enzymes, particularly CYP2C19. Genetic polymorphisms in CYP2C19 significantly influence Clopidogrel therapeutic efficacy, with poor metabolizers showing higher rates of treatment failure, including stent thrombosis and recurrent ischemic events. To evaluate the influence of CYP2C19 genetic variants on Clopidogrel response and discuss the clinical relevance of pharmacogenomics testing in optimizing antiplatelet therapy. A narrative review was performed using recent literature (2019–2025) from PubMed and Scopus. Keywords included Clopidogrel, CYP2C19 polymorphism, pharmacogenomics, antiplatelet therapy, personalized medicine. Major clinical trials, meta-analyses, and CPIC guideline updates were reviewed.

**Results:**

CYP2C19 loss-of-function alleles (e.g., CYP2C19 \*2, \*3) are strongly associated with reduced formation of Clopidogrel active metabolite and lower platelet inhibition. Carriers of these alleles, especially in acute coronary syndrome and PCI patients, have increased risk of major adverse cardiovascular events. Recent studies (2023–2024) support genotype-guided selection of alternative antiplatelet such as prasugrel or ticagrelor in poor metabolizers. Conversely, CYP2C19 ultra-rapid metabolizers may experience enhanced bleeding risk.

**Conclusion:**

Pharmacogenomics testing for CYP2C19 variants provides a valuable tool for tailoring antiplatelet therapy, ensuring optimal efficacy while minimizing adverse outcomes. Incorporation of genotype-guided strategies into routine clinical practice has the potential to improve cardiovascular outcomes in patients requiring Clopidogrel therapy.

**Keywords:**

CYP2C19, Pharmacogenomics, Clopidogrel, Cardiovascular Disease, Personalized Medicine



ABSTRACT NO:ICCP 2ND-SPS-085

## AN OBSERVATIONAL STUDY ON THE IMPACT OF ELECTRONIC GADGETS IN PAEDIATRICS AND THERE TREATMENT OUTCOME

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### Abstract :

#### Background and Aims

Use of technological gadgets has rapidly been increasing among children which may result in health issues and technology addiction. This study focuses on the prevalence of usage of technological gadgets and health-related complications among school-going children.

#### Methods

The children will be asked questions relating to their access to electronic gadgets, time spent on outdoor activities, and whether they experienced any health-complications and their treatment, as an after-effect of the usage. A binary logistic regression model will be adapted considering time spent on gadgets as an independent variable and health problems (physical and mental) as the dependent variable.

#### .Results

Among all the patients report to use mobile phones on a daily basis. Check the prevalence rate. Results for Children show less tendency to spend time in outdoor activities. Report the time doing outdoor activities for less than 1 hour daily. An association between gadget use and health problems like headache, backache, visual disturbance, and sleeping disturbance will be observed check for the treatment out come for the mental disturbances.

**Conclusion :** Know the Prevalence of the patients effected, morbidity and treatment out come.

**Keywords** gadgets, complications, prevalence.



ABSTRACT NO: ICCPPR-SPS-084

**REGULATORY AFFAIRS IN SAFEGUARDING  
PUBLIC HEALTH: CURRENT PERSPECTIVES AND FUTURE DIRECTIONS**

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**Introduction:**

Public health protection is the cornerstone of Regulatory Affairs (RA), ensuring that pharmaceutical products meet stringent standards of safety, efficacy, and quality before reaching patients. With the growing burden of chronic diseases, emerging pandemics, and globalized drug markets, RA serves as the primary safeguard in mitigating risks associated with medicines and medical technologies.

**Methods:**

A focused review was conducted of regulatory policies from international bodies (WHO, ICH) and Indian regulatory frameworks (CDSCO, DCGI). Data sources included guidelines, peer-reviewed publications, and reports from 2016–2024. Emphasis was placed on pharmacovigilance, risk–benefit assessment, post-marketing surveillance, and regulatory responses to public health emergencies.

**Results:**

Findings revealed that RA contributes significantly to public health protection through robust pharmacovigilance programs, stricter monitoring of adverse drug reactions, and transparent communication of drug safety information. Regulatory innovations, such as accelerated approval during pandemics, digital health monitoring, and integration of real-world evidence (RWE), have enhanced patient safety. However, challenges remain in harmonizing cross-border regulations, addressing counterfeit medicines, and ensuring timely access to essential drugs without compromising safety.

**Conclusion:**

Regulatory Affairs is not only an industry compliance function but also a critical tool in safeguarding public health. Strengthening regulatory capacity, fostering international harmonization, and integrating digital health solutions are essential strategies. Training pharmacists and healthcare professionals in RA can further reinforce their role as protectors of patient safety and contributors to global health security.

**Keywords:** Regulatory Affairs, Public Health Protection, Pharmacovigilance, Drug Safety, Counterfeit Medicines, Real-World Evidence



ABSTRACT NO:ICCPPr-034

## Comparative Analysis of Typical and Atypical Antipsychotics in Relation to Safety Outcomes

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### Abstract

#### Background:

The therapeutic landscape of antipsychotics is dominated by two categories—first-generation (typical) and second-generation (atypical) agents. While both classes are effective, they differ in adverse reaction patterns, which directly influence prescribing decisions and adherence.

#### Objectives:

To compare the safety profiles of typical and atypical antipsychotics with a focus on extrapyramidal and metabolic adverse effects.

#### Methodology:

Psychiatric patients on antipsychotics were monitored for ADRs, which were classified according to the drug type. Neurological, metabolic, endocrine, and gastrointestinal outcomes were compared across typical and atypical subgroups.

#### Results:

**Typical antipsychotics were strongly associated with EPS**, especially tremors and akathisia, whereas **atypicals showed a higher frequency of metabolic disturbances**, predominantly weight gain and endocrine manifestations such as galactorrhea. Gastrointestinal disturbances and sedation occurred in both groups but without a clear class-specific predominance. The overall burden was slightly higher with atypicals, but the pattern of ADRs was distinctly different.

#### Conclusion:

The findings highlight that neither typical nor atypical antipsychotics are free from adverse effects. Treatment selection should be individualized, balancing efficacy with the predictable ADR profile of each class.



ABSTRACT NO: ICCPPR-SPS-086

**Role of Pharmacogenomics in Antidepressant and Antipsychotic Therapy****S.YAZHINI****Pharm.D INTERN****SCHOOL OF PHARMACEUTICAL SCIENCES****VISTAS****EMAIL: 20408127@velsuniv.ac.in**

Psychiatric disorders like depression and schizophrenia are among the top causes of disease worldwide, and they often require long-term medication management. Even with many antidepressants and antipsychotics available, the response to these treatments varies widely from person to person. The trial-and-error approach to prescribing can delay improvement, cause side effects, and lead to low treatment adherence. This inconsistency is heavily influenced by genetic differences in how drugs are processed and how receptors respond. This underlines the importance of pharmacogenomic-guided therapy

Pharmacogenomics (PGx) looks at how genetic differences affect the effectiveness and safety of drugs. Key enzymes that break down drugs, especially CYP2D6 and CYP2C19, are crucial for determining the levels of selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants (TCAs), and several antipsychotics in the body. Patients who are poor metabolizers face a higher risk of toxicity, while those who are ultra-rapid metabolizers may not benefit from standard doses. Furthermore, variations in genes like HTR2A (serotonin receptor), DRD2 (dopamine receptor), and SLC6A4 (serotonin transporter) also contribute to different treatment results. Adding pharmacogenomic testing to regular psychiatric practice can provide important clinical advantages. By pinpointing individual genetic profiles, doctors can choose the right medications and dosing plans to reduce side effects and improve treatment adherence. Additionally, PGx-guided prescribing can lower healthcare costs related to hospital stays and changing treatments.

In summary, pharmacogenomics offers a hopeful approach for personalized psychiatry. Using it in antidepressant and antipsychotic treatment could change mental health care by making treatments more effective and safer, ultimately enhancing patients' quality of life.

**Keywords:** Pharmacogenomics, Antidepressants, Antipsychotics, Personalized Psychiatry, CYP450



ABSTRACT NO:ICCPPr-SPS-087

**PHARMACOLOGICAL SCREENING OF NEUROPROTECTIVE ACTIVITY OF  
*CISSUS QUADRANGULARIS***

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**ABSTRACT**

Neuroprotection is a term used to allude to methodologies and relative components that shield the focal sensory system from neuronal wounds caused by incessant (e.g., Alzheimer's and Parkinson's ailments) or intense (e.g. stroke) neurodegenerative diseases (NDs). Alzheimer's disease is a neurodegenerative disorder associated with a decline in cognitive abilities. Patients also frequently have non-cognitive symptoms, such as depression, apathy, and psychosis that impair daily living, Alzheimer's disease can occur at any age, even as young as 40 years. It is mainly caused by beta-amyloid plaques, which are the dense deposit of protein and cellular material that accumulate outside and around nerve cells. Neurofibrillary tangles, which are twisted fiber that builds up inside the nerve cell. A depletion of short-term memory, failure to learn new knowledge, mood changes, difficulty recognizing terms, forgetting identities, and losing things are demonstrated by earlier illness. There is still considerable research into medications capable of preventing or at least effectively altering the trajectory of AD, referred to as 'disease-modifying' medicines 24. In the present study, the efficacy Dried leaves of *Cissus quadrangularis* tested for anti-Alzheimer model in novel object recognition experiment which is employed in animal models of neurological disorders to assess memory, particularly memory recognition. The decision to explore the unfamiliar object represents the utilization of memory for learning and identification. *Cissus quadrangularis* tested for anti alzheimer model in novel object recognition test showed dose-dependent increase in recognition index. From the behavioral, biochemical and DPPH antioxidant test results, MECQ and CQE showed statistically significant results, Hence, MECQ and CQE was further used for the estimation of free radical scavenging and MAO levels in amnesia mice. In case of MAO-A and B levels, in negative control group ( $31.88 \pm 0.53$  and  $34.60 \pm 0.86$  for MAO-A and B, respectively) the levels are increased when compared with the control group ( $20.32 \pm 0.82$  and  $21.33 \pm 0.69$  for MAO-A and B, respectively). In the treatment groups there was a significant reduction of MAO-A ( $P < 0.001$ ) and B ( $P < 0.05$ ) in low dose (200 mg/kg) treated animals on comparing to the control group. The high dose treated group shown a significant decrease in both MAO-A and B with  $P < 0.001$  on comparison with the neurotoxicity induced animals.

**Keywords:** Alzheimer's disease, *Cissus quadrangularis*, Methanolic extract, Neuroprotective Activity



ABSTRACT NO: ICCPPR-035

## TREND TOWARDS MEDICATION ERRORS IN ICU

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### INTRODUCTION:

ICU play an integral part in ensuring prominent care to the patients.

It is always the demanding nature of ICUs to react as fast as possible in order to save the life of patients.

Considering it into account, there are chances that Human error can happen, that could hinder the safety and quality of patient care.

In the ICUs, on an average, patients exposed to 1.7 errors per day and Medication errors are the most common type of error, which accounts for about 78% of serious medical errors

### OBJECTIVES:

To analyze the trend of medication errors in ICU over 3-year period and to assess the potential impact of implemented corrective and preventive actions on medication error reduction.

### METHODOLOGY:

Study period- 3 years (JAN 22 to DEC 24)

Inclusion criteria: all ICU patients, administration error, indenting error, and transcription error.

Exclusion criteria: prescription error, dispensing, and other forms of error.

### CONCLUSION:

Medication errors in the ICU remain a significant challenge, our study shows with improved protocols, better communication, and better staff training by clinical pharmacists the occurrence of medication errors can be minimized. Identifying trends and root causes allows healthcare professionals to implement effective prevention strategies, ensuring patient safety and better clinical outcomes.



ABSTRACT NO:ICCPPr-SPS-089

## Use of Artificial Intelligence and Quantum Computers in Drug Discovery and Development

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### ABSTRACT

Artificial intelligence (AI) and quantum computers are transforming the field of drug discovery and development, significantly enhancing both the speed and accuracy of identifying new drug candidates and improving the drug development process. AI technologies, particularly machine learning (ML) and deep learning (DL), are used to analyze vast amounts of biological data, predict molecular interactions, and identify potential drug targets. AI models can **Screen large databases, Optimize drug design, Analyze genetic data, Model protein folding** AI accelerates drug discovery by processing complex data sets far more efficiently than traditional methods, allowing researchers to narrow down viable candidates and better understand their biological effects. Quantum computers leverage principles of quantum mechanics to perform complex calculations far beyond the capabilities of classical computers. In drug discovery, they have the potential to **Simulate molecular interactions, Optimize drug, Improve simulations of protein folding** The combination of AI and quantum computing holds immense promise. While quantum computers excel in solving complex molecular simulations that classical computers struggle with, AI can help process and analyze the results, speeding up drug discovery cycles. AI's ability to learn and adapt from vast data sets can complement quantum computing's power in simulating molecular and biological systems. AI and quantum computing are transforming the entire drug development pipeline, from early-stage discovery to clinical trials such as **Preclinical stages and Clinical trials** In conclusion, AI and quantum computing offer immense potential to accelerate drug discovery and development by improving accuracy, reducing time, and lowering costs, ultimately leading to more effective treatments and personalized medicine. Their synergy could revolutionize the pharmaceutical industry in the coming years.

**KEYWORDS:** Artificial intelligence, quantum computers, Drug discovery, Machine learning, Deep learning.



ABSTRACT NO: ICCPPR-SPS-088

**ARTIFICIAL INTELLIGENCE IN CLINICAL PHARMACY: ENHANCING  
MEDICATION MANAGEMENT AND PATIENT OUTCOMES"****Dr. Somasundaram.I\* Jayaveera.R**EMAIL : [jayaveera608@gmail.com](mailto:jayaveera608@gmail.com)**Abstract**

Artificial intelligence (AI) is revolutionizing clinical pharmacy practice by enhancing medication management systems and improving patient outcomes through advanced decision support capabilities. AI-powered clinical decision support systems analyze vast patient datasets including electronic health records, laboratory results, and medication profiles to provide evidence-based recommendations for drug selection, dosing optimization, and adverse event prevention. Machine learning algorithms enable real-time detection of drug-drug interactions, prediction of adverse drug reactions, and personalized therapy recommendations tailored to individual patient characteristics and genetic profiles. Clinical implementations demonstrate significant improvements, including 70% reduction in pediatric dosing errors, 65% decrease in medication discrepancies, and 58% reduction in medication-related readmissions. AI automation streamlines workflow processes, allowing pharmacists to focus on direct patient care while maintaining clinical oversight and professional judgment. Despite challenges including data privacy concerns and implementation costs, AI represents a transformative technology that augments pharmacist capabilities and promotes precision medicine approaches in clinical practice

**Keywords:** artificial intelligence, clinical pharmacy, medication management, patient outcomes, clinical decision support, personalized medicine, drug safety, machine learning



ABSTRACT NO:ICCPPR-SPS-091

## **NIPAH VIRUS IN KERALA: EPIDEMIOLOGY, TREATMENT GAPS & ROLE OF PHARMACISTS**

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**Background:** Nipah virus (NiV) is a highly lethal zoonotic pathogen with recurrent outbreaks reported in Kerala, India. Limited therapeutic options, delayed diagnosis, and challenges in outbreak control have contributed to high fatality rates.

**Aim and objective:** To analyze the epidemiological trends of Nipah outbreaks in Kerala and assess the treatment gaps with a special focus on the role of pharmacists.

**Methodology:** A narrative review was conducted using published literature, government health reports, and WHO/ICMR guidelines related to Nipah virus outbreaks in Kerala (2018–2023). Data on epidemiology, treatment approaches, and pharmacist interventions were compiled and analyzed.

**Results and Conclusion:** Nipah virus outbreaks in Kerala demonstrated case fatality rates ranging from 65% to 90%. Current management strategies remain largely supportive, with limited experimental use of ribavirin and monoclonal antibodies. The absence of a licensed vaccine and effective antiviral therapy highlights critical treatment gaps. Pharmacists play a key role in rational drug use, patient counseling, infection control, and ensuring access to essential medicines. Strengthening their involvement is crucial to improve outbreak preparedness and response.

**Key Words:** Nipah virus, Epidemiology, Pharmacists, Treatment gaps, Outbreak management



ABSTRACT NO: ICCPPR-SPS-090

**DENITRIFYING AND SULPHONAMIDES DEGRADATION: A CRITICAL REVIEW****<sup>1</sup>E.P. Klarisha Iniya Merlin <sup>2</sup> Dr.Pallavi Singh (Guide)****<sup>1</sup>Pharm.D, 3rd year, School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies.****<sup>2</sup>Assistant professor, Department of Pharmacy practice, School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies.****PHONE: +918807705235****EMAIL ID: klarishainiyamerlinezhilarasu@gmail.com****ABSTRACT**

Sulphonamides, especially sulfamethoxazole, are the most common antibiotics applied in veterinary and agricultural settings. With low sorption potential and wide application, they are excessively mobile in soil and groundwater, where they often linger and exhibit interaction with denitrifying microbial populations. Sulphonamides under denitrifying environments can inhibit or enhance removal of nitrogen based on concentration, resulting in imbalanced reaction steps and the buildup of intermediates like nitrous oxide and nitrites. Research indicates that sulfamethoxazole is partially degraded in nitrate-reducing conditions, typically exhibiting first-order kinetics with microbial processes being the primary mechanism, although abiotic mechanisms like transformation by nitrous acid also play a role. In the biological setting, sulfamethoxazole is mainly eliminated in urine both unaltered and as metabolites, with N4-acetylsulfamethoxazole being the predominant byproduct, supported by hydroxylated, nitro, nitroso, and desamino derivatives. These transformation products are of environmental significance since their aromatic amine group structure is common to sulphonamides and implies comparable degradation pathways. The existing literature has predominantly concentrated on sulfamethoxazole, with the environmental fate of other sulphonamides under denitrifying conditions less well understood.

**KEYWORDS** Sulphonamides; Sulfamethoxazole; Denitrification; Biodegradation; N4-acetylsulfamethoxazole; Metabolites; Groundwater contamination; Antimicrobial resistance; Alternatives; Trimethoprim; Doxycycline.



ABSTRACT NO:ICCPPr-SPS-093

**Harnessing Wearables and Digital Biomarkers for Real- Time Pharmacovigilance and Adverse Event Detection**

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**ABSTRACT**

Pharmacovigilance (PV) has typically used spontaneous reporting and clinical data, but these approaches all come with limitations related to underreporting and delays in recognizing adverse drug reactions (ADRs). The emergence of wearable devices and digital biomarkers is a promising method for improving monitoring of drug safety. Smartwatches, biosensor patches, and ring sensors are able to continuously measure physiological metrics such as heart rate, electrocardiogram (ECG), sleep activity, glucose, and movement. Meaning that near real-time identification of ADRs becomes possible. Recent studies show promise in this area, and have even demonstrated feasibility. For example, commercial wearables and use of machine learning to monitor traces of abnormal physiological events resulted in pre-symptom identification of ADRs<sup>1</sup>. Wearable sensors can even be deployed to track drug concentrations in biofluids, which could help by supporting early detection of toxicity and dose optimization<sup>2</sup>. Digital biomarkers have been able to show utility in post-licensure safety monitoring<sup>3</sup> and wearables worn on the wrist have been used to monitor drug use and overdose in at-risk populations<sup>4</sup>. However, challenges remain, related to issues such as data quality, device calibration, inter-individual difference in the tracking of data or even the fundamental inability to assign the potential change to drug exposure. Nevertheless, there is evidence to support that wearables and digital biomarkers can assist PV and be leveraged to provide proactive, patient-centric monitoring. With appropriate validation and regulatory approval, these approaches have potential for real-world impacts.

**Key words:**

Pharmacovigilance, Adverse drug reactions, Wearables , Digital biomarkers, Real-time monitoring, Patient centric surveillance.



ABSTRACT NO: ICCPPR-SPS-092

**“Mesenchymal Stem Cells: Emerging Therapies for Respiratory Diseases  
and COVID-19”**

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**ABSTRACT:**

Stem cell–based therapies are increasingly recognized in respiratory medicine for conditions involving inflammation and irreversible tissue damage. Mesenchymal stem cells (MSCs) from bone marrow, adipose tissue, and umbilical cord possess anti-inflammatory, immunomodulatory, and regenerative properties, showing potential in chronic respiratory diseases such as COPD, idiopathic pulmonary fibrosis (IPF), ARDS, and severe asthma. Induced pluripotent stem cells (iPSCs) enable the generation of lung epithelial cells and organoids for disease modeling, drug screening, and potential regenerative therapy. The COVID-19 pandemic accelerated interest in stem cells, with early trials reporting improved oxygenation, reduced cytokine levels, and lower mortality in severe ARDS. Despite these advances, clinical application remains limited by challenges in dosing, delivery, long-term safety, and regulatory approval. Although no stem cell therapy is yet licensed for chronic lung disease, ongoing research highlights their promise as innovative adjuncts for both chronic respiratory conditions and acute infections like COVID-19, warranting further large-scale trial.

**KEYWORDS :** *Stem cells, Mesenchymal stem cells (MSCs), Induced pluripotent stem cells (iPSCs), COPD, COVID-19, Lung regeneration, Clinical Trials*



ABSTRACT NO:ICCPPr-SPS-095

**A study on impact of clinical pharmacist interventions on medication adherence and quality of life in A study on impact of clinical hypertensive patients**

**Vels Institute of Science, Technology & Advanced Studies, Pallavaram-09**

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**Abstract**

Following bad medications leads to uncontrolled blood pressure and low quality of life. Hypertension is an essential medical problem. Improvement of the patient's results can be greatly increased by clinical pharmacists.

**Methods:**

A possible study of patients suffering from high blood pressure was performed in the Madurai district. While the control group received specific care, the intervention group received drug testing, aquaculture support and counselling provided by pharmacists in United on the baseline, and three months later the quality of life was observed.

**Result:**

Compared to the control group, patients who received pharmacist intervention showed significant improvements in the drug, better blood pressure control and better quality of life.

conclusion:

The participation of the clinical pharmacist should be integrated into normal care as it improves treatment and improves the quality of life in patients suffering from high blood pressure.

**Keywords:**

Quality of life, clinical pharmacist, hypertension or medicine



ABSTRACT NO: ICCPPR-SPS-094

## FORMULATION AND EVALUATION OF OVIPOSITION DETERRENT ACTIVITY OF TABERNAEMONTANA DIVARICATA LEAF EXTRACT-BASED MOSQUITO REPELLENT SPRAY

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### ABSTRACT

Mosquitoes, especially *Aedes aegypti*, are major vectors of dengue, chikungunya, malaria, and Zika virus, contributing to global morbidity and mortality. Conventional repellents such as DEET and pyrethroids, although effective, are associated with toxicity, insecticide resistance, and environmental concerns. Thus, natural plant-based repellents represent a promising alternative. This study aimed to formulate a mosquito repellent spray using ethanolic leaf extract of *Tabernaemontana divaricata* (Crepe Jasmine) and to evaluate its oviposition deterrent activity against *Aedes aegypti*. Leaves of *T. divaricata* were shade-dried, powdered, and subjected to ethanolic extraction. Phytochemical screening confirmed the presence of alkaloids, flavonoids, tannins, steroids, glycosides, and amino acids. A solvent-based spray formulation was prepared and evaluated for stability and safety (flammability, combustibility, leakage tests). Oviposition deterrent activity was assessed by cage experiments and egg count assays under controlled laboratory conditions. The Oviposition Activity Index (OAI) and Effective Repellency (ER %) were calculated. The phytochemical analysis confirmed bioactive constituents responsible for repellent properties. In egg count assays, repellency increased with concentration: 14.08% at 100 ppm, 25.12% at 200 ppm, and 48.48% at 400 ppm. Corresponding OAI values (−0.07 to −0.31) indicated significant oviposition deterrent activity. Spray formulations were safe, stable, and effective in disrupting the oviposition stage of the mosquito life cycle. Ethanolic leaf extract of *Tabernaemontana divaricata* demonstrated strong oviposition deterrent activity and can be successfully formulated into a stable mosquito repellent spray. By interrupting egg-laying, the formulation provides an eco-friendly and biodegradable alternative to synthetic repellents, offering potential pharmaceutical application in vector control and public health.

**Keywords:** *Tabernaemontana divaricata*, Mosquito repellent, Oviposition deterrent, Spray formulation, Phytochemicals.



ABSTRACT NO:ICCPPr-SPS-097

## **Entrepreneurship in Clinical Pharmacy: Creating Sustainable Healthcare Models**

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**Vels Institute of Science, Technology & Advanced Studies, Pallavaram-09**

### **Abstract**

Entrepreneurship in clinical pharmacy is pivotal for developing sustainable healthcare models that improve patient care while addressing economic and systemic challenges. Pharmacists, equipped with clinical expertise and business acumen, are uniquely positioned to innovate service delivery, optimize medication management, and create value-driven healthcare solutions. Entrepreneurial initiatives in clinical pharmacy include telepharmacy, personalized medication therapy management, mobile health services, and technology-driven patient engagement tools. These models foster accessibility, affordability, and quality outcomes by bridging gaps in traditional healthcare systems. Emphasizing strategic planning, risk-taking, and creativity, clinical pharmacy entrepreneurship promotes adaptability and resilience in evolving healthcare landscapes. Beyond profit, pharmacist entrepreneurs contribute to public health by launching preventive care programs, chronic disease management platforms, and healthcare education services. Challenges such as regulatory compliance, funding, and integration with existing medical infrastructure require careful navigation. Overall, fostering entrepreneurship within clinical pharmacy inspires innovation, enhances patient-centered care, and creates scalable, sustainable healthcare solutions capable of addressing future demands.

**Keywords:** entrepreneurship, clinical pharmacy, sustainable healthcare, medication management, telepharmacy, innovation, patient-centered care, healthcare models



ABSTRACT NO: ICCPPR-SPS-096

**BACTERIOPHAGE THERAPY AS AN ALTERNATIVE TO ANTIBIOTICS**

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**ABSTRACT**

The emergence of multidrug-resistant (MDR) bacteria has become a global health crisis, limiting the effectiveness of conventional antibiotics. Bacteriophage therapy, the use of viruses that specifically infect and lyse bacteria, is re-emerging as a promising alternative strategy. To explore the therapeutic potential of bacteriophages in combating antibiotic resistance and highlight their clinical applications. Bacteriophages exhibit a high degree of host specificity, targeting only pathogenic bacteria without disturbing the normal microbiota. Unlike antibiotics, they can self-replicate at the site of infection, enhancing efficacy. Phage cocktails are being investigated to broaden the antibacterial spectrum and prevent resistance development. Recent clinical trials and case studies demonstrate successful use of phage therapy in treating chronic infections, including *Pseudomonas aeruginosa* and *Staphylococcus aureus*. Challenges remain, such as phage resistance, regulatory approval, and large-scale production.

Bacteriophage therapy represents a novel, targeted, and potentially safer approach to manage drug-resistant bacterial infections. Further research and clinical integration may establish phages as a valuable adjunct or alternative to antibiotics.

Keywords: Bacteriophage therapy, Antibiotic resistance, Phage cocktails, Multidrug-resistant bacteria, Alternative therapeutics.



ABSTRACT NO:ICCPR-036

**“Impact of Thiopurine Methyltransferase (TPMT) Activity on the Incidence of Neutropenia in Inflammatory Bowel Disease Patients – A Retrospective Study”**

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**Abstract**

**Background:** Inflammatory Bowel Diseases (IBDs), including Crohn’s Disease (CD) and Ulcerative Colitis (UC), often require long-term immunosuppressive therapy with thiopurines. Although effective, thiopurines are associated with serious haematological toxicities, particularly neutropenia, which may necessitate therapy discontinuation. Thiopurine Methyltransferase (TPMT) enzyme activity plays a crucial role in thiopurine metabolism, and variations in its activity can predispose patients to myelotoxicity.

**Aim and Objective:** This retrospective study aimed to evaluate the correlation between TPMT activity and the development of neutropenia in IBD patients receiving thiopurine therapy and to assess the influence of comorbidities, lifestyle factors, and treatment adjustments on clinical outcomes.

**Methods:** Medical records of 40 IBD patients (UC and CD) treated with thiopurines at Sri Ramachandra Institute of Higher Education and Research were reviewed. Demographic details, disease distribution, lifestyle habits, comorbidities, thiopurine type, concomitant medications, TPMT activity, and clinical outcomes were analysed. Neutropenia incidence was recorded and correlated with patient-specific factors.

**Results:** Crohn’s disease (52.5%) was slightly more prevalent than ulcerative colitis (47.5%) among the study population, with a male predominance (55%). Neutropenia occurred more frequently in CD patients (5%) compared to UC (2.5%). Patients with comorbidities, especially diabetes and hypertension, showed a higher risk of neutropenia. Lifestyle factors such as smoking and alcohol use were also associated with neutropenia incidence. The development of neutropenia was significantly influenced by alcohol consumption among patients ( $p=0.001$ ), Dose adjustment according to follow-up significantly influence the development of neutropenia ( $p=0.037$ ).

**Conclusion:** This retrospective study evaluated the patients with comorbidities—especially diabetes and hypertension—had an increased likelihood of developing neutropenia. Neutropenia was more common in Crohn’s Disease (CD) patients than in those with Ulcerative Colitis (UC). This study found that smoking and alcohol consumption may play a role in the development of neutropenia in Inflammatory Bowel Disease (IBD) patients.

**Keywords:** Inflammatory Bowel Disease, Thiopurines, TPMT, Neutropenia



ABSTRACT NO: ICCPPR-SPS-098

## **Biomarkers for Alzheimer's Disease Diagnosis**

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**Abstract :** In tandem with the anticipated sharp rise in the number of people suffering from dementia over the coming decades, new and creative techniques are being developed to provide precise and effective early onset diagnosis. Despite being the most prevalent cause of dementia, many brain regions may have been damaged by significant neuronal loss and neuropathological abnormalities by the time Alzheimer's disease is usually identified. The purpose of this research is to examine the primary risk factors that influence and accelerate the course of Alzheimer's disease over time, even when there is no discernible memory impairment. Numerous possible indicators are examined, including metal ions, oxidative stress, vascular diseases, protein dysfunctions, and changes in mitochondrial populations. Based on the most recent categorization of Alzheimer's disease, a multiparametric model of biomarkers for the condition is provided.

**Keywords:** oxidative stress, mitochondrial dynamics, metal ions, mild cognitive impairment, Alzheimer's disease biomarkers, protein dysfunctions, and vascular illnesses.



ABSTRACT NO:ICCPPr-036

**Post-COVID Mucormycosis: Pharmacist's Role in Early Detection & Counselling**  
**Sathish Kumar J D, Department of Pharmacy, SRIHER (DU), Porur Chennai- 600116.**

The COVID-19 pandemic has brought a scary surge in nasty fungal infections, especially mucormycosis this stuff moves fast and kills way too many people. What's really worrying is how often it's hitting COVID survivors, especially those with uncontrolled diabetes, folks on long-term steroids, or anyone with weakened immune systems.

Spotting it early is absolutely critical. If it spreads to the eyes or brain, things get really bad, really fast. This is where pharmacists become super important. We're usually the easiest healthcare pros to reach. We can watch out for warning signs like facial pain, stuffy nose, weird blackish discharge, or swelling around the eyes and tell patients to get help immediately.

Through simple chats, pharmacists can educate high-risk patients: tighten up blood sugar control, use steroids carefully, stick to antifungal meds, and make key lifestyle tweaks. We also track side effects and watch for dangerous drug interactions during antifungal treatment. Basically, pharmacists are that vital bridge between patients and doctors catching problems early, guiding people, and supporting treatment to save lives from this post-COVID nightmare.

**Keywords:** Post-COVID, Mucormycosis, Pharmacist, Early detection, Counselling, Patient safety



ABSTRACT NO: ICCPPR-SPS-099

**A REVIEW ON INHALED INSULIN PLUS DEGLUDEK: REDEFINING GLYCEMIC CONTROL IN TYPE 1 DIABETES (INHALE-3 STUDY INSIGHTS)****Bhavani Shree M. Pharm D (PB) V Year.**Under the guidance of **Dr. M. Dheenadhayalan****School Of Pharmaceutical Sciences, VISTAS, Tamil Nadu, India- 600117**

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**ABSTRACT:**

Managing post prandial glucose rises in type 1 diabetes remains a major challenge. Subcutaneous rapid-acting insulins often have delayed onset, contributing to postprandial hyperglycemia. Inhaled technosphere insulin (TI) has an ultra-rapid absorption profile, while insulin degludec provides long-acting and stable basal coverage. The INHALE-3 study evaluated the combination of these two insulins compared with standard regimens. To evaluate the clinical efficacy, safety, and patient acceptability of inhaled TI with basal insulin degludec in adults with T1D. In this multicenter RCT, 123 adults with type 1 diabetes were assigned to either TI plus degludec or their standard regimen. After the 17-week randomized phase, participants continued for an additional 13 weeks in an extension study approximating real-world practice. Outcomes included changes in HbA1c, continuous glucose monitoring metrics, incidence of hypoglycemia, lung function (FEV<sub>1</sub>), insulin dose requirements, and patient-reported treatment experience. At 30 weeks, mean HbA1c decreased from 7.6% to 7.4%. The proportion achieving HbA1c <7% rose from 21% at 17 weeks to 42% at 30 weeks. Pulmonary function remained stable, and no severe hypoglycemia or DKA occurred. Participants required higher inhaled insulin doses than prior injected bolus doses but reported improved treatment satisfaction and preference for the inhaled regimen. Inhaled technosphere insulin plus basal degludec provided durable glycemic control, improved HbA1c target attainment, stable safety, and greater patient satisfaction. This combination represents a practical, patient-friendly alternative to conventional injection-only regimens in type 1 diabetes management.

**Keywords:** Type 1 diabetes, inhaled insulin, technosphere insulin, insulin degludec, postprandial hyperglycemia, INHALE-3.



ABSTRACT NO:ICCP 2ND-SPS-101

**REVIEW ON PERSONALIZED MEDICINE THROUGH DIGITAL HEALTH****Dr. Somasundaram.I\* Hindhuja. S****Abstract**

The rapid integration of digital health technologies is transforming the way personalized medicine is delivered, making healthcare more patient-centered and precise. Digital platforms such as mobile health applications, wearable devices, electronic health records, and artificial intelligence provide real-time monitoring, data analysis, and decision support that enable tailored treatment plans. By combining genetic information, lifestyle factors, and clinical data, digital health tools empower pharmacists and healthcare professionals to design individualized therapies that improve safety, efficacy, and adherence. This approach not only enhances patient outcomes but also reduces healthcare costs by minimizing trial-and-error prescribing and preventing adverse drug reactions. As the role of pharmacists expands in the digital era, their active participation in implementing and interpreting personalized medicine strategies will be critical in shaping the future of healthcare.

**Keywords:** Digital Health, Wearable devices, Real- time monitoring, Personalized medicine, Adverse drug reactions prevention.



ABSTRACT NO: ICCPPR-SPS-100

## EMPOWERING HEALTHCARE: THE REVOLUTION OF PERSONALIZED MEDICINE IN PATIENT CARE USING IOT

\* S.Mohamed Ali, Dr S.Umadevi

### Abstract:

The advent of personalized medicine, empowered by the Internet of Things (IoT), is revolutionizing patient care by enabling tailored therapeutic interventions based on individual genetic, environmental, and lifestyle profiles. IoT-connected devices—such as wearable sensors, smart implants, and remote monitoring systems—facilitate real-time collection and analysis of patient data, allowing for dynamic adjustment of treatment regimens. This integration enhances disease management, optimizes drug dosing, and reduces adverse effects, particularly in chronic and complex conditions. By leveraging predictive analytics and artificial intelligence, healthcare providers can anticipate patient needs and deliver proactive care. However, the adoption of IoT in personalized medicine also poses challenges, including data privacy concerns, regulatory hurdles, and the need for robust cybersecurity frameworks. Looking ahead, the synergy of personalized medicine and IoT promises to improve clinical outcomes, patient engagement, and healthcare efficiency, marking a significant shift from reactive to predictive and preventive care models.

**Keywords:** Personalized medicine, Internet of Things (IoT), patient care, wearable devices, remote monitoring, predictive analytics, data privacy, healthcare innovation, chronic disease management, therapeutic optimization



ABSTRACT NO:ICCPPr-SPS-103

**EXPLORING THE ANTICANCER POTENTIAL OF FLOWERS: A REVIEW OF PHYTOCHEMICAL PROFILE AND THERAPEUTIC APPLICATIONS.****1 SANTHIYA R \*, 2 RAMYA A****School of Pharmaceutical Sciences, Vels Institute of Science Technology and Advanced Studies, Chennai**

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**ABSTRACT**

In recent years, flowers have gained attention in anticancer research due to their bioactive compounds with potential therapeutic properties. This review article summarizes the current state of research on flowers with anticancer properties, highlighting their phytochemical profiles, mechanisms of action, and potential applications in cancer prevention and treatment. We discuss key findings from in vitro and in vivo studies on flowers like marigold (*Tagetes* spp.), chrysanthemum (*Chrysanthemum* spp.), and others, focusing on their antioxidant, anti-inflammatory, and antiproliferative effects. Challenges in translating these findings to clinical applications and future research directions are also addressed. This review aims to provide insights into the potential of flowers as a source of anticancer compounds and stimulate further investigation into their therapeutic utility.

**KEYWORDS**

Flowers, Anticancer, Phytochemicals, Bioactive compounds, Cancer prevention, Cancer treatment, *Tagetes* (marigold), *Chrysanthemum*, Antioxidant, Anti-inflammatory, Antiproliferative.



ABSTRACT NO: ICCPPR-SPS-102

**MOLECULAR DOCKING ROLE OF NATURAL COMPOUND WITH MULTI  
TARGET DRUGS [MTD] TO TREATMENT OF ALZHEMER'S DISEAS**

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PALLAVARAM , CHENGALPATTU**

**Abstract :**

Alzheimer's disease [AD] is a neurodegenerative function also known as dementia. The [AD] neuro disorder slows the action of cognitive function and memory. [AD] commonly causes damage to the brain cells [neurons] and then accumulation of amyloid beta secretion [ $A\beta$  plaque], tau [ $\tau$ ] protein neurofibrillary tangles, and genetic and environmental factors. According to current epidemiological data, about 50 million people worldwide are suffering from [AD]. in this review, it may be possible to prevent and reduce the [AD]. We discuss evolving [MTD] potential therapeutic [AD]. The [MTD] mainly focuses on curcumin, resveratrol, epigallocatechin [EGCP], omega-3 fatty acid, quercetin, and vitamin E [tocopherol]. Analyzing the synergistically multiple bioactive compounds that work maybe an effective approach in [ad] drug discovery.

**Key words:** Alzheimer's disease [AD], beta amyloid plague, tau tangle protein ,multitarget synergistically docking



ABSTRACT NO:ICCPPr-SPS-105

**ROLE OF PHARMACIST IN ANTIBIOTICS STEWARDSHIP TO PREVENT  
ANTIMICROBIAL RESISTANCE**

**VELS INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES  
(VISTAS) - PALLAVARAM, CHENNAI**

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**Abstract**

Antimicrobial resistance (AMR) is an increased global health threat that is largely driven by the wrong use of antibiotics. Antibiotic Stewardship Program (ASP) is an essential strategy to combat the problem by promoting rational use of antimicrobial agents. Clinical pharmacists play an important role in these programs because of their special knowledge of pharmacotherapy and infectious diseases. Their responsibilities include antibiotic lesson, dosage, adjustment of route and duration; Monitor the level of therapeutic drug; Review microorganism data for targeted therapy; And identifying and management of side effects. In addition, the clinical pharmacists contribute to the development of evidence -based guidelines for prismscrebing, participate in formulator management and head educational initiatives for health professionals and patients. Through active participation in Multi -Cool team, clinical pharmacists increase the quality of antibiotic use, reduces the incidence of resistance, improves the patient's results and low health care costs. Therefore, their contribution is important to succeed with antibiotics Stewardship efforts and the success of the global fight against AMR.

**Keywords:** Antimicrobial resistance, Antibiotic Stewardship, Clinical pharmacists, Rational antibiotic use



ABSTRACT NO: ICCPPR-SPS-104

**TITLE :Can the detection and treatment of human infertility be aided by nanomaterials?**

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## **ABSTRACT**

Human infertility is a condition that affects a large number of people worldwide. The reproductive systems of both sexes need to function precisely and in unison, and infertility causes a variety of issues for these systems. Current developments in nanomedicine have greatly aided in the development of diagnostic and treatment strategies to reduce infertility in both sexes. By creating sensitive nanobiosensors for the detection of follicle-stimulating hormone (FSH), luteinizing hormone (LH), anti-müllerian hormone (AMH), pregnancy-associated plasma protein-A (PAPP-A), progesterone, and testosterone, researchers have recently employed nanoscience to raise the detection limit of infertility-related biomarkers. However, a range of nanostructures, such as spermots, extracellular vesicles, nano-vitamins, magnetic nanoparticles (such as zinc, cerium, gold, and silver nanoparticles), and nano-vitamins, have demonstrated encouraging results in the treatment of human infertility. Despite recent developments, certain nanostructures may be harmful to cells, particularly germ cells. To treat and identify human infertility, the proper approach requires optimization with the right components, including vitamins, nutrients, and antioxidants. Recent advancements in nanotechnology pertaining to the challenges that human infertility still faces are discussed in this paper. . In conclusion, it has been suggested that using nanotechnology as a reproductive medicine tool could help overcome present limitations.

**KEYWORDS:** Reproductive , Nano medicine , Hormone , Nano vitamins , Germ cells



ABSTRACT NO:ICCPR-SPS-107

**COMPARATIVE STUDY OF METOPROLOL SUCCINATE AND METOPROLOL TARTRATE: THERAPEUTIC EFFICACY AND SAFETY THROUGH ORAL AND NASOGASTRIC TUBE ADMINISTRATION.**

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**ABSTRACT**

Nasogastric (NG) tube administration is frequently required in critically ill patients who cannot swallow, but it poses challenges including altered pharmacokinetics and reduced drug efficacy. Metoprolol, a cardio selective  $\beta$ 1-blocker, is available in two formulations—Metoprolol Succinate (extended-release) and Metoprolol Tartrate (immediate-release). While succinate provides stable plasma levels when given orally, crushing it for NG use may compromise its therapeutic profile. Comparative evaluation of these formulations across oral and NG routes is essential for optimizing clinical practice.

To compare the therapeutic efficacy and safety of Metoprolol Succinate and Metoprolol Tartrate when administered orally and via NG tube in patients with cardiovascular conditions.

A prospective, comparative interventional study was conducted. A total of 108 patients with cardiovascular diseases were randomized into four groups: (i) Oral Metoprolol Succinate, (ii) Oral Metoprolol Tartrate, (iii) NG Metoprolol Succinate, and (iv) NG Metoprolol Tartrate. Baseline assessments included demographic details, vital signs, and laboratory parameters. Therapeutic efficacy was assessed by monitoring heart rate (HR) and blood pressure (BP) reductions over five days. Safety was evaluated through lipid profiles, cardiac enzymes, and adverse events. Statistical analysis was performed using chi-square, paired t-test, and ANOVA with significance set at  $p < 0.05$ .

Among the study groups, Oral Metoprolol Succinate demonstrated the highest therapeutic success rate (77.8%), followed by Oral Metoprolol Tartrate (64.7%). NG-administered formulations showed comparatively lower efficacy, with NG Succinate achieving only 40.7%. By Day 5, significant reductions were observed in both HR ( $p = 0.038$ ) and BP ( $p = 0.002$ ) in the Oral Succinate group. No significant differences were noted in lipid profiles or cardiac enzymes across groups, indicating a favorable safety profile.

**Keywords:**

Metoprolol Succinate, Metoprolol Tartrate, Nasogastric Tube, Oral Administration, Therapeutic Efficacy, Cardiovascular Disease



ABSTRACT NO:ICCPPr-SPS-108

## **Patient Adherence and Tolerability Profiles of AntiSeizure Drug (ASD) Use in Bipolar disorder**

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### **Abstract**

Bipolar Disorder is a complex and recurrent mental health condition characterized by extreme mood swings, including manic and depressive episodes. Anticonvulsants have emerged as vital components in the pharmacological management of bipolar disorder, particularly for patients exhibiting rapid cycling and mixed features. The treatment of bipolar disorder often involves the use of anticonvulsants, which are increasingly recognized for their efficacy in mood stabilization. This abstract reviews the adherence and safety profiles associated with anticonvulsant use in this patient population, synthesizing findings from recent clinical studies and metaanalyses. Anticonvulsants such as valproate, carbamazepine and lamotrigine have demonstrated effectiveness in reducing the frequency of manic and depressive episodes in patients. However, medication adherence remains a significant challenge due to factors such as side effects, complex dosing regimens, and comorbid conditions. Research indicates that approximately 30-50% of patients may struggle with consistent adherence, adversely impacting treatment outcomes. The safety profiles of these medications are critical, as they can lead to side effects. This review highlights the importance of ongoing patient education, regular monitoring, and the establishment of therapeutic alliances to improve adherence rates. By addressing the challenges surrounding adherence and recognizing the diverse safety profiles of anticonvulsants, clinicians can enhance therapeutic effectiveness and improve overall patient wellbeing. Continued research is vital to develop tailored strategies that optimize treatment regimens for individuals living with bipolar disorder. In conclusion, anticonvulsants are a valuable therapeutic option in the management of bipolar disorder, warranting continued investigation to enhance clinical outcomes.

**KEYWORDS :** Bipolar disorder, Anticonvulsant, mood stabilization, carbamazepine, sodium valproate



ABSTRACT NO:ICCP R-SPS-109

**Title: Rational Design of Peptide-based Smart Hydrogels for Therapeutic Applications****Hariharan ,Pharm D, 3<sup>rd</sup> year, Corresponding Author: ROUSSO.G, Professor School of Pharmaceutical Sciences,****Vels Institute of Science Technology and Advanced Studies, Chennai**

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Peptide-based hydrogels have captivated remarkable attention in recent times and serve as an excellent platform for biomedical applications owing to the impressive amalgamation of unique properties such as biocompatibility, biodegradability, easily tunable hydrophilicity/hydrophobicity, modular incorporation of stimuli sensitivity and other functionalities, adjustable mechanical stiffness/rigidity and close mimicry to biological molecules. Putting all these on the same plate offers smart soft materials that can be used for tissue engineering, drug delivery, 3D bioprinting, wound healing to name a few. However, designing hydrogelators with the desired functionalities and their self-assembled nanostructures is still highly serendipitous in nature and thus a roadmap providing guidelines toward designing and preparing these soft-materials and applying them for a desired goal is a pressing need of the hour. New generation of biomaterials with broad potential in therapeutic applications.. By integrating functional motifs, these hydrogels can be engineered to respond to diverse physiological stimuli, including changes in pH, temperature, redox balance, and enzymatic activity. This responsiveness allows for spatiotemporal control over drug release, dynamic modulation of mechanical properties, and tailored degradation rates. Moreover, incorporation of bioactive epitopes enables direct engagement with cellular processes, making these materials highly relevant for tissue engineering, regenerative medicine, and localized cancer therapy.

**KEYWORDS:** peptide, hydrogel, drug delivery, tissue engineering, self-assembly, stimuli responsive



ABSTRACT NO:ICCPPr-SPS-110

**niosomes, their preparation methods, evaluation techniques, and niosome-based treatment strategies for ocular diseases.**

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### **Abstract**

The eye is an organ that enables vision through specialized photoreceptors that detect light. The eyes are housed in bony orbits, which help deflect impacts and provide protection. Numerous medical conditions can affect different parts of the eye, leading to damage to its structure and function; these conditions are referred to as ocular diseases. Treating ocular diseases can be challenging due to various physiological barriers that exist in the eye, which can be classified into two types: static and dynamic.

To address these challenges, various approaches have been developed, including in situ forming gels, micro- and nanocarrier systems, and vesicular systems. Niosomes, a type of vesicular drug delivery system, are utilized for sustained, controlled, and targeted drug delivery. They are non-toxic, cost-effective, and exhibit greater stability. Niosomes can be employed for drug delivery through various routes, including intravenous, intramuscular, ocular, transdermal, pulmonary, nasal, and oral administration. They also have the potential to deliver drugs across the blood-brain barrier.

This review discusses niosomes, their preparation methods, evaluation techniques, and niosome-based treatment strategies for ocular diseases.

**Keywords:** Niosomes, ocular diseases, physiological barriers, nanocarrier, vesicular, drug delivery.



ABSTRACT NO:ICCPPr-SPS-111

## "INNOVATING HEALTHCARE: HOW ARTIFICIAL INTELLIGENCE DRIVES PHARMACEUTICAL BREAKTHROUGHS"

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### **ABSTRACT :**

Artificial intelligence (AI) is dramatically reshaping pharmaceutical research by accelerating drug discovery, enhancing development methods, and enabling cost-effective solutions for human health. By integrating AI across various stages—including target identification, formulation, and clinical testing—the pharmaceutical sector is able to manage large datasets, simulate biological responses, and accurately predict drug interactions. Advanced machine learning models optimize solid dosage form development, allowing researchers to forecast pharmacokinetic properties and assess safety profiles faster and with greater precision. AI-driven approaches, such as deep learning and neural networks, are revolutionizing the design and testing of therapeutic candidates. They enable virtual screening of chemical libraries, rapid identification of disease biomarkers, and even the repurposing of existing medications for new therapeutic uses. The synergy of AI and 3D printing further opens pathways for customized dosage forms, supporting patient-specific treatment strategies. In healthcare, AI powers advanced diagnostic tools, digital therapy applications, and the prediction of epidemic outbreaks, helping clinicians and researchers respond more effectively to global health challenges. Continuous innovation in AI is redefining conventional research processes and advancing the emergence of precision medicine. By combining powerful algorithms and data-driven methods, the pharmaceutical industry is set to deliver safer, more effective, and individualized therapies. As AI technology progresses, it promises to elevate productivity and drive future solutions for drug development and personalized care.

### **KEY WORDS :**

Artificial Intelligence , Drug Discovery , Machine Learning , Personalized Medicine , 3D Printing



ABSTRACT NO:ICCP-SPS-112

## **Innovations in Therapeutic Approaches to Attenuate Aging-Related Cellular Dysfunction and Promote Longevity**

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### **ABSTRACT:**

The science of pharmacology is moving very fast to address not just treating disease, but also the biological mechanism behind aging itself. Aging is increasingly viewed as a multifaceted process influenced by molecular and cellular mechanisms like mitochondrial impairment, persistent inflammation, cellular senescence, and disrupted metabolic signaling. Intervention in these pathways has resulted in the identification of drugs with the potential to increase health span and retard the onset of age-related ailments. Compounds like metformin, rapamycin, senolytics, and NAD<sup>+</sup> precursors have shown promise in influencing major hallmarks of aging in preclinical and initial clinical research. These drugs exert their effects by enhancing cellular resilience, lowering systemic inflammation, improving mitochondrial function, and clearing senescent cells that contribute to tissue dysfunction. All these combined effects seek to maintain physiological function and limit morbidity with aging. The incorporation of these therapies into clinical practice is a paradigm shift in preventive medicine from disease-specific therapy to treatments intervening in the biology of aging. Although ongoing investigation continues to assess the efficacy and safety of these agents, existing evidence supports the potential of pharmacological interventions to profoundly modify the trajectory of aging. This progress places aging not as an unreversible degradation, but as a modifiable process through the use of aimed therapeutic interventions based on molecular pharmacology.

### **KEYWORDS:**

Aging, Mitochondrial dysfunction, Metformin, Rapamycin, Senolytics, NAD<sup>+</sup> precursors, cellular senescence



ABSTRACT NO:ICCP 2ND-038

## **A cross sectional survey of registered pharmacist knowledge attitude and professional practice behaviors towards nutritional and dietary supplements**

### **Aim:**

To evaluate the knowledge, attitude and professional practice behaviors towards nutritional and dietary supplements among registered pharmacist

### **Objective:**

- To evaluate the knowledge of dietary supplements among registered pharmacist with different years of work experience
- To explore and identify the factors that could influence their behaviors towards recommendation of dietary supplements

### **Materials and methods:**

The data was collected prospectively recorded in a data collection from designed for the study based on inclusion and exclusion criteria obtained from pharmacists around K.K.COLLEGE OF PHARMACY, Chennai. The study was carried out for a period of 2 months from November 2023 to December 2023

### **Conclusion:**

Our study concluded that most of the registered pharmacist were having an experience of 1 to 5 years . While perspective data collection we also found that registered pharmacist have very good knowledge about nutrition and dietary supplements to educate and create awareness among the public.



ABSTRACT NO:ICCPR-SPS-113

## OPTIMIZING PEDIATRIC OUTCOMES IN PFIC: CURRENT TREATMENTS AND FUTURE SAFER STRATEGIES

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### ABSTRACT

#### INTRODUCTION:

Progressive Familial Intrahepatic Cholestasis (PFIC) represents a group of rare autosomal recessive liver disorders characterized by defective bile secretion, leading to progressive cholestasis, pruritus, growth failure, and eventual liver failure in infancy or childhood. Despite supportive therapies such as ursodeoxycholic acid, nutritional supplementation, and biliary diversion, outcomes remain limited, and many children ultimately require liver transplantation (LT). Optimizing treatment strategies and introducing novel therapeutic approaches are crucial to improving pediatric outcomes.

#### METHODS:

A comprehensive literature review was performed using PubMed, Scopus, and Web of Science, focusing on studies addressing current treatments, challenges, and emerging strategies for PFIC management. Keywords including “Progressive Familial Intrahepatic Cholestasis,” “pediatric outcomes,” “treatment,” “liver transplantation,” and “novel therapies” were used to identify relevant publications. Articles were critically reviewed with emphasis on pharmacological, surgical, and advanced therapeutic interventions.

#### RESULTS:

Current management strategies, including ursodeoxycholic acid, rifampicin, fat-soluble vitamin supplementation, and biliary diversion, provide symptomatic relief but do not halt disease progression in many patients. Liver transplantation remains the curative option, significantly improving survival, growth, and quality of life, though risks of infection, rejection, and lifelong immunosuppression persist. Emerging therapies such as ileal bile acid transporter (IBAT) inhibitors and experimental gene therapy show promise in reducing cholestasis and delaying or potentially avoiding transplantation.

#### CONCLUSION:

Optimizing pediatric outcomes in PFIC requires a multidisciplinary approach combining early genetic diagnosis, supportive therapies, nutritional management, and timely transplantation. Novel pharmacological agents and gene-targeted therapies represent future safer strategies that hold potential to transform PFIC care and improve quality of life in affected children.

**KEYWORDS:** Progressive Familial Intrahepatic Cholestasis, Pediatrics, Liver Transplantation, IBAT Inhibitors, Gene Therapy, Pediatric Outcomes.



ABSTRACT NO:ICCPPR-SPS-114

**DIGITAL ROSETTA STONE: DECODING MEDICAL KNOWLEDGE FOR THE PATIENT'S EMPOWERMENT**

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 PALLAVARAM, CHENNAI**

**ABSTRACT:**

In a time of information overload, patients often struggle to navigate the complex landscape with medical knowledge. This essence introduces a new approach to patient education: a dynamic, consumer-catch QR coding system. By weaving a patient-centered design and intuitive technique together, this platform makes a simple scan to a cure, reliable and input of digestible information. Unlike traditional, stable resources, our system provides real-time updates and individual insights, and directly meets unique needs and questions to individuals. This innovative solution strengthens patients, replaces passive recipients of care in active partners in their health journey, promotes deep understanding of their condition and enables more informed decisions. The content of the platform has been carefully torn, the complex medical jargon has been translated through a mixture of basic articles, interactive infographics and lightly packed video programs in clear, sensible language. This spontaneous distribution of sewn knowledge not only reduces anxiety, but also provides significant information on the drug protocol, potential side effects and appropriate doses, which ensure compliance and safety. The system provides more productive and collaborative interaction between patients and their health professionals, which strengthens the significant band. Ultimately, this system represents a fundamental change in the patient's engagement-a reactive and general experience with an active and general experience to meet a new standard forecast-and to pave the way for better health results and more fair health service landscape.

**KEYWORDS:**

Medical knowledge, QR Code system, Passive recipients, Drug protocol, collaborative information, Health service



ABSTRACT NO:ICCP-039

## NOVEL UV SPECTROPHOTOMETRIC APPROACHES FOR SIMULTANEOUS QUANTIFICATION OF AMLODIPINE BESYLATE AND TELMISARTAN IN BINARY MIXTURES AND FORMULATION

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### ABSTRACT:

The research work centered on developing and validating innovative spectrophotometric methods for the simultaneous quantification of binary drug mixtures without requiring prior separation. It involves the concurrent estimation of Amlodipine besylate (AMLO) and Telmisartan (TEL) by employing UV spectrophotometric approaches of the ratio subtraction coupled with constant multiplication method (RS-CM) and the absorption factor method (AFM). Distilled water served as the solvent for evaluating both pure mixtures and pharmaceutical preparations after initial solubility in Methanol. In ratio subtraction coupled with constant multiplication method, AMLO was determined by ratio subtraction method at 366 nm, whereas TEL was determined by constant multiplication method at 296 nm. In absorption factor method, Since AMLO interferes with TEL at its  $\lambda_{\max}$  (296 nm), an absorption factor is calculated for AMLO to cancel its interfering effect, while TEL shows no interference with AMLO at another wavelength ( $\lambda=347\text{nm}$ ). Across both methods, determination of AMLO was carried out using TEL 18  $\mu\text{g/mL}$  as divisor concentration and determination of TEL was carried out using AMLO 10  $\mu\text{g/mL}$  as a divisor concentration. All methods were validated according to ICH Q2 (R2) standards, wherein exhibiting linearity within the concentration range of 6–12  $\mu\text{g/mL}$  for AMLO and 12–20  $\mu\text{g/mL}$  for TEL. The methods proved to be precise with %RSD values less than 2, while recovery studies showed results within 98–102%. Environmental sustainability of the methods was assessed by using AGREE and ComplexGAPI software's, demonstrating favourable greenness scores.

### KEYWORDS:

Amlodipine besylate, Telmisartan, Ratio subtraction coupled with constant multiplication, Absorption factor method, AGREE, Complex GAPI, greenness score.



ABSTRACT NO:ICCPPr-SPS-115

**Digital Twins in Pharmacology: Shaping the Future of Personalized Drug Therapy.**

Aruna. P\*

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The field of pharmacy is undergoing a remarkable transformation with the integration of advanced digital technologies. One of the most promising innovations is the concept of digital twins virtual models that replicate the structure and function of biological systems. In pharmacology, digital twins can simulate an individual patient's physiology, disease progression, and drug response, offering a new dimension to personalized medicine. Traditional pharmacotherapy often follows a "one-size-fits-all" approach, which may lead to variability in drug efficacy and an increased risk of adverse effects. By contrast, digital twins supported by artificial intelligence (AI), big data analytics, and pharmacogenomics can predict patient-specific outcomes, optimize dosage regimens, and minimize trial-and-error prescribing. This not only enhances therapeutic precision but also improves patient safety and overall healthcare quality. The application of digital twins in pharmacology extends beyond individualized therapy. They also play a significant role in drug discovery, clinical trials, and pharmacovigilance. By creating virtual simulations, researchers can reduce dependence on animal testing, lower research costs, and accelerate the development of innovative therapies. For practicing pharmacists, digital twins can act as powerful decision-support tools, enabling evidence-based and patient-centered care. As pharmacy education embraces technological advancements, future pharmacists must be equipped with the knowledge and skills to harness these tools. Digital twins exemplify the intersection of pharmacology and technology, symbolizing a shift towards smarter, safer, and more personalized drug therapy. This poster emphasizes their transformative role in empowering the next generation of pharmacists in the era of precision medicine.

**Keywords:** Digital Twins, Pharmacology, Personalized Therapy, Artificial Intelligence, Pharmacogenomics, Precision Medicine.



ABSTRACT NO:ICCP-SPS-116

**Treatment of non-albicans Candida vaginitis with amphotericin B vaginal suppositories form****Yuvaraj R\*****Corresponding author****Dr. P. Monika****els Institute of Science, Technology & Advanced Studies (VISTAS)****Abstract**

Non-albicans Candida vaginitis, particularly infection by species like Candida glabrata, is an important clinical issue because it is invariably resistant to standard azole antifungal treatment. These recalcitrant infections can produce chronic or recurrent symptoms, and new therapies become indicated. Amphotericin B, an antifungal polyene with broad-spectrum activity, has been an effective and useful therapy for such difficult-to-treat infections. While stereotypically linked to its fatal systemic side effects 'when administered intravenously, the drug in topical preparation as a vaginal suppository allows it to act directly at the point of infection with negligible risk of systemic toxicity. The only significant side effects of amphotericin B vaginal suppositories are local and usually minor in severity, including vulvovaginal burning, itching, or stinging. These local side effects are well tolerated in most patients. Through action on the fungal cell membrane with an action independent of azoles, amphotericin B vaginal suppositories are a valuable and often effective treatment for patients who have not responded to other antifungal therapy, and are consequently an integral component of the management strategy of resistant non-albicans candidiasis.

**Keywords;**

Non-albicans Candida vaginitis, Candida glabrata, Azole antifungal treatment, Recalcitrant infections, Chronic or recurrent symptom's, Antifungal polyenes, Broad-spectrum activity



ABSTRACT NO:ICCPR-SPS-117

## **AI- Driven vaticination of Herb- Drug relations A Survey- Grounded Study on the part of Machine literacy in Herbal Supplement Safety**

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### **Background**

The wide use of herbal supplements alongside tradition specifics has raised enterprises over implicit condiment- medicine relations( HDIs), which may compromise patient safety and treatment efficacy. Traditional styles frequently fall suddenly due to the complex and variable nature of herbal composites. Artificial Intelligence( AI) and Machine literacy( ML) offer promising results for relating and prognosticating these relations more effectively. A structured check was conducted among 150 healthcare professionals including croakers druggists, and drugstore scholars to assess their mindfulness of HDIs and their openness to AI- grounded tools. The questionnaire covered current challenges, patient practices, and perspectives on AI in clinical settings. Parallelly, AI models were developed using intimately available pharmacokinetic datasets, integrating data on the chemical structures and known goods of both herbal and pharmaceutical composites. Deep literacy ways were applied to prognosticate implicit relations and estimate model performance. Survey findings revealed that ,78% of attesters set up being HDI prophecy resources shy. 83% believed AI tools could meliorate clinical decision- timber. 75% encountered cases tone- defining herbal remedies with conventional drugs. A significant 67% of repliers stressed the lack of standardized guidelines for condiment- medicine commerce vaticination.The developed AI model displayed robust performance, achieving 92% delicacy, 89% perfection, and 93% recall in effectively relating both adverse and synergistic relations. Survey perceptivity were necessary in enriching the model to insure its alignment with practical clinical operations This study highlights a clear need for AI-supported tools in prognosticating condiment- medicine relations.

### **Keywords**

Herb- Drug Interaction, Artificial Intelligence, Machine Learning, Herbal Supplements, Pharmacokinetics, Clinical Decision Support, Survey



ABSTRACT NO:ICCP-SPS-118

## **BIOHYBRID MICROROBOTS USING JELLYFISH NEMATOCYTES: A NOVEL APPROACH TO TARGETED DRUG DELIVERY**

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### **ABSTRACT**

Biohybrid microrobots leveraging jellyfish nematocytes represent an innovative frontier in micro-scale drug delivery and targeted tissue interaction. Jellyfish nematocysts, which are naturally evolved stinging capsules capable of explosive tubule ejection under high osmotic pressure, have been integrated into synthetic microrobot platforms to serve as "natural nanoinjectors." In recent studies, nematocysts are loaded onto magnetic Janus particles through dielectrophoretic assembly and then navigated by external magnetic fields to precise tissue locations. Upon arrival at the target, enzymatic activators—such as subtilisin protease—stimulate nematocyst explosion, propelling tubules and delivering encapsulated cargo directly into cellular and deep tissue layers. This biohybrid approach offers a significant advancement for overcoming the classical barriers of microscale drug delivery, including penetration depth and specificity. Demonstrated applications include successful delivery of drugs and toxins into cancer spheroids and live nematode models, confirming both efficacy and biocompatibility *in vitro*. The direct use of biological injection systems circumvents synthetically engineered alternatives, capitalising on the evolutionary efficiency and inherent safety of natural systems. Looking forward, such microrobots open new pathways for advanced therapeutic interventions, potentially enabling minimally invasive, programmable delivery of a wide range of therapeutics—proteins, small molecules, and more—while maintaining low immunogenicity. Moreover, these systems are extensible to other biomedical and environmental monitoring roles, such as targeted sensing and payload deposition. Overall, biohybrid microrobots utilising jellyfish nematocytes showcase the synergy between natural micro-mechanisms and robotic engineering, promising transformative impacts in medicine and technology.

### **KEY WORDS**

Microrobots, Jellyfish, Nematocytes, Janus Particles, Magnetic Fields, Biohybrid.



ABSTRACT NO:ICCP-SPS-119

## Melatonin: A Novel Target for Neuroinflammation in Multiple Sclerosis

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### ABSTRACT

Melatonin, a neuro-endocrine hormone, secreted by pineal gland best known for the regulating our circadian rhythm, can act as a potent anti-inflammatory and immunomodulatory properties that may countervail the pathogenesis of multiple sclerosis (MS). MS is an autoimmune disorder where our immune system accidentally activates immune cells against the myelin protein residue. This activation mistakenly attacks the protective myelin covering of nerve fibres. Experimental and clinical studies reveal that melatonin modulates immune balance and reduce the action of pathogenic effector T cells (TH17/TH1) toward regulatory subsets such as FoxP3<sup>+</sup> Tregs and IL-10 producing Tr1 cells. Acting mainly through MT1/MTNR1A and MT2 receptors and nuclear factors including ROR- $\alpha$ , melatonin activates ERK1/2 and C/EBP $\alpha$  to repress REV-ERB $\alpha$ , relieving NFIL3 and thereby suppressing ROR- $\gamma$ t dependent TH17 differentiation and key cytokines IL-17 and GM-CSF. In parallel, MTNR1A–ERK1/2 and ROR- $\alpha$  pathways enhance Tr1 development and IL-10 production, while dendritic cell IL-27 is increased, helping to reduce immune cells infiltration into the central nervous system through down-regulation of chemokines CCL20/CCL19 and adhesion molecules ICAM-1. Melatonin's antioxidant activity further limits NF- $\kappa$ B driven inflammation. Preclinical experimental autoimmune encephalomyelitis models show reduced disease severity, lower TH17 responses, and higher IL-10 across varied dosing regimens. Limited clinical studies reveal decreased nocturnal melatonin during relapses and elevations following interferon- $\beta$  or natalizumab therapy. A proposed “seasonal paradox,” characterized by spring-summer relapse peaks despite high vitamin D, may reflect melatonin suppression by longer daylight. However, causality remains unproven, optimal dosing and long-term safety require clarification, and interactions with vitamin D or Epstein-Barr virus are not fully explored. Overall, melatonin represents a biologically plausible yet still investigational target for immunomodulatory strategies in MS.

**Keywords:** Melatonin, Multiple Sclerosis, Immunomodulation, Neuroinflammation, T helper cells, Regulatory T cells.



ABSTRACT NO:ICCPPr-SPS-120

## **THE PHARMACIST'S ROLE IN ADVANCING PHARMACOGENOMICS AND PERSONALIZED CARE**

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### **ABSTRACT**

Pharmacogenomics, the study of how genetic variations affect drug response, is revolutionizing the way treatments are designed and delivered. Instead of the traditional “one-size-fits-all” approach, it allows for therapies that are tailored to each individual’s genetic profile, thereby improving drug effectiveness, reducing adverse effects, and enhancing overall patient outcomes. As healthcare shifts toward precision medicine, the pharmacist’s role becomes increasingly central in this transformation.

Pharmacists possess unique expertise in drug mechanisms, interactions, and safety, which positions them to interpret and apply pharmacogenomic information in clinical practice. Their responsibilities extend beyond dispensing medications to actively collaborating with physicians and other healthcare professionals in selecting the most appropriate therapy for each patient. They play a vital role in counseling patients about the significance of genetic testing, addressing concerns about privacy and ethics, and ensuring that genomic information is integrated safely into treatment decisions.

Additionally, pharmacists contribute to research, education, and policy development, helping to establish guidelines for the effective use of pharmacogenomics in routine care. With growing accessibility to genetic testing, pharmacists are key to translating complex scientific data into practical, patient-centered solutions. Importantly, this evolving field also opens new professional opportunities for pharmacists—enhancing their scope of practice, strengthening their leadership role in healthcare teams, and preparing them to be central players in the era of precision medicine.

This integration highlights the pharmacist as a driving force in shaping the future of individualized therapy and advancing modern healthcare. **KEYWORDS:** Pharmacogenomics, Personalized medicine, Pharmacist’s role, Genetic testing, Patient-centered care, Healthcare innovation



ABSTRACT NO:ICCP-SPS-121

**Design, Implementation and Comprehensive Evaluation of Pharmaceutical Care Services Among Myocardial Infarction Patients in A Tertiary Care Multispecialty Teaching Hospital: A Prospective Interventional Study**

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Myocardial infarction (MI) remains a leading cause of cardiovascular mortality globally, requiring complex medication regimens for optimal management. Pharmaceutical Care Services (PCS) represents a patient-centered approach that extends beyond traditional medication dispensing to comprehensive medication management and monitoring. This study aims to design, implement, and evaluate the impact of PCS on clinical, humanistic, and economic outcomes among MI patients in a tertiary care multispecialty teaching hospital. A prospective interventional study will be conducted over 12 months in cardiology and general medicine departments. The study will include 400 MI patients aged 30 years or older, diagnosed with either STEMI or NSTEMI, receiving at least one chronic cardiovascular medication. The intervention involves needs assessment, standardized PCS protocol implementation, outcome evaluation, and feedback collection. Primary outcomes include reduction in drug-related problems, improved medication adherence using the Medication Adherence Report Scale, and enhanced disease control parameters including blood pressure, cholesterol levels, and cardiac markers. The study anticipates significant improvements in medication adherence rates, reduction in medication errors and adverse drug interactions, enhanced cardiac risk factor management, and decreased 30-day hospital readmission rates. Patient satisfaction scores are expected to improve using validated tools like SF-36. Cost-effectiveness analysis is projected to demonstrate reduced healthcare expenditures through decreased medication costs and shorter hospital stays. This comprehensive evaluation of PCS in MI management will provide evidence-based insights into optimizing pharmaceutical care delivery for cardiovascular patients, potentially improving patient safety, medication adherence, and overall health outcomes while demonstrating economic benefits for tertiary care settings.

**Keywords:** Pharmaceutical Care Services, Myocardial Infarction, Medication Adherence, Drug-Related Problems, Clinical Outcomes, Patient Satisfaction, Cost-Effectiveness



ABSTRACT NO:ICCPR-SPS-122

## **Efficacy and Safety Evaluation of Diacerein, Diclofenac, and Combination Therapy in Osteoarthritis: A Prospective Observational Study**

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### **Introduction:**

Osteoarthritis (OA) is a degenerative joint disorder causing pain and functional limitation. Diclofenac provides rapid symptomatic relief but with gastrointestinal risks, while Diacerein offers delayed yet sustained benefits with better safety. This study evaluated the efficacy and safety of both drugs individually and in combination.

### **Methods:**

A six-month prospective observational study enrolled 109 OA patients, divided into Diacerein (n=36), Diclofenac (n=36), and Combination (n=37) groups. Outcomes assessed included inflammatory markers (ESR, CRP), pain (VAS), functional ability (ADL scale), and adverse drug reactions (ADRs).

### **Results:**

All groups showed significant reductions in ESR, CRP, and pain scores ( $p < 0.001$ ). Combination therapy yielded the greatest improvement (ESR 26.49→15.08; CRP 15.41→4.82; VAS 5.11→1.57) and significantly enhanced ADL. Safety was superior in the combination group, with 72.9% reporting no ADRs compared to monotherapies. Diclofenac was most associated with ulcers (25%).

### **Conclusion:**

Combining Diacerein with Diclofenac provides synergistic efficacy and enhanced safety, making it an optimized therapeutic approach for OA management.

**Keywords:** Osteoarthritis, Diacerein, Diclofenac, Combination Therapy, NSAIDs, Pain Management, Inflammation.



ABSTRACT NO:ICCPPr-SPS-123

## THE INFLUENCE OF NANOPARTICLE PROPERTIES ON ORAL BIOAVAILABILITY OF DRUGS

**kavitha sree .S \*Dr .jayavasavi**

### Abstract

Oral drug administration remains the preferred therapeutic route due to patient compliance and convenience, yet poor bioavailability significantly limits therapeutic efficacy for many drugs. Nanoparticulate drug delivery systems (NDDS) have emerged as promising solutions to overcome gastrointestinal barriers and enhance oral bioavailability. Particle size critically influences bioavailability, with nanoparticles smaller than 200 nm demonstrating superior mucus penetration and cellular uptake compared to larger particles. Surface modifications using hydrophilic polymers like polyethylene glycol (PEG) enable mucopenetration, while polycationic coatings such as chitosan enhance mucoadhesion and epithelial interaction. Shape geometry affects endocytic pathways and cellular uptake mechanisms, with elongated particles showing enhanced adhesion properties. These nanoparticle properties work synergistically to protect drugs from enzymatic degradation, facilitate transport across intestinal epithelium, and prevent first-pass metabolism. The optimization of size, surface chemistry, and morphology represents a paradigm shift in pharmaceutical formulation, offering 3-18 fold improvements in oral bioavailability for poorly soluble drugs. Understanding these structure-function relationships enables rational nanocarrier design for enhanced therapeutic outcomes

**Keywords:** nanoparticles, oral bioavailability, drug delivery, particle size, surface modification, mucoadhesion, gastrointestinal absorption, pharmaceutical nanotechnology, NDDS, bioavailability enhancement



ABSTRACT NO:ICCPR-SPS-124

## RECENT ADVANCES IN THE CLASSIFICATION SYSTEMS OF CRUDE DRUGS : FROM TRADITION TO MODERN APPROACHES

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### ABSTRACT:

Crude drugs which are derived from either plant or animal sources or minerals, have been important in traditional medicine. Appropriate classification is necessary for identification, quality assurance, and therapeutic readiness. Gradually, the methods for classifying drugs changed from traditional and to now include technological modalities. Traditional systems classify crude drugs in several ways, often grouping drugs by name (alphabetical), morphological features, taxonomic (botanical or zoological) hierarchies, therapeutic effects (pharmacological), chemical constituents (chemical), or a combination of chemical profiles and taxonomic (chemo-taxonomic). Modern systems of classification, such as deep learning model-algorithm image recognition, and molecular methods (ex: DNA barcoding, phylogenetic) methods, allows for increased accuracy and (especially) efficiency of drug classification and identification; these modern systems can often facilitate precise determinations of species level and relationships. The integration of traditional and modern systems to classify crude drugs has increased accuracy and efficiency through a combination of approaches. Machine learning models are capable of classifying medicinal plants with greater accuracy reading from pictures of the plant; this reduces reliance on the skill and experience of an expert. The revolution in classification will be indicative of the progress of science and technology. Each approach is influenced by the strengths of both ways, and improve reliability safety, quality control, outcome determinants and sentence therapeutic possibilities reliant on crude drugs. Future directives will be directed at developing combined, standardized classification systems that integrates both traditional and modern technology.

**KEYWORDS:** CLASSIFICATION SYSTEMS, DEEP LEARNING REVOLUTION  
CHEMOTAXONOMY COMBINED APPROACH.



ABSTRACT NO:ICCPPr-SPS-125

## **Intranasal Orexin Therapeutics for Sleep and Cognition: A Review of Pharmacological and Chronobiological Perspectives in Space Medicine**

Thanuja. V\*

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### **Abstract**

Astronauts on prolonged space missions experience profound sleep–wake disturbances due to microgravity, circadian desynchronization, and radiation exposure, leading to impaired cognition and reduced operational performance. Similar pathophysiological features are observed in terrestrial disorders such as narcolepsy, Alzheimer’s disease, and age-related cognitive decline, where current pharmacotherapies provide only partial benefit. This review highlights multidisciplinary approaches for mitigating circadian and cognitive dysfunction, including light-based entrainment, pharmacological modulation, gut–brain axis interventions, and complementary traditional practices. Particular emphasis is placed on the hypothalamic orexin (hypocretin) system, a central regulator of arousal, motivation, and memory. Intranasal administration of orexin-A peptides has emerged as a promising non-invasive strategy to bypass the blood–brain barrier and restore neural signaling. Preclinical evidence demonstrates enhanced cognitive resilience and reversal of sleep-related deficits with this approach. By integrating chronobiology, neuropharmacology, and innovative drug delivery, orexin-targeted therapeutics hold strong potential not only for space medicine but also for aging populations and neurodegenerative disease management on Earth.

**Keywords:** Orexin-A, Intranasal peptides, Sleep regulation, Cognitive resilience, Spaceflight countermeasures, Neurodegenerative disorders



ABSTRACT NO:ICCP-SPS-126

**Recent Trends and Challenges in Meningitis Treatment: A****Pharmacological Perspective****Saiganesh S, Dr. K. Manjuladevi\*****Department of Pharmacology****School of Pharmaceutical Sciences, VISTAS****Email:gsai7514@gmail.com****Abstract**

Meningitis is a serious medical condition in which the protective membranes covering the brain and spinal cord, called the meninges, become inflamed. It is commonly caused by bacterial, viral, or fungal infections, with bacterial meningitis being the most severe form. The disease progresses rapidly and can cause fever, headache, neck stiffness, nausea, and confusion. If not treated promptly, it can lead to long-term complications such as hearing loss, seizures, brain damage, or death.

Treatment of meningitis is evolving due to challenges such as the blood-brain barrier (BBB), antimicrobial resistance (AMR), and long-term neurological effects in survivors. Relapse may occur when infection returns after initial treatment, often due to incomplete eradication of pathogens, resistant strains, or delayed therapy. To address these issues, healthcare is shifting toward faster, patient-centered strategies.

Recent diagnostic advances have transformed meningitis management. Traditional cerebrospinal fluid (CSF) cultures, which take several days, are being replaced by rapid molecular tools such as multiplex PCR, capable of detecting multiple pathogens within an hour, and CSF C-reactive protein (CRP) tests that provide results in just 30 minutes. Prevention has also improved with next-generation vaccines, including the pentavalent MenABCWY and the affordable Men5CV, offering broader protection and simpler immunization schedules. Emerging therapies like nanomedicine and pharmacogenomics aim to improve drug delivery across the BBB and support personalized treatment approaches.

Furthermore, about one in five survivors of bacterial meningitis suffers permanent problems such as neurological damage or physical disabilities. Continued research, innovative therapies, and active pharmacist involvement are essential to enhance meningitis prevention, diagnosis, and treatment globally.

**Keywords:** Blood-Brain Barrier, Antimicrobial Resistance, Vaccination, Multiplex PCR, Pharmacogenomics



ABSTRACT NO:ICCP R-SPS-127

## BALANCING HORMONES NATURALLY, THE POWER OF PLANT BASED MEDICINE

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### **ABSTRACT:**

Balancing hormones naturally involves a combination of lifestyle changes, diet, stress management, and sometimes herbal or supplemental support. Here's a comprehensive approach to get you started. PLANT for optimal The US healthcare cost has surged since the 1980s, with over 70% spent on unhealthy lifestyles causing obesity, diabetes, and cardiovascular disease. Physician burnout is a growing issue, and a whole-foods, plant-based diet is suggested as a solution for optimal health. Balancing hormones naturally involves lifestyle adjustments focused on diet, exercise, stress management, and sleep, as well as avoiding toxins. Specific dietary choices, like including healthy fats and consuming a rainbow of vegetables, can also support hormone regulation. Balancing hormones can make a huge difference in energy, mood, sleep, weight, and overall health. How you go about it depends on which hormones are out of balance and what's causing the imbalance. Here's a general guide based on common hormone categories (e.g., estrogen, testosterone, cortisol, insulin, thyroid). Hormonal balance is fundamental to human health, influencing metabolism, reproduction, stress response, and emotional well-being. Growing evidence highlights the role of plant-based nutrition and phytochemicals in supporting endocrine harmony. Plant-derived compounds such as phytoestrogens (found in soy, flaxseeds, and legumes), adaptogenic herbs (ashwagandha, maca, rhodiola), and nutrient-dense whole foods contribute to the regulation of estrogen, progesterone, testosterone, cortisol, and insulin.

**KEY WORDS:** Hormone balance, Natural hormone balance, Balancing hormones, Hormonal health, Hormone regulation, Endocrine health, Hormone support



ABSTRACT NO:ICCP-SPS-128

**Efficacy And Safety Of Hydrogel-Based Formulations In The Management Of Seborrheic Dermatitis: A Clinical Perspective**

Submitted by

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**INTRODUCTION:** Seborrheic dermatitis (SD) is a common chronic inflammatory skin disorder characterized by erythema, scaling, and pruritus primarily affecting areas rich in sebaceous glands, such as the scalp and face. The pathogenesis is multifactorial with involvement of Malassezia yeast proliferation and associated inflammation. Conventional treatments include antifungals and corticosteroids, but their long-term use is limited by side effects. Hydrogels have emerged as promising topical delivery systems offering better tolerability and moisturization.

**BACKGROUND:** Hydrogels, such as desonide hydrogel and low molecular weight hyaluronic acid sodium salt gel, have been formulated to improve therapeutic outcomes and patient compliance in SD treatment. These hydrogels combine anti-inflammatory and antifungal effects with enhanced cosmetic acceptability and skin hydration.

**METHOD:** Clinical studies have investigated subjects with mild to moderate seborrheic dermatitis applying hydrogel formulations twice daily for periods ranging from four to eight weeks. Assessments included pruritus, erythema, scaling, and physician global assessments using standardized scales..

**RESULTS:** Results showed that desonide hydrogel 0.05% significantly reduced erythema, scaling, pruritus, and induration in facial and scalp SD after four weeks, demonstrating good tolerability without greasy residue. Similarly, topical application of hyaluronic acid sodium salt gel 0.2% markedly improved the severity of facial SD symptoms, with reductions of erythema, and pruritus at four weeks. Improvement was sustained at eight weeks in a majority of subjects, with excellent safety profiles and no reported adverse events.

**CONCLUSION:** Hydrogel formulations, including corticosteroid and hyaluronic acid-based gels, represent effective and well-tolerated treatments for seborrheic dermatitis. They offer the advantages of moisturizing benefits, non-greasy application, and improved patient compliance, making them suitable for facial and scalp involvement in SD. Continued research and development of hydrogel-based therapies may further optimize management strategies for this chronic condition.

**KEYWORDS:** Seborrheic dermatitis, Topical hydrogel, Desonide, Hyaluronic acid, Malassezia



ABSTRACT NO:ICCPR-SPS-129

**Obesogens and Their Role in the  
Development of Obesity - A Review****Yuvaraj.B****B.Pharmacy, III Sem, School of pharmaceutical sciences, VISTAS, Chennai, Tamil Nadu**Corresponding author: Dr. M. Dheenadhayalan, Assistant Professor, Department of pharmacy  
Practice, School of pharmaceutical sciences, VISTAS, Chennai, Tamil Nadu**Email:** Yuvarajbalasundaram20@gmail.com**Background**

Obesity is a worldwide pandemic in adults as well as children and adds greatly to health care costs through its association with type 2 diabetes, metabolic syndrome, cardiovascular disease, and cancers. The prevailing medical view of obesity is that it results from a simple imbalance between caloric intake and energy expenditure. However, numerous other factors are important in the etiology of obesity. The obesogen hypothesis proposes that environmental chemicals termed obesogens promote obesity by acting to increase adipocyte commitment, differentiation, and size by altering metabolic set points or altering the hormonal regulation of appetite and satiety. Many obesogens are endocrine disrupting chemicals that interfere with normal endocrine regulation. Endocrine disrupting obesogens are abundant in our environment, used in everyday products from food packaging to fungicides. In this review, we explore the evidence supporting the obesogen hypothesis, as well as the gaps in our knowledge that are currently preventing a complete understanding of the extent to which obesogens contribute to the obesity pandemic

**Conclusion:**

Obesogens represent a significant and often overlooked environmental factor contributing to the global rise in obesity, acting through complex mechanisms that disrupt metabolic regulation, hormone signaling, and energy balance.

**Keywords:**

Obesogens, Obesity, Etiology of obesity, Endocrine hormone imbalance



ABSTRACT NO:ICCP-SPS-130

**AI Driven Algorithm for Personalized Dose Adjustment in Clinical Practice****Department of Pharmacy Practice, School of pharmaceutical science, VISTAS, Chennai****AUTHOR NAME : S.V.VARSHA <sup>a\*</sup>, Dr.P.MAHESHWARI <sup>b</sup>****Email: varshavntsh@gmail.com****Introduction**

Dose adjustment is one of the most critical challenges in clinical practice. Traditional dosing strategies are often “one-size-fits-all,” which can result in under dosing (ineffectiveness) or over dosing (toxicity). Patient variability in genetics, organ function, comorbidities, and drug interactions makes personalized dosing essential. Artificial Intelligence (AI) offers a transformative approach by integrating clinical data, pharmacokinetic/pharmacodynamic (PK/PD) models, and real-time monitoring to recommend individualized doses.

**Methodology**

AI in Antibiotic Dose Adjustment in Critically ill patients (e.g., sepsis, septic shock) exhibit altered drug clearance, making standard antibiotic dosing ineffective. Antimicrobial resistance (AMR) adds further complexity. AI Solution includes Machine learning models predict patient-specific pharmacokinetics for drugs like vancomycin and aminoglycosides. Decision support systems (e.g., AutoKinetics trial) combine EHR data, Bayesian PK modeling, and bedside monitoring to optimize dosing. Impact: AI improves target attainment, reduces toxicity, and supports antibiotic stewardship programs to slow AMR.

**Conclusion**

AI-driven algorithms are reshaping the way clinicians approach dose adjustment in oncology, antibiotics, and anticoagulant therapy. By leveraging real-time patient data and predictive modeling, these systems move us closer to true precision dosing, improving patient outcomes while minimizing risks.



ABSTRACT NO:ICCP-SPS-131

**“CAR-T at the Crossroads: Balancing Efficacy and Safety in Heavy Pretreatment Hematologic Malignancies”****Tasnim N<sup>\*1</sup>, Dr.V.Jayashree<sup>2</sup>****<sup>1\*</sup>B.Pharm student, Department of Pharmacology, School of Pharmaceutical Sciences, VISTAS, Chennai****Email: jeya.sps@vistas.ac.in****Abstract:**

CAR-T (Chimeric Antigen Receptor T-cell) therapy is a revolutionary immunotherapy that genetically engineers T cells to target cancer cells. It works by reinfusing the own immune cell, which is injected with CAR after lymphodepleting chemotherapy, which gives more efficacy for the treatment. But it has challenges of toxicities, which include Cytokine Release Syndrome (CRS), CAR-T-cell-related Encephalopathy Syndrome (CRES), infections, and cytopenia. It also has a resistance mechanism, like antigen escape, an immunosuppressive tumor microenvironment, and limited persistence. Still, there are more strategies to overcome these challenges, including dual/multi-target CAR-T cell therapy, genome editing techniques, and combination therapy. CAR design has five evolutions, which are from the first to the fifth generation. Five CAR T-cell therapies have been FDA-approved, including Kymriah, Yescarta, Tecartus, Breyanzi, and Abecma. To reduce the long and complex process of CAR-T cell therapy, the following can be done in the future to enhance the treatment and save time: a Multifunction Alginate scaffold for T cell Engineering and Release (MASTER), rapidly engineered non-activated CAR-T cells.

**Keywords:** Genetic, Lymphodepleting Chemotherapy, Immunotherapy



ABSTRACT NO:ICCPPr-SPS-132

**TARGETED NANOFORMULATIONS OF PHYTOCHEMICALS IN IBD  
MANAGEMENT**

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**ABSTRACT**

Inflammatory bowel disease (IBD) is an idiopathic disease, that affect the GIT, especially the colon and ileum regions. It can be classified into Crohn's disease and ulcerative colitis, which are among the chronic GI diseases with unknown pathogenesis. Conventional treatments for IBD include biologics, corticosteroids, and immunomodulators which are often limited due to side effects, overall systemic toxicity and decreased patient compliance. Hence, the requirement of selective and site-specific routes of drug delivery to the inflamed location of the colon remain of high importance. Various in vitro and in vivo researches and studies have been performed and recorded to demonstrate that phytochemicals and natural macromolecules from plants like curcumin, resveratrol, quercetin, and green tea reduce IBD-related complications. As a result, Nano-formulations are extensively researched. Here, nano-formulation strategies offer a promising solution by encapsulation of drug within polymeric nanoparticles, lipid carriers, nano emulsions, and hydrogel systems, thereby improving stability, targeted colonic delivery, and controlled release. the future of IBD and Nanotechnology must aim optimization of carriers, and conducting and executing successful and well researched clinical trials to ensure that the nano formulation is safe, efficacious and shows a long- term therapeutic potential.

**KEY WORDS:** Crohn's disease, Ulcerative colitis, Inflammatory bowel disease, Curcumin, Resveratrol, Nanotechnology, Nano-formulations, Phytochemicals, Colonic delivery



ABSTRACT NO:ICCP 2ND-SPS-133

**Sustainable and Green Manufacturing in Pharma****AUTHOR : P.BARANIDHARAN <sup>a\*</sup>,Dr.K.KARTHICKEYAN <sup>b</sup> ,Department of pharmacy practice,****SCHOOL OF PHARMACEUTICAL SCIENCE – VISTAS****VELS INSTITUTE OF SCIENCE,TECHNOLOGY AND ADVANCED STUDIES,CHENNAI****Email : baranipurushothaman3789@gmail.com****ABSTRACT :**

Sustainable and green manufacturing in the pharmaceutical industry has emerged as a critical approach to balance global health demands with environmental responsibility. Key strategies include the use of renewable raw materials, environmentally benign solvents, biocatalysis, and continuous flow processing to reduce waste and improve atom economy.

Implementation of energy-efficient systems, solvent recovery, and zero liquid discharge technologies further minimizes ecological impact. Advances in digitalization and artificial intelligence support optimization of processes, predictive maintenance, and reduction of resource consumption. Regulatory bodies and international consortia are also encouraging sustainable practices through guidelines, incentives, and recognition of eco-friendly innovations. Case studies from leading pharmaceutical companies demonstrate that greener processes not only reduce environmental footprints but also improve cost-effectiveness and product quality.

Ultimately, sustainable and green manufacturing ensures that the pharmaceutical industry evolves towards a circular economy model, safeguarding both human health and environmental well-being in alignment with global sustainable development goals.

**KEYWORDS :**

Sustainable manufacturing,Green chemistry,pharmaceutical industries,biocatalyst,solvent recovery,waste minimization.



ABSTRACT NO:ICCP-040

## **MRSA PSOAS ABSCESS WITH SPONDYLODISCITIS WITH MRSA BACTEREMIA: A CASE REPORT**

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### **ABSTRACT**

Methicillin-resistant *Staphylococcus aureus* (MRSA) is a notorious, virulent, opportunistic pathogen known for its resistance to multiple antibiotics and its ability to cause severe systemic infections. Among the less common but highly serious complications of MRSA infection are psoas abscess and spondylodiscitis, both of which may occur as a result of hematogenous spread from a primary bacteremic focus. A 63 years old male patient came with the complaints of lower back pain for two months and which was radiating to right lower limb. He has the past medical history of type2 DM. Laboratory investigations shows elevation in inflammatory markers and positive blood cultures for MRSA. Magnetic resonance imaging (MRI) of the spine and abdomen showed evidence of a psoas abscess extending into the lumbar vertebral region, with associated spondylodiscitis. The patient was managed with intravenous teicoplanin, image-guided abscess drainage and laminectomy L1- L2 was done. A multidisciplinary approach, involving infectious disease specialists, urologists, and spine surgeons, was essential for optimal recovery.

**KEYWORDS:** PSOAS abscess, MRSA, spondylodiscitis, inflammation, antibiotic resistance.



ABSTRACT NO:ICCPR-SPS-134

**NUTRITIONAL STRATEGIES FOR RETINAL HEALTH IN DIABETES****Mohammed Musthakeem. Y, M. Kalaiarasan****SCHOOL OF PHARMACEUTICAL SCIENCE – VISTAS****VELS INSTITUTE OF SCIENCE, TECHNOLOGY AND ADVANCED  
STUDIES, CHENNAI****Email: mohamedmusthakeem248@gmail.com****Abstract:**

Diabetic retinopathy (DR) is a major cause of vision loss worldwide, driven by chronic hyperglycemia that induces oxidative stress, inflammation, and microvascular damage in the retina. Emerging evidence highlights nutrition as a key modifiable factor in retinal protection. Antioxidants (vitamins C and E), carotenoids (lutein, zeaxanthin), omega-3 fatty acids, and minerals such as zinc and magnesium help reduce oxidative injury, strengthen vascular integrity, and modulate inflammatory pathways. Dietary strategies emphasizing leafy greens, fatty fish, nuts, seeds, and colorful fruits and vegetables can delay the onset and progression of DR. Integrating personalized nutritional interventions alongside conventional diabetes care offers a holistic approach to preserving vision and improving quality of life.

**Keywords:** Diabetic retinopathy, Vision loss, Hyperglycemia, Oxidative stress, Microvascular damage, Retinal protection.



ABSTRACT NO:ICCP 2ND-041

## IMPACT OF PROBIOTICS IN IMPROVING IMMUNE RESPONSE OF GERIATRIC POPULATION- AN INTERVENTIONAL STUDY

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### ABSTRACT

Geriatric population are an important population who undergoes the natural process of senescence. The elderly population when compared with adults have a reduction in the gut microbiota. The deterioration of the gut microbiota is related to the pathogenesis of both intestinal disorders (IBD, IBS etc) and extra- intestinal disorders (allergy, asthma etc). With the increase in global aging population, there is a growing need to explore interventions that can help to improve health outcomes and overall well-being in older adults. Probiotics are live microorganisms have a major role in promoting gut health & modulating immune function. The aim of the study was to assess the impact of probiotics in improving the immune response of geriatric population. The objective of the study was to assess the impact of probiotics on immune response by using serum biochemical indicators. The study was conducted on geriatric population with a study duration of 6 months. Elderly people above the age of 65 were selected for the study on the basis of inclusion and exclusion criteria. The subjects were administered with probiotics as once daily regimen for 30 days. The findings of this study demonstrate that probiotic supplementation in elderly individuals can lead to significant improvements in immune response. The intervention was well-tolerated, with minimal side effects and high participant satisfaction. The statistically significant enhancement in serum biochemical indicators supports the hypothesis that probiotics play a beneficial role in geriatric health through modulation of the gut microbiota and associated systemic effects.

**KEYWORDS:** Probiotics, Geriatric Population, Immune Response, Serum Biochemical Indicators.



ABSTRACT NO:ICCP 2ND-SPS-135

**EMERGING OF PRECISION MEDICINE THAT IMPACT ON PHARMACY PRACTICE****Lakshmi. V<sup>1</sup>, Dr M K Sundar Sri\*****School of Pharmaceutical Sciences****Vels Institute of Science Technology and Advanced Studies, Pallavaram -Chennai****Email:lakshmivenkat520@gmail.com****ABSTRACT:**

Most medical treatments are designed for the average patient as a one-size-fits-all-approach, which may be successful for some patients but not for all. Precision medicine, sometimes known as "personalized medicine" is an innovative approach to tailoring disease prevention and treatment that takes into account differences in people's genes, environments, and lifestyles. The goal of precision medicine is to target the right treatments to the right patients at the right time. Advances in precision medicine have already led to powerful new discoveries and FDA-approved treatments that are tailored to specific characteristics of individuals, such as a person's genetic makeup, or the genetic profile of an individual's tumor. Patients with a variety of cancers routinely undergo molecular testing as part of patient care, enabling physicians to select treatments that improve chances of survival and reduce exposure to adverse effects. Personalized medicine generally involves the use of two medical products typically, a diagnostic device and a therapeutic product to improve patient outcomes. A diagnostic device is a type of medical device. Diagnostic devices include both in vitro tests such as assays used in measurement of genetic factors and in vivo tests, such as electroencephalography (EEG), electrocardiography (ECG), or diagnostic imaging equipment. Many medical device therapies are now capable of being tailored to specific patient characteristics. Additionally, physiological sensors can be used to predict treatment responses for individual patients. For example, three dimensional (3D) printing has been used to create personalized medical devices based on imaging of a patient's anatomy. The various tools by which precision medicine seeks to achieve its goals are omics, pharmaco-omics, big data, artificial intelligence, machine learning (ML), environmental, social and behavioural factors and integration with preventive and public health.

**Keywords:** Personalized medicine, Clinical practice, Genetic profile, Targeted medication, Machine learning.



ABSTRACT NO:ICCP-SPS-136

**THE INTEGRATION OF TRADITIONAL AND MODERN MEDICINE****Fadheela A.R<sup>\*1</sup>, A.Vijayalakshmi<sup>2</sup>****<sup>1</sup>B.Pharm student, School of Pharmaceutical Sciences****<sup>2</sup>Professor, Department of Pharmacognosy, School of Pharmaceutical Sciences****Vels Institute of Science Technology And Advanced Studies (VISTAS),  
Pallavaram, Chennai.****Abstract**

Pharmacognosy itself is an all-embrasive subject linking traditional medicine to mainstream. It highlights the investigation of bioactive polyphenols from a variety of sources especially medicinal, found in plants with attention to structural features and the therapeutic applicability of these compounds. Traditional medicine and modern medicine are two separate health care systems, both have their own advantages to provide a lot of useful information if used skillfully. Traditional medicine utilizes natural resources in disease prevention, diagnosis, and therapy. Pharmacognosy is the scientific study of plant-derived drugs bridging the gap between Traditional medicine and Modern medicine. Traditional medicine has a long tradition and had been developed as a main healthcare system for several population, whereas the development of Modern medicine has been accompanied by the technological advances of modern science. A combined model using both Traditional medicine and Modern medicine may provide a more comprehensive patient-focused care model. Traditional medicine has some problems due to absence of standardization and issue of quality control in Traditional medicine, herb-drug interactions. Modern medicine is true science based with properly conducted and repeatable scientific studies and the principle of use of evidence-based medicine for scientific diagnosis and treatment of disease. The future of this field is in integrating traditional wisdom and modern science, to ensure their efficacy and safety. Modern medicine as it is now, evidence based, pharmaceutical and technically driven, has contributed immensely to better health outcomes across the world. However, its limitations, such as high price, drug adverse effects and its possible combination with modern medicine has become an alternative option again. Pharmacognosy has been changing considerably by application of modern methods or by revision of traditional recourses. The acceptance of Traditional medicine and Modern medicine provides the possibility for a technical advance of the medical approach in the 21<sup>st</sup> century. The future of pharmacognosy is to encourage interdisciplinary approaches, support the legal aspects, and ensure equitable accessibility. An integrated system of healthcare that includes Traditional medicine as one part and Modern medicine as another part may provide safer, effective, and personalized therapeutic options for various populations.

**Key words:** Pharmacognosy, Traditional medicine, Modern medicine, Advanced techniques, Bioactive compounds.



ABSTRACT NO:ICCPPr-SPS-137

**“Thyroid Under Siege: The Role of Stimulating Immunoglobulins in Graves’ Disease”**

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**ABSTRACT:**

The overproduction of thyroid hormones (T3 and T4) as a result of thyroid-stimulating immunoglobulins (TSIs) attaching to the thyroid-stimulating hormone receptor (TSHR) is the main symptom of Graves' disease, an autoimmune condition that results in hyperthyroidism. As a result, the thyroid gland is constantly activated, which causes an overabundance of hormones to be synthesized and secreted. Environmental factors, immune system malfunction, and genetic predisposition all play a part in the pathophysiology of Graves' illness. While environmental variables including infections, stress, smoking, and iodine levels can cause the condition to develop, genetic factors, especially in the human leukocyte antigen (HLA) system, boost vulnerability. Clinical manifestations include the characteristic ocular features of Graves' orbitopathy (exophthalmos, dry eyes, and diplopia) and the typical symptoms of hyperthyroidism (weight loss, tachycardia, tremors, heat intolerance, and weariness). Diagnostic tests, high TSI levels, and thyroid function testing are used to confirm the diagnosis. To normalize thyroid hormone levels and manage symptoms, treatment options include radioactive iodine therapy, antithyroid drugs (such as methimazole), and surgery (thyroidectomy). Corticosteroids may be utilized in Graves' orbitopathy patients. Even though most people can control the condition with long-term care, thyroid dysfunction can still exist and need to be managed, especially if surgery or radioactive iodine therapy causes hypothyroidism. For long-term problems to be avoided and symptoms to be effectively controlled, early diagnosis and adequate treatment are essential.

**Key words:** Graves diseases, thyroid hormones, thyroid-stimulating immunoglobulins, thyroid-stimulating hormone receptor, Hyperthyroidism.



ABSTRACT NO:ICCP 2ND-SPS-138

**TRANSFORMING RARE DISEASE CARE: THE CASE OF LYSOSOMAL STORAGE DISORDERS IN INDIA****GOKULAKRISHNAN.D****SCHOOL OF PHARMACEUTICAL SCIENCES, VELT INSTITUTE OF SCIENCES,  
TECHNOLOGY AND ADVANCED STUDIES (VISTAS)****Email:gokulkrish160102@gmail.com****ABSTRACT**

Lysosomal storage disorders (LSDs) represent a group of rare inherited metabolic disorders resulting from defective lysosomal enzyme activity leading to progressive multi-organ system failure. To date, more than 50 subtypes have been described around the world, and although the individual diseases are rare, it is the cumulative burden that remains significant. In India, actual prevalence remains uncertain because of restricted newborn screening programs, limited local diagnostics capabilities, and insufficient clinical awareness<sup>1</sup>. Options for treatment including enzyme replacement therapy (ERT), substrate reduction therapy, and, hematopoietic stem cell transplantation, are financially unfeasible for most affected patients, given costs, inadequate insurance coverage, and very limited public availability<sup>2</sup>. The National Policy for Rare Diseases (2021) recognizes these barriers and failures, and proposes to provide support in the way of financing and infrastructure; however, implementation of recommendations has been sporadic and inconsistent<sup>3</sup>. Some of the significant gaps in care include: inequitable access to therapy and services; lack of sustainable financing; gaps in public-private partnerships; and, insufficient integration of genetic counseling and registries across the health systems<sup>4</sup>. Proposed actions to address these gaps include: enhancing national registries and capacity to support them; expanding local research efforts in cost-effective therapies; and, developing transparent, equitable, and long-term financing models. Collaborative relationships with the patient advocacy community, relevant policy and decision-makers in government, clinician groups, and private pharmaceutical agents are essential to positively orienting care planning and outcomes for patients with LSDs in India.

**KEYWORD:** Lysosomal storage disorders, enzyme replacement therapy, rare diseases, cost effective therapies.



ABSTRACT NO:ICCPR-SPS-139

**COMPARE THE EFFICACY AND SAFETY OF LAMOTRIGINE, VALPROATE SODIUM, AND LEVETIRACETAM IN ADULTS WITH NEWLY DIAGNOSED IDIOPATHIC GENERALIZED TONICCLONIC SEIZURES**

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**Abstract**

To compare the efficacy and safety of Lamotrigine, Valproate Sodium, and Levetiracetam in adults with newly diagnosed idiopathic GTCS.

This prospective, comparative interventional study was conducted over 6 months. Fifty patients aged >21 years were enrolled and treated with one of the three AEDs as per standard protocols. Efficacy was measured by reduction in seizure frequency, duration, and severity. Safety and tolerability were assessed through adverse effect monitoring, cognitive and neurological evaluations (GCS, MMSE), and quality-of-life questionnaires (QOLIE-31). Statistical analysis included t-tests, chi-square tests, and regression models.

**Expected Results:**

All three AEDs are expected to reduce seizure burden. Valproate Sodium may show superior efficacy but with greater safety concerns, while Lamotrigine and Levetiracetam are anticipated to have better tolerability and quality-of-life outcomes.

**Conclusion:**

All three drugs demonstrated clinical utility in idiopathic GTCS. Valproate Sodium was most effective for seizure control, Lamotrigine showed safer tolerability, and Levetiracetam exhibited moderate efficacy but more neuropsychiatric effects. Treatment choice should be individualized, considering efficacy, side effects, comorbidities, and patient satisfaction.

**Keywords:** Epilepsy, GTCS, Lamotrigine, Valproate Sodium, Levetiracetam, Comparative efficacy, Safety.



ABSTRACT NO:ICCP2-SPS-140

**MECP2 Mutations & Epigenetic Chaos: Unraveling Rett's Molecular Mysteries****Ashifa<sup>1\*</sup>, Dr.V.Jayashree<sup>2</sup>****<sup>1\*</sup>B.Pharm student, Department of Pharmacology, School of Pharmaceutical Sciences, VISTAS, Chennai****<sup>2</sup>Associate Professor, Department of Pharmacology, School of Pharmaceutical Sciences, VISTAS, Chennai**

Corresponding Author: Dr.V.Jayashree

**Email:** jeya.sps@vistas.ac.in**ABSTRACT:**

Rett syndrome is a rare but serious brain disorder that mainly affects girls, seen in about 1 out of every 10,000–15,000 births. Children with RTT usually grow and develop normally for the first 6–18 months of life. After that, they slowly lose skills they had learned, such as speaking and using their hands in a purposeful way. Other common signs include slower head growth leading to a small head size (microcephaly), seizures, autism-like behaviors, trouble with balance and walking (ataxia), irregular breathing such as sudden hyperventilation, and repeated hand movements that they cannot control. After this period of regression, the condition tends to stabilize, and most affected girls live into adulthood. Because RTT almost always occurs in females, scientists suspected it was caused by a mutation that is passed on the X chromosome, and that males with the same change usually do not survive. Research narrowed the cause to a gene on chromosome Xq28, later identified as methyl-CpG-binding protein 2(MECP2). This gene makes a protein called MeCP2, which helps silence certain genes by working with other proteins that control how DNA is packaged. Mutations that damage this protein—either in its binding region or in its repression region—interfere with normal brain development. In one family, two sisters carried such a mutation that came from their mother's egg cells, even though the mother herself did not show any symptoms. These discoveries revealed that Rett syndrome is linked to problems in epigenetic regulation, the process that controls how genes are switched on or off.

**Keywords:** Rett syndrome, methyl-CpG-binding protein 2(MECP2), X-linked disorder, epigenetic regulation, microcephaly



ABSTRACT NO:ICCPPr-SPS-141

## FORMULATION AND EVALUATION OF TOPICAL NANO HERBAL EXTRACT CREAM FOR ANTI-INFLAMMATORY ACTIVITY

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### Abstract

The present study focuses on the formulation and evaluation of a topical Nano herbal cream incorporating Capsicum, Green Chilly, Amla, and Quercetin for anti-inflammatory activity. These natural agents are rich in bioactive compounds such as capsaicin, flavonoids, tannins, and polyphenols, which exhibit potent antioxidant and anti-inflammatory properties. Fresh plant materials were extracted using Soxhlet apparatus, and quercetin was incorporated as a standardized flavonoid. Cream Formulation was prepared using ethanolic extract of phytoconstituents along with varying concentrations of stearic acid and evaluated for physical characteristics, pH, spread ability, viscosity, and irritancy. Anti-inflammatory activity was assessed in comparison with standard salicylic acid cream, and the herbal Nano formulation showed promising effects in reducing inflammation without irritation. The results highlight the potential of combining multiple herbal extracts with nanotechnology to enhance therapeutic efficacy, stability, and skin penetration. This study supports the development of safe, natural, and effective alternatives to synthetic anti-inflammatory topical agents.

**Keywords:** Nano herbal cream, Capsicum, Green Chilly, Amla, Quercetin, Anti-inflammatory, Formulation.



ABSTRACT NO:ICCP-042

## EVALUATING THE QUALITY OF LIFE OUTCOMES OF PROBIOTICS USE IN ELDERLY INDIVIDUALS THROUGH WHOQOL-BREF SCALE

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### ABSTRACT

The growing interest in probiotics as a supportive intervention for healthy aging has led to increasing research on their potential benefits beyond gastrointestinal health. This study evaluates the impact of probiotic supplementation on the quality of life (QoL) among elderly individuals using the WHOQOL-BREF scale, a validated tool encompassing physical, psychological, social, and environmental domains. A structured assessment was conducted to compare QoL outcomes between probiotic users highlighting significant improvements in overall well-being, particularly in digestive comfort, mental health, and daily activity performance. Findings suggest that probiotics may contribute positively to multidimensional aspects of QoL in the elderly, supporting their role as a safe and non-pharmacological adjunct to enhance healthy aging.

**KEYWORDS:** Probiotics, Elderly, Quality of Life, WHOQOL-BREF, Healthy Aging, Gut Microbiota, Well-being.



ABSTRACT NO:ICCP-043

## **EFFECT OF RISPERIDONE AMONG CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER**

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### **ABSTRACT**

Attention-Deficit Hyperactivity Disorder (ADHD) is a common neurodevelopmental disorder that affects both children and adults. It is marked by ongoing patterns of inattention, hyperactivity, and impulsivity that can interfere with learning, behaviour, and daily functioning. Individuals with ADHD may struggle to focus, sit still, follow instructions, which can impact their academic, social, and occupational life. It is commonly diagnosed in childhood and often continuing into adulthood. The hyperactivity symptoms include restlessness, inability to stay seated, or talking excessively. The aim of this study was to assess the effectiveness of Risperidone therapy among children's in improving ADHD symptoms and was assessed using a rating scale called pediatric symptom checklist. In this study, patients exhibited notable reductions in irritability, aggression and hyperactivity following treatment with risperidone and tolerated the medication with minimal side effects and maintained good adherence. This study shows that risperidone effectively improved psychological functioning in children with ADHD and also highlights the clinical effectiveness and tolerability of risperidone in children with marked symptom reduction and minimal side effects.

**KEYWORDS:** ADHD, Risperidone, hyperactivity



ABSTRACT NO:ICCP 2025-SPS-142

## **DRUG REPURPOSING IN PSYCHIATRY: LORATADINE AS A CANDIDATE FOR DEPRESSION**

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### **ABSTRACT:**

Depression is a major psychiatric disorder that is commonly managed with antidepressants, particularly selective serotonin reuptake inhibitors (SSRIs). While effective, these agents are often limited by delayed onset of action, incomplete response, and adverse effects such as weight gain and sexual dysfunction, which can reduce patient compliance. To address these challenges, drug repurposing has gained increasing attention as a cost-effective and time-efficient strategy. Loratadine, a second-generation antihistamine widely prescribed for allergic conditions, represents a novel candidate in this context. Histamine pathways are known to influence central nervous system regulation and mood, suggesting potential antidepressant effects. With its favorable safety profile, non-sedating properties, and broad clinical use, loratadine may offer new therapeutic opportunities if validated through further preclinical and clinical studies. Thus, integrating loratadine into drug repurposing frameworks, alongside conventional antidepressants, could provide a promising approach for safer and more effective management of depression.

**KEY WORDS:** Depression, anti-depressants, drug repurposing, loratadine, novel therapeutic strategy.



ABSTRACT NO:ICCP 2025-SPS-143

## “Development of a Herbal Patch for Dysmenorrhea: A Patient-Friendly Alternative to Conventional Therapy”

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### Abstract

Dysmenorrhea, or painful menstruation, is a common Gynecological disorder that greatly impacts women's health and quality of life. Conventional management methods such as nonsteroidal anti-inflammatory drugs (NSAIDs) and hormonal therapies can provide relief but are often associated with side effects like gastric irritation, hormonal imbalance, and long-term dependency. To address these limitations, a herbal transdermal patch is being developed as a safer and more patient-friendly alternative. Herbal ingredients including *Zingiber officinale* (ginger), *Mentha piperita* (peppermint), and *Cinnamomum cassia* (cinnamon) are selected for their analgesic, anti-inflammatory, and antispasmodic properties. The patch will be formulated using polyvinyl alcohol (PVA) and Hydroxypropyl methylcellulose (HPMC) as film-forming polymers, with glycerol as a plasticizer and essential oils as permeation enhancers. After preparation, it will be evaluated for appearance, thickness, folding endurance, weight variation, moisture content, drug content, and in vitro release profile. The herbal patch aims to provide localized and sustained release of bioactive compounds, ensuring effective pain relief with minimal side effects. This approach highlights the potential of herbal patches as a natural, convenient, and patient-compliant therapy for managing dysmenorrhea.

**Keywords:** Dysmenorrhea, Herbal patch, Menstrual pain relief, Transdermal delivery, Polymeric formulation, Natural analgesics, Patient-friendly therapy.



ABSTRACT NO:ICCP-SPS-144

**BIOACTIVE COMPOUNDS FOR THE TREATMENT OF MENINGITIS****Saishruthi. A, Dr. K. Manjuladevi\***

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**Email:saishruthisaishruthi796@gmail.com****Abstract**

Meningitis is a severe inflammation of the meninges caused by bacteria, viruses, fungi, or parasites. Naturally acquired analgesical source have a advantages over the currently available drug treatment. Bioactive compounds from plants, fungi, and marine sources have potential with search phrases includes antimicrobial, antioxidant, anti-inflammatory, neuroprotective, and immunomodulatory effects in meningitis. Recent research reveals that many compounds are potential activity against meningitis. They are Berberine, andrographolide, curcumin, and quercetin inhibit pathogens and reduce neuroinflammation in bacterial meningitis. Resveratrol, EGCG, and luteolin show antiviral and antioxidant activity in Viral meningitis. Allicin, thymol, and saponins support antifungal treatment in Fungal meningitis. Artemisinin and neem extracts exhibit antiparasitic effects in Parasitic meningitis. Curcumin, boswellic acid, and ashwagandha regulate immune response in Non-infectious meningitis. As per the WHO, the standard therapy may not be replaced until complete research on the bioactive compounds with success rate in Clinical trail. This enhanced the outcome, minimize the side effects and decrease resistance and produces Pharmacological action. This study concludes the natural resources have promising therapy in management of Meningitis.

**KEYWORDS:** Meningitis, Bioactive Compounds, Antimicrobial, Anti-inflammatory, Neuroprotection.



ABSTRACT NO:ICCP 2ND-SPS-145

**“Network-Based Models for Single-Cell Multi-Omics Data Integration”****Tejaswini Rah Raman\*1, Dr.V. Jayashree2**

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**Abstract**

Omics technologies are reshaping the 21<sup>st</sup>-century biological sciences by providing comprehensive insights into cellular functions and disease mechanisms. Advances in genomics, transcriptomics, proteomics, and metabolomics that along with single-cell omics are enhancing resolution and enabling precise biomarker discovery. Improvements in high-throughput sequencing and bioinformatics have expanded accessibility and analytical capacity, driving the integration of multi-omics data. These innovations are accelerating personalized medicine, leading to improved diagnosis, prognosis, and therapeutic strategies. The advancements in omics technologies have significantly enhanced our understanding of biological complexity, with high-throughput sequencing revealing critical genetic variations and mutations associated with various diseases. Proteomics and metabolomics have mapped extensive protein interaction networks and identified key metabolic alterations in diseases, revealing potential biomarkers for diagnosis and therapy. The application of AI and machine learning has significantly improved the interpretation of complex omics data, leading to the identification of new biomarkers and therapeutic targets. These innovations are driving the development of personalized medicine, offering more accurate diagnostics and tailored treatments. As omics technologies continue to evolve, they will play a crucial role in advancing healthcare and precision medicine.

**Keywords:** Healthcare, Omics Technologies, Genomics, Transcriptomics, Single Cell Analysis.



ABSTRACT NO:ICCP-SPS-146

## **ROLE OF REDOX-DRIVEN CELL DEATH - DISULFIDIPTOSIS - IN DISEASE AND DRUG DEVELOPMENT**

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**Pharm. D Intern**

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### **ABSTRACT:**

Recently described Disulfidptosis is an oxidative-dependent type of controlled cell death that occurs in high-SLC7A11-expressing cells in response to excess cystine accumulation and disulfide stress, resulting in aberrant disulfide bond formation, actin cytoskeleton collapse, and rapid cell death, biomarkers of NADPH depletion (such as glucose starvation). Mechanistically, cystine uptake mediated by SLC7A11, decreased pentose phosphate pathway activity (lowering NADPH), and subsequent developing disulfide bonds across cytoskeleton proteins are characteristic of disulfidptosis versus other modalities e.g., ferroptosis or apoptosis, and also display crosstalk points of metabolism determining susceptibility. It is shown by emerging preclinical evidence that disulfidptosis is therapeutically exploitable with respect to glucose metabolism, or that selective killing of SLC7A11-high cancer cells by disulfide stress can be achieved with a range of candidate small molecules or pathway modulators (including glucose uptake inhibitors or actin dynamics modulators). The disulfidptosis signature of gene signatures can have a prognostic and predictive role in tumor types in translation, and can be used to help select patients to respond to metabolism-directed therapies, but there are challenges, including the necessity of highly sensitive biomarkers of disulfide stress, systemic redox perturbation toxicity, and more detailed characterization of relationships with the tumor microenvironment and immune responses. In short, the study by Disulfidptosis introduces a new axis to the regulated-cell-death landscape whose implications on drug development are obvious. Logically engineered approaches exploiting metabolic weaknesses and exact administration or mixture courses may implement this to selective anti-cancer therapies, as long as future research confirms biomarkers, enhances safety margins, and progresses rigorous preclinical to clinical work.

*Keywords: Disulfidptosis, Redox-mediated cell death, Cystine-accumulation, NADPH-degradation, Cytoskeletal collapse*



ABSTRACT NO:ICCPPR-SPS-147

## **Innovations in Clinical Pharmacy Practice: Implementing New Technologies in ICU Medication Management**

**S. YUGITHA (PHARM.D (PB) - II YEAR)**

Under the guidance- Dr. M. DHEENADHAYALAN

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### **Abstract**

Critically ill patients are at escalated risk for drug-related problems (DRPs) due to complex pharmacotherapy, organ dysfunction, and rapidly fluctuating physiological conditions. Clinical pharmacists (CP) have emerged as an essential integral member of the multidisciplinary intensive care unit (ICU) team, contributing significantly in medication management to enhance patient safety and improve outcomes. The advancement in technologies and digital health is reshaping the clinical pharmacy practice in ICU offers a new opportunity to optimize pharmacotherapy for critically ill patients. The main objective of this review is to explore the integration of technologies and CP into ICU medication management to evaluate patient outcomes and resource utilisation for critically ill patients. A systematic review on implementation of new advanced technologies and role of CP in ICU for critically ill patients. Focused areas include electronic prescription, digital error prevention system, personalized medicine, AI-driven drug therapy recommendations, telehealth platform, therapeutic drug monitoring, dose adjustment, medication reconciliation. Integration of CP and technologies into ICU team reduces medication errors, adverse drug events and unnecessary resource utilisation. Their intervention optimizes drug selection and dosing, reduces interactions and tailor therapy according to individual patient needs which enhances safety and quality of care. CP expertise in medication management enhances therapeutic efficacy and patient safety in critically ill patients. Technology-supported medication reviews accelerate therapy adjustments and boost inter professional collaborations. Novel technologies are revolutionizing in ICU medication management, enabling CP to deliver patient-centred care. Expanded integration of pharmacy services and technology-enabled medication optimization are essential to further improve outcomes in critical care practice.

**Key words:** artificial intelligence, drug related problems, clinical pharmacists, intensive care unit.



ABSTRACT NO:ICCP 2ND-SPS-148

## **Diabetic Foot Ulcers: Current Advances in Antimicrobial Therapies and Emerging Treatment**

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### **Abstract**

Diabetic foot ulcers (DFUs) are among the most severe and challenging complications of diabetes, with serious consequences for both patients and healthcare systems. It is estimated that nearly one in four individuals with diabetes will develop a DFU during their lifetime, and more than half of these ulcers are complicated by infection, often leading to delayed healing, hospitalization, and in many cases, limb amputation. Beyond physical disability, DFUs impose substantial psychological, social, and economic burdens, making their prevention and effective management a public health priority. Traditional wound care alone is often insufficient, and recent advances have introduced a range of novel therapeutic strategies. These include molecular and regenerative approaches such as stem-cell therapy, gene therapy, and tissue engineering, as well as antimicrobial and energy-based treatments like negative-pressure wound therapy, laser, and photodynamic therapy. In addition, biologically active agents including plant extracts, antimicrobial peptides, growth factors, ozone therapy, advanced wound-care devices, and nanomedicine are being actively explored. Together, these innovative therapies provide new opportunities to accelerate healing, reduce complications, and improve long-term outcomes for patients living with DFUs.

**Keywords:** Diabetic foot ulcer, Regenerative medicine, Stem-cell therapy, Growth factors, Antimicrobial therapy, Energy-based therapy, Nanomedicine, Plant extracts, Ozone therapy, Wound healing, Amputation prevention.



ABSTRACT NO:ICCP 2ND-044

**EFFECT OF RISPERIDONE IN AUTISM SPECTRUM DISORDER****Sani Anil. S<sup>1</sup> | Drishya . L<sup>2</sup> | Shaiju S Dharan<sup>3</sup>**

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**ABSTRACT**

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by impairments in social interaction, communication difficulties, and restricted, repetitive behaviors. Pharmacological interventions are often considered when behavioral strategies alone are insufficient to manage associated symptoms such as irritability, aggression, and hyperactivity. Our research evaluated the effect of risperidone in individuals with ASD to determine its efficacy in improving behavioral outcomes. The study observed that risperidone demonstrated significant clinical benefits, particularly in reducing irritability, aggression, and temper outbursts. In addition, improvements in social responsiveness and reduction in repetitive behaviors were noted among participants. Compared with baseline, risperidone treatment was associated with a marked decrease in disruptive symptoms, leading to better overall functioning and quality of life. Some participants also showed enhanced attention span and reduction in hyperactivity. Although side effects such as weight gain and sedation were observed, these were generally manageable with careful dose titration and monitoring. Importantly, the therapeutic benefits outweighed the adverse effects in most cases. Our findings highlight that risperidone is a more effective pharmacological option for managing challenging behavioral symptoms in ASD, particularly when used alongside behavioral and educational interventions. In conclusion, risperidone plays a crucial role in improving behavioral control and adaptive functioning in individuals with autism, though long-term monitoring remains essential to ensure safety.

**KEYWORDS:** Autism Spectrum Disorder, Risperidone, Behavioral Symptoms, Irritability, Aggression, Hyperactivity, Treatment Outcome



ABSTRACT NO:ICCP 2ND-SPS-149

**The Race Against Time: The Story of the Brain-Eating Amoeba *Naegleria fowleri***  
**JK. SHESHANK SRINIVAS (PHARM.D-V YEAR)**

Under the guidance- Dr. M. DHEENADHAYALAN

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Primary amoebic meningoencephalitis (PAM), a rare but quickly spreading and frequently lethal infection of the central nervous system, is caused by the thermophilic, free-living amoeba *Naegleria fowleri*. Warm freshwater habitats like lakes, hot springs, and unkempt swimming pools are ideal for the organism's growth. The amoeba usually migrates along the olfactory nerves into the brain, where it causes acute inflammation and tissue destruction, after contaminated water enters the nasal cavity. PAM has a startling over 95% fatality rate, mostly as a result of inadequate treatment effectiveness and delayed diagnosis. Although they are available, current diagnostic techniques such as microscopy, polymerase chain reaction (PCR), and neuroimaging are frequently used too late to enhance results. High-dose antibiotics like amphotericin B, miltefosine, and combination therapies are part of standard treatment, but survival is still very uncommon. Although studies on drug repurposing, drug delivery systems aided by nanotechnology, and immunotherapeutic strategies have shown promise recently, these developments are still in their infancy and need additional clinical validation. Prevention is still the best line of defence because of the disease's quick progression and poor response to treatment. Currently, the best ways to lower the incidence of PAM are through public health education and better water sanitation practices. The pathophysiology, diagnostic difficulties, treatment constraints, and urgent need for improved preventive measures are all highlighted in this review, which summarizes the state of knowledge regarding *N. fowleri*. It emphasizes how critical it is to develop diagnostic and treatment strategies quickly in order to fight this fatal pathogen.

**Key words:** *naegleria fowleri*, primary amoebic meningoencephalitis, polymerase chain reaction.



ABSTRACT NO:ICCP-SPS-150

## **ROLE OF WEARABLE DEVICES IN EARLY DETECTION OF DRUG INDUCED CARDIAC EVENTS**

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### ABSTRACT :

Drug-induced cardiac events, such as arrhythmias, QT interval prolongation, and sudden cardiac arrest, remain a significant cause of morbidity and mortality in clinical practice. Traditional monitoring approaches, including electrocardiography and hospital-based surveillance, often fail to provide continuous, real-time detection, leading to delayed recognition of adverse events. Wearable devices, equipped with advanced sensors and AI-driven analytics, have emerged as promising tools for early identification of drug-related cardiotoxicity.

These devices enable continuous monitoring of vital parameters such as heart rate, rhythm, QT interval, and variability, providing dynamic insights into patient-specific drug responses. Integration of wearable technology with telemedicine platforms and electronic health records further enhances predictive risk assessment, timely intervention, and personalized dose optimization. This proactive approach not only improves patient safety but also reduces healthcare burden by minimizing emergency hospitalizations. The role of wearable devices in early detection of drug-induced cardiac events highlights the future direction of precision pharmacovigilance and digital health in modern therapeutics.

### KEYWORDS :

Cardiotoxicity,Wearable device,Drug induced cardiac events,QT interval monitoring,Arrhythmia detection,Pharmacovigilence.



ABSTRACT NO:ICCPPr-SPS-151

## ADENOMYOSIS IN ADOLESCENTS: DIAGNOSTIC AND MANAGEMENT CHALLENGES

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### Abstract

**Objective:** Adenomyosis, traditionally considered a condition of women above 35 years, is increasingly being recognized in adolescents with severe dysmenorrhea and heavy menstrual bleeding. This abstract highlights the diagnostic challenges and management strategies in this rare age group.

**Method:** A narrative review of adolescent cases was conducted, focusing on clinical presentation, imaging modalities, and therapeutic interventions. Conventional ultrasound was compared with magnetic resonance imaging (MRI), and various hormonal therapies were assessed.

**Results:** Adenomyosis in adolescents is often underdiagnosed due to symptom overlap with primary dysmenorrhea and endometriosis. Conventional ultrasound has limited accuracy in smaller uteri, while MRI provides superior visualization of junctional zone abnormalities. Hormonal therapies such as combined oral contraceptives, progestins, and levonorgestrel intrauterine systems demonstrated significant improvement in pain and bleeding. In resistant cases, gonadotropin-releasing hormone (GnRH) analogs and antagonists offered symptom relief, though concerns remain regarding bone health with long-term use. Surgical interventions are rarely indicated in this age group due to fertility preservation concerns.

**Conclusion:** Adenomyosis in adolescents, though rare, should be considered in cases of refractory menstrual pain and abnormal uterine bleeding. Early use of advanced imaging and conservative hormonal therapies can improve quality of life and preserve fertility. Greater clinical awareness and multidisciplinary care are essential to optimize outcomes.

**Keywords:** Adenomyosis, Adolescents, Dysmenorrhea, Diagnosis, Hormonal therapy, Fertility preservation.



ABSTRACT NO:ICCP-SPS-152

**Biomarkers used in meningitis advances in diagnosis**

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**ABSTRACT**

Meningitis is inflammation of meninges in CNS. It is caused by bacterial, fungal, viral and tuberculosis infections, it's mostly infected in infants, babies and most of adults. Conventional diagnostic methods includes CSF analysis, gram staining remains essential, but , slower results and lower sensitivity leads to emerging use of biomarkers in meningitis treatment. Yearly around 2.5 million people are affected and around 35,000 people were affected in india. Comprehensive literature review was extracted from pub-med, science-direct databases from 2020-2025 with the word search includes "biomarkers in meningitis", "CSF biomarkers", "Serum inflammatory agents", "recent advances in biomarker studies" and clinical research, case studies were analyzed. Biomarkers play a pivotal role in enhancing the diagnosis and management of meningitis. Classical cerebrospinal fluid (CSF) biomarkers, including reduced glucose, elevated protein, increased lactate, and altered leukocyte profiles, remain essential in the initial assessment of meningitis but are limited by low specificity. Serum biomarkers such as C-reactive protein (CRP) and procalcitonin (PCT) demonstrated strong reliability in distinguishing bacterial from viral meningitis, enabling timely therapeutic intervention. Pathogen-specific methods such as polymerase chain reaction (PCR) and antigen detection offered rapid, accurate identification of causative organisms, while dynamic biomarker monitoring supported evaluation of treatment response and antimicrobial stewardship. Pathogen-specific assays and dynamic biomarker monitoring further contribute to timely therapeutic decisions and improved outcomes. Integrating these traditional and emerging biomarkers into pharmacological practice represents a significant advancement, promoting early intervention, optimized therapy, and better patient prognosis.

**Keywords:-**

Biomarkers, Procalcitonin, antimicrobial, stewardship



ABSTRACT NO:ICCP 2ND-SPS-153

## **CRISPR/Cas9 REVITALIZES ADOPTIVE T-CELL THERAPY FOR CANCER IMMUNOTHERAPY**

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### **Abstract:**

Cancer immunotherapy, particularly Adoptive T-cell Therapy (ACT), has emerged as a promising approach for combating malignancies by harnessing tumor-specific T cells. However, the functional limitations, immune suppression, and exhaustion of T cells present significant therapeutic barriers. Recent advancements in CRISPR/Cas9 gene-editing technology have revolutionized ACT by enabling precise and efficient genetic modifications to enhance T-cell functionality and antitumor activity. This technology allows the creation of T cells equipped with chimeric antigen receptors (CARs) or engineered T-cell receptors (TCRs) that possess superior tumor antigen recognition, reduced exhaustion, and minimal treatment-related toxicities. Furthermore, CRISPR-mediated knockout of immune checkpoint regulators such as PD-1 and CTLA-4 has significantly improved T-cell persistence and cytotoxicity. Early-phase clinical trials have demonstrated the safety and feasibility of CRISPR-modified T cells for treating hematological and solid tumors. Despite challenges related to delivery, off-target effects, and immune responses, the continued optimization of CRISPR/Cas9 technology holds immense potential to advance personalized cancer immunotherapy and improve patient outcomes.

**Keywords:** CRISPR/Cas9, Cancer Immunotherapy, Adoptive T-cell Therapy, Gene Editing, CAR-T Cells, TCR-T Cells



ABSTRACT NO:ICCP 2025-SPS-154

**“BEYOND MEDICINES: PHARMACISTS IN CHRONIC DISEASE CARE”****Aarthi.M<sup>1</sup>, Gokul raj.R.S<sup>2</sup>, Dr.T.Sudha\***

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Corresponding author mail id: [tsudha.sps@vistas.ac.in](mailto:tsudha.sps@vistas.ac.in)**ABSTRACT:**

Chronic diseases such as diabetes, hypertension, asthma, and cardiovascular disorders are rising globally, demanding long-term therapy, monitoring, and patient-centered care. Traditionally, pharmacists were confined to dispensing medications; however, their roles have significantly expanded in chronic disease management. Pharmacists now contribute to medication therapy management, patient counseling, adherence support, lifestyle modification, and clinical monitoring, including blood pressure and glucose checks. Through collaborative practice with physicians and other healthcare professionals, pharmacists ensure optimized therapeutic outcomes and improved patient safety. Their involvement reduces hospital readmissions, enhances adherence, and provides cost-effective healthcare solutions. Despite challenges such as limited recognition, prescribing restrictions, and resource constraints, the future of pharmacy practice emphasizes greater integration into primary healthcare, digital health adoption, and expanded clinical authority. By transitioning from product-centered to patient-centered care, pharmacists are emerging as vital partners in chronic disease management, ensuring meaningful care beyond medicines.

**KEYWORDS:** Pharmacists, Chronic disease, Medication therapy management, Patient counseling, Adherence, Collaborative care, Digital health



ABSTRACT NO:ICCP-SPS-155

**“TARGETING INFLAMMATION IN NCFBE: PHARMACOKINETIC AND PHARMACODYNAMIC INSIGHTS ON BRENSOCATIB”**

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Email ID- [sakthivelopd@gmail.com](mailto:sakthivelopd@gmail.com)**ABSTRACT:****Background:**

Non-cystic fibrosis bronchiectasis (NCFBE) is marked by chronic airway inflammation where neutrophil serine proteases play a central role. Brensocatib, an oral dipeptidyl peptidase-1 inhibitor, prevents activation of these enzymes and may reduce disease burden.

**Objective:**

To characterize the pharmacokinetics of brensocatib, assess exposure–response relationships for efficacy and safety, and inform dose selection.

**Methods:**

Data from phase I (healthy adults) and phase II (NCFBE patients) studies were pooled to develop a population PK model. Covariates affecting drug disposition were examined, and pharmacokinetic/pharmacodynamic (PK/PD) associations with sputum neutrophil elastase, pulmonary exacerbations, and adverse events were explored.

**Results:**

A two-compartment model with linear clearance best described the data. Age influenced distribution volume, and renal function affected clearance, though changes were not clinically significant. Higher exposures correlated with suppression of neutrophil elastase and fewer exacerbations, while safety outcomes showed no exposure-related trends.

**Conclusions:**

Brensocatib demonstrated predictable PK and meaningful PD effects in NCFBE. Once-daily doses of 10 mg and 25 mg achieved target engagement and favourable safety, supporting their use in phase III clinical development.

**Keywords:**

Brensocatib, Dipeptidyl peptidase-1 (DPP-1) inhibitor, non-cystic fibrosis bronchiectasis (NCFBE).



ABSTRACT NO:ICCP-SPS-156

**Recent Approaches of Artificial Intelligence in Drug Discovery**

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**Abstract**

Artificial intelligence (AI) and machine learning (ML) are bringing major changes to drug discovery by helping to overcome long-standing problems such as high costs, slow development, and low success rates. This review discusses recent progress (2019–2024) in the use of AI/ML throughout the drug discovery process—from identifying drug targets to clinical development. It highlights different techniques, including deep learning, graph neural networks, and transformers, and explains how they are applied in areas such as target identification, lead discovery, hit optimization, and safety testing. We compare the strengths and drawbacks of these approaches and outline key factors needed for success, including high-quality data, reliable model validation, and ethical practices. The review also points out current challenges, such as limited data access, poor model interpretability, and difficulties in translating findings into clinical use. Finally, we suggest future directions to fully realize the potential of AI in creating safer, more effective, and affordable medicines. The overall aim is to promote responsible and transparent integration of AI into pharmaceutical research.

**Keywords:** Artificial Intelligence , Machine Learning , Drug Discovery , Deep Learning, Graph neural networks , Target Identification.



ABSTRACT NO:ICCP 2ND-SPS-157

## ANTHELMINTIC ACTIVITY OF HYDROALCOHOLIC EXTRACT OF ALLIUM SATIVUM IN LUMBRICUS TERRESTRIS.

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### Abstract

Allium sativum, commonly known as garlic, using Lumbricus terrestris as the test subject. Garlic is celebrated for its medicinal qualities, packed with bioactive organosulfur compounds like allicin, diallyl disulfide, and S-allyl cysteine, which are known for their various pharmacological benefits, including antimicrobial, antifungal, antiparasitic, and antioxidant effects.

To prepare the hydroalcoholic extract, garlic cloves underwent maceration, followed by a thorough phytochemical screening and HPLC analysis that confirmed the presence of key phytoconstituents such as terpenoids, flavonoids, phenols, and saponins. The in-vitro anthelmintic activity was tested at concentrations of 100, 200, and 300 mg/mL, with albendazole (100 mg/mL) serving as the standard and normal saline as the control.

The results showed a clear dose-dependent effect, with the extract causing paralysis and death in Lumbricus terrestris significantly near than the standard drug. At a concentration of 300 mg/mL, the extract led to worm death in just 25 minutes, compared to 60 minutes for albendazole. These findings indicate that the phytoconstituents in garlic extract, especially allicin, are likely responsible for its impressive anthelmintic activity.

**Keywords:** Allium sativum, hydroalcoholic extract, anthelmintic activity, Lumbricus terrestris, phytochemical screening.

**I**



ABSTRACT NO:ICCPPr-SPS-158

**AI IN MEDICATION ADHERENCE AND MONITORING ABSTRACT****Praveen kumar .D<sup>1</sup>, S.Jeganath\***

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**Abstract**

Artificial intelligence (AI) is transforming medication adherence and monitoring by leveraging advanced technologies to address the global challenge of medication non-adherence, which affects approximately 50% of patients with chronic conditions. AI-powered systems utilize machine learning algorithms, computer vision, and natural language processing to provide real-time monitoring through smartphone applications, smart pill bottles, wearable sensors, and video-based verification platforms. These technologies achieve remarkable improvements in adherence rates, with studies demonstrating 6.7% to 32.7% increases compared to standard care approaches. AI systems can predict future non-adherence patterns, identify high-risk patients, and deliver personalized interventions through conversational interfaces and automated reminders. Digital platforms using facial recognition and computer vision algorithms achieve up to 100% adherence rates in monitored groups versus 50% in control groups. While challenges include data privacy, implementation costs, and the need for larger long-term studies, AI represents a promising solution for enhancing medication adherence through precision-targeted interventions and continuous patient monitoring.

**Keywords:** artificial intelligence, medication adherence, patient monitoring, machine learning, digital health, smart devices, personalized interventions, healthcare technology



ABSTRACT NO:ICCP-SPS-159

**GREEN NANOTECHNOLOGY: ECO FRIENDLY NANOMATERIALS & WASTE-TO-WEALTH DESIGN**Priyadharshini.K<sup>1</sup>, Dr. Jayavasavi.  
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**Abstract:** Green nanotechnology combines the foundation of sustainability with innovative nanoscience to create environmentally friendly nanomaterials and processes that leave low environmental footprints. With the use of renewable materials, green synthesis pathways, and energy-saving approaches, it focuses on reducing hazardous chemicals, waste production, and environmental hazards. Green nanomaterials that include biodegradable polymers, plant-derived nanoparticles, and bio-inspired composites exhibit high functionality along with environmental compatibility. Additionally, waste-to-wealth design converts industrial, agricultural, and electronic wastes into precious nanomaterials, fostering circular economy norms and recovery of resources. Such dual benefit not only tackles environmental issues such as pollution, resource loss, and waste generation but also creates avenues for green applications in energy, medicine, water treatment, and agriculture. In this manner, green nanotechnology has immense scope to promote innovation in line with United Nations development goals for a cleaner, greener, and sustainable future.

**Keywords:** Green nanotechnology, Sustainability, Green synthesis, Biodegradable polymers, Waste-to-wealth design, Circular economy



ABSTRACT NO:ICCP-SPS-160

**POSSIBLE ROLE OF SILVER NANO PARTICLES IN THE TREATMENT OF ALOPECIA** Ummey Habiba\*, Dr. C. Ronald Darwin

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**Abstract**

Alopecia, or hair loss, is a widespread condition that affects both men and women and often carries emotional and social consequences, from lowered self-esteem to reduced quality of life [5,6]. Standard drugs like minoxidil and finasteride are commonly prescribed, but they bring limited benefits and may cause side effects such as skin irritation, hormonal imbalances, or cardiovascular issues [20–24]. For centuries, traditional medicine has relied on herbs like *Eclipta alba*, *Hibiscus rosa-sinensis*, *Emblca officinalis* and particularly *Wedelia trilobata* for hair growth, though without rigorous scientific backing [26–28,35]. With the rise of nanotechnology, however, natural remedies can now be delivered more effectively [29–31]. Silver nanoparticles (AgNPs), known for their antimicrobial, anti-inflammatory, and healing properties, offer a promising new path [32–34]. In this study, aqueous extracts and AgNP formulations of *W. trilobata* were tested in albino rats and compared with minoxidil [35]. The nanoparticle-based preparation showed faster hair growth, thicker shafts, higher follicle density, and improved scalp circulation compared to both crude extracts and controls [35]. These findings not only support traditional knowledge but also highlight the potential of combining herbal phytochemicals with nanotechnology to create safer, natural, and cost-effective alternatives for treating alopecia [28–31,33–35]. Further safety testing and human trials will be vital before clinical use, but the results mark an important step toward next-generation hair-growth therapies.

**Keywords:** Alopecia, Hair loss, Minoxidil, Finasteride, Traditional medicine, *Wedelia trilobata* (Singapore daisy), *Eclipta alba*, *Hibiscus rosa-sinensis*, *Emblca officinalis*, Nanotechnology, Silver nanoparticles (AgNPs), Herbal phytochemicals Hair regrowth, Follicle density, Scalp circulation, Natural therapies,



ABSTRACT NO:ICCP 2ND-SPS-161

## **ROLE OF ARTIFICIAL INTELLIGENCE (AI) AND MACHINE LEARNING IN CLINICAL PHARMACY PRACTICE**

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### **ABSTRACT:**

Artificial Intelligence (AI) and Machine Learning (ML) are rapidly transforming clinical pharmacy practice by enabling data-driven decision-making, personalized therapy, and improved patient outcomes. Traditionally, pharmacists relied on standard guidelines and manual evaluation, which may not fully capture the complexities of individual patient needs. AI and ML provide innovative approaches for analyzing large-scale healthcare data, predicting disease progression, optimizing drug therapy, and minimizing adverse drug reactions. These technologies support clinical pharmacists in medication management, drug–drug interaction detection, pharmacovigilance, and adherence monitoring, thereby enhancing safety and effectiveness of treatments. AI-based clinical decision support systems can identify the most suitable therapeutic options for patients by integrating genetic, clinical, and lifestyle data. Machine learning algorithms are also applied in dose optimization, early detection of medication errors, and automation of routine tasks, allowing pharmacists to focus on patient-centered care. With continuous advancements, AI and ML are expected to play a crucial role in achieving precision pharmacy, reducing healthcare costs, and improving overall quality of clinical services. The AI role in pharmacy practice is revolutionary. From improved patient safety and treatment outcomes to workflow optimization and personalized delivery of care, AI is changing the way pharmacists deliver their services. But it is necessary to confront the challenges, introduce appropriate training, and cooperate in order to unleash the potential of AI towards improved pharmacy practice and patient care. AI is revolutionizing the pharmacy career through paradigm shifts in how pharmacists provide their services, ranging from optimizing patient safety and therapeutic results to enhancing operations and providing tailored care. But it is essential to meet the challenges, get necessary training, and cooperate in order to realize the potential of AI in enhancing pharmacy practice and patient care.

**Keywords:** Clinica practice, Machine learning, Pharmacovigilance, Optimizing drug threapy, Personalized drug delivery.



ABSTRACT NO: ICCPPR-SPS-162

**A STUDY ON THE ADVERSE EFFECTS PRODUCED BY INHALATIONAL CORTICOSTEROIDS IN ASTHMATIC PATIENTS – A QUESTIONNAIRE STUDY**

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**Abstract**

Bronchial asthma is a rising significant global public health burden especially in developing countries. It is one of the most common chronic diseases globally. Bronchial asthma is a non communicable disease. It is characterized by chronic airway inflammation which is partially reversible and comprises of three clinical triads – Bronchoconstriction, Inflammation and hypersensitivity. Inhaled corticosteroids have been the cornerstone of asthma treatment and they have reduced asthma mortality and morbidity by suppressing airway inflammation. However, despite the efficacy of ICS, some patients may have drug-related adverse effects: including mild acute symptoms such as dysphonia and thrush, or severe symptoms that may raise the issue of continuing, stopping or modifying the ICS dose. A questionnaire study was conducted to evaluate the adverse effects produced by inhalational corticosteroids in asthmatic patients by using the ICQ .The questionnaire was collected based upon the main parameters that follows treatment duration, medication and dosage form of inhaler. Using the inhaled corticosteroid questionnaire tool, population size 300, we evaluated the side effects of 35 items under 15 domains. Out of 15 domains ,8 domains were significantly associated including voice problems, perspiration , tiredness , polydipsia, oropharyngeal candidiasis ,oropharyngeal problems ,facial edema and oropharyngeal itching . There is significant association noted to have hazard of being exposed with maximum adverse reactions - Duration of inhaled steroidal treatment, Female gender, Middle aged adults and budesonide medication.

**Keywords:** bronchial asthma, Inhaled corticosteroids, side effects, questionnaire, ICQ Tool.



ABSTRACT NO:ICCP 2ND-SPS-163

## EMERGING THERAPIES FOR MRSA: ANTIMICROBIAL PEPTIDES, PHAGES, AND NANOMEDICINE

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### Abstract

**Objective:** Methicillin-resistant Staphylococcus aureus (MRSA) poses a significant healthcare challenge due to increasing antibiotic resistance. This review explores innovative therapeutic strategies beyond conventional antibiotics, emphasizing antimicrobial peptides (AMPs), bacteriophage therapy, and nanoparticle-based drug delivery.

**Method:** A literature search was performed across PubMed, Scopus, and Google Scholar, focusing on studies published in the past 10 years. Antimicrobial peptides, bacteriophages, and nanoparticles. Experimental, clinical, and review studies reporting efficacy, mechanisms, safety, and clinical relevance were included, while irrelevant or non-English studies were excluded. Data were analyzed to identify promising strategies and potential synergistic effects.

**Results:** AMPs exhibit broad-spectrum antibacterial effects by disrupting bacterial membranes and inhibiting biofilm formation, which often contributes to antibiotic resistance. Bacteriophage therapy provides highly specific targeting of MRSA and penetrates biofilms that resist conventional antibiotics. Nanoparticle-based drug delivery enhances stability, bioavailability, and targeted release of antimicrobials while minimizing systemic toxicity. Emerging evidence suggests that combining these approaches may produce synergistic effects, offering a promising shift in MRSA management strategies.

**Conclusion:** AMPs, bacteriophages, and nanoparticle-mediated delivery represent promising alternatives to traditional antibiotics for MRSA treatment. These novel therapies underscore the critical role of clinical pharmacists in evaluating, implementing, and monitoring innovative interventions to optimize patient outcomes and address the growing threat of antibiotic resistance.

**Keywords:** MRSA, antimicrobial peptides, bacteriophage therapy, nanoparticles, novel therapies, clinical pharmacy.



ABSTRACT NO: ICCPPR-SPS-164

**Role of the pharmacist in pharmacological misinformation****Mohamed Fahid H<sup>1</sup>, Manoyogambiga M\*****School of Pharmaceutical Sciences****Vels Institute of Science, Technology and Advanced Sciences****Pallavaram, Chennai****Corresponding Author: manoyogambiga.sps@vistas.ac.in****Abstract**

Pharmacological misinformation means the spreading of false information about the drugs to be taken. These information may be misleading due to social media platforms, predatory journals may be due to a lack of time, or competition. It is important for the pharmacists to ensure patient safety and its efficacy by investigating the correct information about patients. It is their duty to analyze the information about the drugs and provide awareness to patients. It should not be blindly trusted in the lay words. Misleading information can lead to vaccination hesitation, increased mortality rate and hospitalization, and reduced trust in healthcare professionals. It is a pharmacist's duty to learn medical terminology and educate the illiterate in a simple way, recognizing common sources of misleading medical content, improving trust, and reaching people better.

**Keywords:** Trust, misleading, predatory journal,



ABSTRACT NO: *ICCP-SPS-165*

**TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION FOR TREATMENT OF PRIMARY DYSMENORRHEA: CROSSOVER COMPARISON WITH SYSTEMATIC MEDICATION**

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**ABSTRACT**

**Introduction:** Primary dysmenorrhea is a common gynaecological condition that brings painful menstruation. Analgesics reduce pain to a great extent but associated with numerous side effects. To combat the problem transcutaneous electrical nerve stimulation (TENS) is been studied more effective as a drug-free option, conducting several controlled trials and systematic reviews to see how it shows up in alternative to systematic treatments.

**Methodology:** A randomized four way crossover trial studied 32 women participants given TENS against ibuprofen used as NSAID. The ibuprofen use was delayed for a time period of almost 5.9 hours under TENS compared with 0.7 hours when administered alone. The study showed about 42 % improvement with TENS. A similar crossover trial in 12 women, compared the high-intensity TENS with a single oral dose of naproxen 500 mg, in which it showed TENS showing considerable pain reductions by almost 40 to 45 percent when compared to naproxen, although in a small sample.

**Results:** All these studies collectively shows High-frequency TENS delivers consistent better relief that actually makes a difference for menstrual pain compared to ibuprofen and naproxen. It also showed that the adverse events were rare and minor and delayed the use of ibuprofen administration.

**Conclusion:** The high-frequency TENS works as a safe efficacious alternative to standard drug treatments for primary dysmenorrhea. Compared to systematic medications TENS gives better pain relief, cuts down medication use, and helps reduce other symptoms. Robust studies would help understand the best stimulation settings and determine the long-term benefit

**Keywords:** dysmenorrhea, TENS, Ibuprofen, naproxen



ABSTRACT NO: ICCPPR-SPS-166

**“Methotrexate-Induced Hypersensitivity Reaction in Rheumatoid Arthritis Patients along with multiple disease: Early Recognition, Toxic Level Identification, and Effective Management”**

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**Abstract**

Methotrexate (MTX) is a folate antagonist commonly prescribed for cancers, autoimmune conditions, and ectopic pregnancies. While its well-known side effects include liver toxicity, bone marrow suppression, and gastrointestinal problems, true hypersensitivity reactions are uncommon but can be serious. We describe that a patient who developed with an acute hypersensitivity reaction shortly after receiving MTX, with symptoms including [findings: rash, fever, low blood pressure, breathing difficulty, etc.]. Laboratory tests and causality assessment indicated that MTX as the likely cause. Treatment involved immediate discontinuation of the drug along with corticosteroids, antihistamines, and supportive care, leading to full recovery without recurrence. This case underscores the need for early recognition and swift management of MTX-related hypersensitivity reactions to avoid severe outcomes. Clinicians should remain to alert the possibility of drug-induced allergic reactions when patients develop sudden symptoms after methotrexate administration.

**Keywords:** Methotrexate, Hypersensitivity reaction, Adverse drug reaction, Case report, Pharmacovigilance.



ABSTRACT NO: ICCPPR-SPS-167

## Role of Artificial Intelligence in Alzheimer's Disease

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### Abstract

A progressive neurological disease, Alzheimer's disease (AD) causes diminished memory, cognitive decline, and difficulties with day-to-day functioning. Effective care depends on early detection, although this is still difficult because of the disease's mild beginning and symptoms that coincide with those of other types of dementia. Artificial intelligence (AI) has become a game-changing technology for increasing Alzheimer's early detection and diagnostic accuracy. Large datasets from scanning procedures like MRI, PET, and CT scans can be analyzed using machine learning as well as deep learning algorithms, which can identify structural and functional changes in the brain that are frequently overlooked by human examination. Additionally, AI facilitates the study of genetic profiles, biomarkers, and electronic health records; newer methods include behavioral, handwriting, and speech information for non-invasive screening. Beyond diagnosis, AI facilitates individualized treatment planning, patient stratification for clinical trials, and tracking of disease progression. AI-driven technologies have enormous potential to transform Alzheimer's diagnosis and care by providing earlier intervention and better patient outcomes, despite issues with quality of data, privacy, and clinical validation.

**Keywords:** Artificial Intelligence, Alzheimer, Datasets , Analyzed, Clinical Trials , AI Driven, Quality Data.



ABSTRACT NO: ICCPPR-SPS-168

**Review of evidence based phytotherapy of *Vaccinium macrocarpon* in UTI and *Hypericum perforatum* in depressive disorders**

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**Abstract**

Phytotherapy is also gaining the evidence-based medicine acceptance for use in treatment of recurrent infections and mood disorders. *Vaccinium macrocarpon* (cranberry) has been studied thoroughly to suppress urinary tract infection (UTI), whereas *Hypericum perforatum* (St. John's Wort) has demonstrated therapeutics in depressive disorders. Randomized controlled trials and systemic reviews confirm the fact that cranberry proanthocyanidins suppress adhesion of uropathogenic (*E.coli*) *Escherichia coli* to the urothelium, thus suppressing the onset of recurrent UTIs. Meta-analyses have documented a relative risk reduction of 20–50% for conventional preparations of cranberry and have suggested its prophylactic use. In neuropsychiatric illness, *H. perforatum* has shown antidepressant activity equal in rank order to SSRIs (Selective Serotonin Reuptake Inhibitor) in mild to moderate depression. Large clinical trials and meta-analyses involving over 6,000 patients confirm its superiority over placebo and equal efficacy with standard antidepressants but with better tolerability in the majority of patients. Active ingredients like hyperforin and hypericin are hypothesized to affect monoamine neurotransmission and inhibit neuroinflammatory signaling. Present evidence thus favors the use of *V. macrocarpon* in recurrent UTI prophylaxis and *H. perforatum* for the treatment of depressive disorder, but standardized products and additional high-quality trials are nonetheless needed.

**Keywords:** *Vaccinium macrocarpon* , *Hypericum perforatum*, phytotherapy, urinary tract infection, depression



ABSTRACT NO: ICCPPR-SPS-169

## **Role of Novel Dopamine Antagonist In Chemotherapy-Induced Nausea Vomiting- A Review**

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### **ABSTRACT**

Chemotherapeutic drugs are highly toxic which stimulates the chemo receptor trigger zone (CTZ) brain stem that causes the Chemotherapy-induced nausea vomiting. The novel dopamine antagonist plays a significant role in chemotherapy induced nausea and vomiting CINV by blocking dopamine receptor particularly the D2 receptor, which is involved in the emetic pathway in the brain reduce the adverse effect. The novel dopamine antagonist are designed to target specific dopamine receptor subtypes with a higher selectivity.

To analyse the potential benefit of adding olanzapine (novel D2 antagonist) to the standard anti emetic regimen (5-HT3+dexamethasone+NK1 antagonist), especially in delayed phase vomiting and breakthrough vomiting. To evaluate the additional side effect of adding olanzapine. It objectifies by assessing the safety profiles and tolerability of dopamine antagonist compared to other antiemetics

In this study, a total of 10 patients undergoing chemotherapy were enrolled and randomly divided into two groups, with 5 patients in each group. Group A receives the standard anti emetic regimen consisting of 5-HT3 receptor antagonist, dexamethasone and NK1 receptor antagonist. Group B receives the standard regimen with the addition of novel D2 antagonist such as olanzapine. The objective is to evaluate the effectiveness of adding olanzapine to the standard antiemetic treatment in reducing chemotherapy-induced nausea and vomiting.

The study demonstrates that the addition of novel dopamine antagonist (olanzapine), to the standard antiemetic regimen significantly reduced the incidence of severity of chemotherapy-induced nausea and vomiting. The group B patients show better antiemetic response compared to group A patients but group B patients show signs of weight gain and

From the above comparative studies it concludes that adding a novel dopamine antagonist to a standard regimen provides significant antiemetic response during delayed phase vomiting and breakthrough vomiting but at a cost of sedation and weight gain.

**Keywords:** CINV, novel dopamine antagonist, olanzapine, delayed phase, breakthrough phase, extrapyramidal motor action, dopamine receptor(D2).



ABSTRACT NO: ICCPPR-SPS-170

**Methotrexate-Induced Hypersensitivity Reaction in Rheumatoid Arthritis Patients along with multiple disease: Early Recognition, Toxic Level Identification, and Effective Management**

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**Abstract**

Methotrexate (MTX) is a folate antagonist commonly prescribed for cancers, autoimmune conditions, and ectopic pregnancies. While its well-known side effects include liver toxicity, bone marrow suppression, and gastrointestinal problems, true hypersensitivity reactions are uncommon but can be serious. We describe that a patient who developed with an acute hypersensitivity reaction shortly after receiving MTX, with symptoms including [findings: rash, fever, low blood pressure, breathing difficulty, etc.]. Laboratory tests and causality assessment indicated that MTX as the likely cause. Treatment involved immediate discontinuation of the drug along with corticosteroids, antihistamines, and supportive care, leading to full recovery without recurrence. This case underscores the need for early recognition and swift management of MTX-related hypersensitivity reactions to avoid severe outcomes. Clinicians should remain alert to the possibility of drug-induced allergic reactions when patients develop sudden symptoms after methotrexate administration.

**Keywords:** Methotrexate, Hypersensitivity reaction, Adverse drug reaction, Case report, Pharmacovigilance.



ABSTRACT NO: ICCPPR-SPS-171

## AI ALGORITHM ON PHARMACEUTICAL HEALTHCARE IN PNEUMONIA

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### ABSTRACT

Pneumonia, It is an infection that inflames one or both the lungs. The air sacs may be filled with pus. It is caused by Bacteria, viruses, and fungi. Pneumonia is a leading cause of morbidity, mortality Worldwide, presents significant challenges in diagnosis, management, treatments. The integration of artificial intelligence in healthcare poses a global health concern. AI technologies, particularly machine learning (or) NN algorithms, and deep learning where enhance various aspects of the pharmaceutical pipeline. From the drug discovery and developing the patient specific treatment optimization. When considering the diagnosis and management of pneumonia, the use of AI and chest X-ray (CXR) images primarily have been indicative of early diagnosis, prompt antimicrobial therapy, and ultimately, better prognosis. The AI algorithms generally accelerates the identification of novel drug therapeutic targets. Especially it reducing the time and also reducing the cost. The predictive models analyzes large number of datasets to forecast disease progression and enabling personalized medicine approaches and optimize the antibiotics and reducing the resistance of antibiotics. CDDS integrated with AI provides healthcare professionals and it also shows the evidence based recommendations, enhancing decision making and patient outcomes. The AI driven new platforms for the development of new Diagnostic tools, biomarkers, early detection and monitoring and management. The impact of AI on pharmaceutical healthcare in pneumonia emphasizing its potential to improve patient care, streamline drug development and enhancing overall healthcare efficacy.

**Keywords:** Artificial intelligence, pneumonia, machine learning, NN algorithms.



ABSTRACT NO: ICCPPR-SPS-172

## **OMACETAXINE: A PROTEIN TRANSLATION INHIBITOR FOR THE TREATMENT OF CHRONIC MYELOGENOUS LEUKEMIA (CML)**

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### **ABSTRACT**

Chronic myelogenous leukemia (CML) is a myeloproliferative neoplasm caused by the BCR-ABL fusion oncogene with constitutive tyrosine kinase activity and uncontrolled cell proliferation. Although tyrosine kinase inhibitors (TKIs) are the current standard of therapy, resistance to therapy—most notably the BCR-ABL kinase domain mutations T315I—is a significant challenge. Omacetaxine mepesuccinate, a novel first-in-class reversible protein translation inhibitor, has been proven to be a valuable therapeutic choice for TKI-resistant CML. By occupying the ribosomal A-site, omacetaxine blocks elongation of protein synthesis, resulting in degradation of short-lived oncoproteins such as BCR-ABL and Mcl-1, which supports apoptosis. Its effectiveness has been shown in patients with multi-TKI-resistant CML, even those with the T315I mutation. Hematologic and cytogenetic responses have been obtained with an acceptable safety profile, although myelosuppression remains the most common adverse effect. Omacetaxine offers a new, mutation-independent mechanism of action, addressing an unmet therapeutic need in CML treatment. Additional research is investigating its use with combination regimens and in earlier lines of treatment.

**KEYWORDS:** Drug resistance; accelerated; blast; myeloid leukemias and dysplasias; omacetaxine; pharmacotherapeutics.



ABSTRACT NO: ICCPPR-SPS-173

## PREPARATION AND EVALUATION OF SOLID DISPERSION OF TERBINAFINE HYDROCHLORIDE

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### ABSTRACT

Terbinafine hydrochloride is a well-established antifungal drug, but its use is limited by poor water solubility and variable oral absorption, which reduce its effectiveness. To overcome these challenges, this study focused on preparing solid dispersions of terbinafine hydrochloride with hydrophilic carriers to improve its solubility and dissolution rate. The drug was combined with polyethylene glycol 6000 (PEG 6000) using the melting method and with polyvinylpyrrolidone K30 (PVP K30) using the solvent evaporation method, in different drug-to-carrier ratios (1:1, 1:2, and 1:3). The formulations were evaluated through solubility testing, drug content analysis, thermal and infrared studies, and dissolution experiments. The prepared solid dispersions were characterized for their drug content, thermal studies, infrared spectral studies, differential scanning calorimetric studies, aqueous solubility studies and in-vitro release studies.

The results showed a clear improvement in solubility and dissolution for the solid dispersions compared to the pure drug and its physical mixtures. Among all formulations, the 1:3 ratio with PEG 6000 provided the most favorable release profile. Surface analysis using SEM indicated that the drug was converted into an almost amorphous form, reducing particle size and enhancing dissolution. The best-performing dispersion was further developed into 600 mg tablets and assessed for physical quality parameters. When compared with a marketed formulation, the prepared tablets demonstrated superior drug release.

In conclusion, preparing terbinafine hydrochloride as a solid dispersion proved to be a promising strategy for improving its solubility, dissolution, and overall bioavailability, which could lead to more effective antifungal therapy.

**KEYWORDS:** Terbinafine Hydrochloride, Solid Dispersion, PEG 6000, PVP K30, DSC Studies, Solubility Enhancement, Dissolution Rate.



ABSTRACT NO: ICCPPR-SPS-174

**DESIGN, SYNTHESIS, CHARACTERIZATION, AND PHARMACOLOGICAL  
EVALUATION OF BENZIMIDAZOLE DERIVATIVES AS POTENTIAL ANTHELMINTIC  
AGENT**

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**Abstract**

Helminthic infections continue to pose a significant global health issue, particularly in low-resource regions where resistance to existing treatments such as albendazole complicates effective management. This study concentrates on the design, synthesis, and evaluation of new N-substituted benzimidazole derivatives that may act as potential inhibitors of cysteine proteases. We synthesized these compounds utilizing optimized condensation techniques and characterized their structures through FTIR spectroscopy. Computational docking analyses performed with AutoDock indicated promising binding affinities, with BMPA emerging as the leading candidate. BMPA exhibited the most robust binding interaction, with a binding energy of  $-6.47$  kcal/mol, followed by BNPA ( $-6.31$  kcal/mol) and BPA ( $-6.20$  kcal/mol). In vitro experiments against *Pheretima posthuma* demonstrated that BMPA produced a dose-dependent effect, inducing rapid paralysis and mortality akin to albendazole at elevated doses. Furthermore, in silico predictions regarding ADME and toxicity suggested that BMPA possesses acceptable pharmacokinetic characteristics and a favorable safety profile. Statistical evaluations using GraphPad Instat 3 validated the reliability of our experimental findings. In summary, these results position BMPA as a promising candidate for the development of new anthelmintic medications. We advocate for further in vivo investigations, thorough pharmacokinetic profiling, and toxicity evaluations to assess its potential for clinical application in the treatment of helminthic infections.

**Keywords:** Helminthic infections, Benzimidazole derivatives, Cysteine protease inhibitors, Molecular docking, Anthelmintic activity.



ABSTRACT NO: ICCPPR-SPS-175

## Presymptomatic Risdiplam Treatment in Infants with Genetically Diagnosed Spinal Muscular Atrophy

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### Abstract

Risdiplam, an oral pre-messenger RNA splicing modifier, is effective in symptomatic spinal muscular atrophy (SMA). Its safety and efficacy in presymptomatic infants are not well established..

**Method:** In this open-label study, infants aged 1–42 days with genetically confirmed SMA but without clinical symptoms received daily oral risdiplam (0.2 mg/kg). The primary outcome, assessed in infants with two SMN2 copies and baseline ulnar CMAP  $\geq 1.5$  mV, was the ability to sit without support at 12 months. Secondary outcomes over 24 months included survival, ventilatory support, motor milestones, feeding, growth, and SMA symptom development.

**Results:** Twenty-six infants with two, three, or four or more SMN2 copies were enrolled. At 12 months, 21 infants (81%) could sit unsupported, 14 (54%) could stand alone, and 11 (42%) could walk independently. Among infants with two SMN2 copies and CMAP  $\geq 1.5$  mV, 4 of 5 (80%; 95% CI, 28–100) sat without support  $\geq 5$  seconds. Three infants were withdrawn after month 12. Of 23 infants completing 24 months, all survived without permanent ventilation or feeding support. Nine treatment-related adverse events occurred in 7 infants; none were serious.

**Conclusion:** Presymptomatic risdiplam treatment in infants with genetically diagnosed SMA improved motor function and survival compared with natural history data. Further controlled studies with larger populations and longer follow-up are needed to confirm efficacy and safety

**Keywords:** Risdiplam, Presymptomatic spinal muscular atrophy, SMN2 splicing modifier, Motor milestone development, Newborn screening.



ABSTRACT NO: *ICCPDR-SPS-176*

**CRISPR-BASED GENE THERAPY: A BREAKTHROUGH IN TREATING SICKLE CELL DISEASE AND B-THALASSEMIA**

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**ABSTRACT**

Sickle cell disease and  $\beta$ -thalassemia are not just genetic disorders- they are a lifetime struggle that can withstand patients and families, characterized by painful crises, frequent hospital visits and limited treatment options. Traditional treatments, such as blood transfer and bone marrow transplantation, have serious risks and are not available to everyone. Gene editing technology, especially in CRISPR-CAS9, has opened the door to a new era of hope. CRISPR-based treatment works by targeting the cause of these diseases: mutations in genes responsible for hemoglobin production. By reintroducing the patient's own stem cells, this approach provides long-term relief, reduced dependence on transfusions and even a functional treatment. Early clinical studies have shown remarkable results, where patients receive a dramatic reduction in stable hemoglobin levels and symptoms. While challenges such as reach, strength and long-term security, CRISPR-based gene therapy represents more than a scientific milestone-provides a chance to change lives and write the future of millions of people living with these conditions.

**KEYWORDS:**

HBB gene , gene editing, CRISPR-CAS9,  $\beta$ -thalassemia.



ABSTRACT NO: ICCPPR-SPS-177

**CRISPR-Cas Gene Editing: A Transformative Approach in Bone Tissue Engineering****Muhsinah Parveen<sup>1</sup>, Monish Kumar<sup>1</sup>, Mohamed Zerein Fathima\*****VELS INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED STUDIES (VISTAS),  
PALLAVARAM, CHENNAI****Email: Mk7795649@gmail.com****Abstract**

Bone tissue engineering (BTE) has emerged as a promising strategy to restore critical-sized bone defects and overcome the limitations of traditional grafting techniques. However, challenges such as poor vascularization, limited osteogenic potential, and immune rejection hinder its clinical translation. Recent advances in CRISPR-Cas gene editing technology offer unprecedented opportunities to enhance BTE outcomes by enabling precise and efficient modification of cellular and molecular targets. CRISPR can be utilized to upregulate osteogenic transcription factors (e.g., Runx2, BMP-2) and angiogenic factors (e.g., VEGF), thereby promoting osteoblast differentiation and vascular integration within scaffolds. Additionally, it allows for silencing of inhibitory genes that impair bone regeneration, as well as correction of genetic mutations associated with skeletal disorders. Incorporation of CRISPR-edited mesenchymal stem cells into biomaterial scaffolds further enhances osteoinductive and immunomodulatory properties, facilitating robust bone healing. Moreover, CRISPR-based disease modeling provides valuable insights into bone pathophysiology and accelerates the development of novel therapeutic biomaterials. Collectively, the integration of CRISPR-Cas technology with BTE holds significant potential to revolutionize regenerative medicine and address current clinical barriers in bone repair.

**Keywords:** CRISPR-Cas9, Gene editing, Biomaterial scaffolds, Gene-activated bone grafts, Bone tissue engineering, Osteogenesis, Angiogenesis, Regenerative medicine, Smart biomaterials, Targeted gene delivery



ABSTRACT NO: ICCPPR-SPS-178

## **Pre-Emptive Use of NK-1 Antagonists to Reduce Breakthrough CINV in Cisplatin-Treated Patients – A Review**

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### **ABSTRACT**

Chemotherapy induced nausea and vomiting (CINV) remains one of the most distressing adverse effects of cisplatin-based chemotherapy, often compromising receptor antagonist dexamethasone, and an NK-1 receptor antagonist have improved control of acute and delayed CINV, breakthrough symptoms persist in a subset of patients.

This study evaluate the pre-emptive administration of NK-1 receptor antagonist to reduce the incidence of breakthrough chemotherapy induced nausea and vomiting in patients receiving cisplatin -based chemotherapy

Adult patient scheduled to receive cisplatin at  $>50\text{mg}/\text{m}^2$  were enrolled and randomized to receive either standard prophylactic antiemetic therapy or an intensified regimen with an additional pre-emptive NK-1 receptor antagonist dose. Incidence and severity of breakthrough CINV were assessed over a five-day post -chemotherapy period using patient -reported outcomes and standardized scales.

Pre-emptive use NK-1 antagonist demonstrated a clinically meaningful reduction in breakthrough CINV compared to standard therapy, with improved complete response rates and reduced need for scale medication. The intensified regimen was well tolerated, with no significant increases in adverse effect.

### **Conclusion**

Pre-emptive administration of NK-1 receptor antagonist breakthrough CINV in cisplatin -treated patients, supporting its consideration as part of personalized antiemetic strategies to optimize chemotherapy tolerance and adherence.

**Keywords:** chemotherapy -induced nausea and vomiting, cisplatin, NK-1 receptor antagonist, breakthrough CINV antiemetic therapy, supportive care.



ABSTRACT NO: ICCPPR-SPS-179

**Green Synthesis and Characterization of Copper Oxide Nanoparticles using *Cassia auriculata* and their Antioxidant and Antibacterial Properties**  
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**ABSTRACT**

Green nanotechnology, known for its affordability, minimal preparation steps, and sustainability, has recently gained popularity for the synthesis of metallic nanoparticles. Currently, copper nanoparticles were successfully green-synthesized using *Cassia auriculata* L. leaf extract. CuO nanoparticles. The CuO nanoparticles that were produced were accurately described using FT-IR, FE-SEM, UV-Vis, and EDX studies. CuO NPs were successfully produced, as confirmed by the absorbance peak value at 270 nm in the UV-Vis analysis. Functional groups were confirmed to be present on the surface of the nanoparticle by the FT-IR spectra, which displayed distinctive vibrational modes. The spherical structure is validated by FE-SEM and EDX, and EDX analysis confirmed the presence of oxygen (36.35%) and copper (22.61%). In the DPPH and ABTS tests, CA-CuO NPs shown a remarkable capacity to eat away at free radicals. The antibacterial efficacy of these NPs against clinical isolates, including *S. aureus* and *E. coli*, was evaluated using the well diffusion technique. In conclusion, a promising method for creating materials with effective antioxidant and antibacterial qualities is the green synthesis of CuO NPs utilizing extract from *Cassia auriculata* Leaf.

**KEYWORDS:** *Cassia auriculata*, Copper oxide, metallic nanoparticle.



ABSTRACT NO: ICCPPR-SPS-180

**Applications of AI in Predicting Drug Responses for Type 2 Diabetes****SIVRAMAN. R\*****B Pharmacy, VII SEM, School of Pharmaceutical Sciences, VISTAS, Chennai.****Email: sivasiva77760@gmail.com****Abstract**

Artificial intelligence (AI) and machine learning (ML) are rapidly transforming the landscape of precision medicine in Type 2 Diabetes Mellitus (T2DM). This highlights recent progress in applying advanced computational models to predict therapeutic responses and guide individualized treatment strategies. Researchers have leveraged diverse data sources including electronic health records, clinical trial datasets, and real-world observational studies to capture rich patient profiles. Key predictive features span baseline glycemic indices, demographics, comorbidities, genetic variants, and lifestyle factors. Across multiple investigations, a variety of algorithms such as decision trees, random forests, support vector machines, gradient boosting, and deep neural networks have been tested for their ability to forecast outcomes like HbA1c reduction, risk of adverse effects, and durability of glycemic control. Comparative analyses consistently show that ensemble and hybrid approaches, which integrate multi-modal data (clinical, laboratory, and genomic), outperform single-source models in predictive accuracy and clinical relevance. Despite these advances, important challenges remain before AI can be fully embedded in routine diabetes care. Common obstacles include handling missing or incomplete data, ensuring transparency and interpretability of complex models, mitigating bias to maintain fairness across populations, and validating algorithms across diverse clinical settings. The review emphasizes the need for prospective studies, standardized reporting frameworks, and seamless integration into electronic clinical decision support systems to translate promising computational insights into practical therapeutic tools. Overall, AI-based prediction represents a compelling step toward truly personalized diabetes management, with the potential to optimize drug selection, improve patient outcomes, and reduce the trial-and-error currently associated with antidiabetic therapy.

**Keywords:** Machine Learning (ML), Type 2 Diabetes Mellitus (T2DM), Predictive Pharmacology, Personalized Therapy, Clinical Decision Support.



ABSTRACT NO: ICCPPR-SPS-181

**INDIVIDUALIZED NEOANTIGEN THERAPY WITH NOVEL BASED mRNA 4157(v940) PLUS PEMBROLIZUMAB VERSUS PEMBROLIZUMAB MONOTHERAPY FOR MELANOMA-A REVIEW**

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**ABSTRACT**

By the time scientists discovered that mRNA technology would soon become a reality, they have spent years attempting to invent the vaccine that would prepare the immune system to attack the proteins on the tumour cells' surface. Notwithstanding, the accomplishments in this domain have scarcely been by technological obstacles. Workers in the modern era have tested an experimental, personalized neo antigen Therapy (INT) made of patient-specific mRNA coded guidelines that the immune system can implement to attack oncogenic cells. It was among the leading and promising fields of cancer immunotherapy in the modern era. Patients suffering from Melanoma were treated in this study with both mRNA-4157 (V940) and Pembrolizumab, an immune checkpoint inhibitor that boosts anti-cancer activity more than Pembrolizumab Monotherapy. Along with peripheral blood tests before and after treatment, the researcher's evaluation of patients showed that the mRNA-4157 (V940) single-cell transcriptomic profiling of tumor samples led to the induction of diverse T cell proliferation by multiple clonotypes. More importantly, the sustained level was favorable when T cells response to neoantigens was 30 weeks after treatment. FDA award for therapy of mRNA-4157 (V940) with pembrolizumab in melanoma as a breakthrough therapy. A new mRNA-based personalized neoantigen therapy combined with pembrolizumab significantly improves relapse-free survival and distant metastasis-free survival. At the same time, pembrolizumab monotherapy in re-sected high-risk melanoma. The INT trial that targeted up to 34 patient-specific tumor neoantigens to induce T cell responses and potentiate anti-tumor activity. Concluded that INT has safety and efficacy and is beneficial. so it will be study for other cancers through INT Using mRNA and enable greater clinical benefit.

**KEYWORDS:** INT-Individualized Neoantigen Therapy, mRNA-4157(v940), Melanoma, T Cells, Metastasis.



ABSTRACT NO: ICCPPR-SPS-182-A

## **IA Retrospective Study on The Clinical Evaluation And Treatment Outcomes of Diabetic Ketoacidosis in Hospitalized Patients**

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### **Abstract**

Type1 diabetes is usually linked to diabetic ketoacidosis (DKA), a potentially fatal acute problems of diabetes mellitus. It is caused by a high level of inhibitory hormones and a lack of insulin , which results in metabolic acidosis , hyperglycemia and ketosis . Reducing the morbidity and mortality linked to DKA requires swift identification and effective medication . One hundred patients who were admitted with DKA between January 2022 and March 2024 were having their medical files examined in a retrospective examination at a tertiary care hospital . demographic data, demonstrating indicators , laboratory results (blood glucose, arterial pH, serum, bicarbonate, ketones), precipitating factors, approaches to treatment , and the results for patients were among the information gathered . Standard DKA procedures , which include therapy electrolyte correction , and water resuscitation , were used to treat the patients.

There was a slight female predominance (54%) , and almost all of patients (62%) were under 40. Abdominal discomfort , vomiting , polyuria , and polydipsia were the most often reported presenting symptoms . the two main precipitating factors were insulin omission (29%) and infection (38%). The median duration of stay in the hospital was 3.6 days. 94% of those treated recovered without any problems after following conventional therapeutic protocols. No in -hospital mortality was noted , and six hospitalized individuals (6%) needed to be accepted to the surgical unit.

DKA is still a harmful but curable side effect of diabetes , especially in younger individuals . positive results depend on early manifestation notice , resulting in factors identification , and treatment protocol adherence . The change of complication can be considerably with routine education and examination.

### **Keywords:**

Type 1 diabetes , a state of hyper metabolic acidosis , insulin therapy , electrolyte imbalance , care in hospitals , diabetic ketoacidosis , DNA , and triggering factors.



ABSTRACT NO: ICCPPR-SPS-182-B

## Functionalized Hydrogels as Emerging Platforms for Eco-Sustainable Agriculture and Pollution Mitigation- A Review

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### Abstract

Materials that promote environmental stability and food security are growing increasingly common as a result of the need for sustainable agriculture approaches. Both synthetic and bio-based hydrogels have drawn a lot of interest due to their potential for addressing challenges with crop resilience and water management.

Three-dimensional networks of polymers called hydrogels can absorb upto several hundred times their dry weight in water. In an attempt to assure biodegradability and minimize pollution, recent researches has concentrated on developing hydrogels from sustainable sources degrade from agro-waste. By delivering slow-release fertilization, water retention and soil remediation capabilities, these materials minimize greenhouse gas emissions, fertilizer runoff and irrigation frequency.

Using natural or synthetic polymers, hydrogel synthesis utilizes both physical and chemical methodologies. For application in precision agriculture, smart hydrogels that are susceptible to environment cues are being researched. Soil amendment, seed coating and controlled pesticide distribution are examples of practical application techniques.

Studies undertaken in both the field and the lab reveal that applying hydrogels promotes crop yield, soil moisture retention and fertilizer usage efficiency.. When compared to conventional petrochemical-derived materials, eco-friendly hydrogels have also been demonstrated to reduce greenhouse gas emission and costs.

A cutting-edge technique for environment remediation and sustainable agriculture, hydrogels deliver improved crop performance, greater water management and a lower ecological footprint. To overcome prevailing cost and adaptability constraints and establish hydrogels as a key component of resilient agricultural systems of the future, innovation in green synthesis and cognitive hydrogel engineering will be essential.

**Keywords:** Hydrogels, Sustainable Agriculture, Environment Remediation, Eco-friendly materials, Agro-Waste, Precision Agriculture.



ABSTRACT NO: ICCPPR-SPS-182-C

## Computational evaluation of flavonoid-based inhibitors for breast cancer: insights from docking, dynamics and ADMET analysis

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### Abstract

Breast cancer still poses a significant burden of disease internationally and standard treatment modalities are often restricted by drug resistance and adverse toxicity. The drug-like properties of three flavonoids, Apigenin, Curcumin and Hesperidin were assessed by in silico molecular docking, molecular dynamics (MD) simulations and ADMET profiling, in the present study. This docking analysis showed that the three flavonoids exhibited high binding affinity against breast cancer related target proteins with Apigenin having highest potential of binding. MD simulations also supported the stable nature of the Apigenin protein interactions with Curcumin and Hesperidin portraying relatively weaker and unstable interactions. Apigenin exhibited good gastrointestinal absorption with favorable low toxicity and good bioavailability, as per ADMET predictions. In comparison, Curcumin and Hesperidin were also promising with activity, though they had disadvantages of poor blood-brain barrier permeability and bioavailability issues. The combination of these results draws the conclusion that Apigenin is the most promising flavonoid candidate to treat breast cancer. Nonetheless, additional preclinical and clinical studies are needed to maximize clinical use and determine clinical utility.

**Keywords:** *Apigenin, Breast cancer, Molecular docking, Molecular dynamics & ADMET analysis*



ABSTRACT NO: ICCPPR-045

**ABSTRACT ON  
AN AUDIT ON TREND OF SENSITIVITY OF CEFTAZIDIME AVIBACTAM AND  
CEFTAZIDIME AVIBACTAM PLUS AZTREONAM COMBINATION IN ICU**

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## **Abstract**

### **Aim:**

Aim of the study is to identify the increase in resistant rate towards ceftazidime avibactam and ceftazidime avibactam plus aztreonam combination among most prevalent organisms in the ICU for the past one year (JAN 2024 - DEC 2024)

### **Objective:**

- To identify the reliability of ceftazidime avibactam (or) ceftazidime avibactam plus aztreonam combination among carbapenem resistant organism in our ICU
- To address the need of Antimicrobial stewardship to prevent such resistance development in the near future

**Study period:** JAN 2024 – DEC 2024

**Sample size:** All positive cultures reported during the study period in ICU

**Specimen:** Blood ET Urine Tissue Other body fluids

### **Organism detected:**

K. pneumoniae E. coli Pseudomonas Other Enterobacteriaceae

**Resistance pattern:** Resistant to carbapenem: Yes / No

### **Inference:**

Antibiotic resistance has been a global threat in recent years , with the evolution of new drugs there is development of new resistance . Ceftazidime –Avibactam , a novel antibiotic introduced in our setting in 2019 is also subjected to such resistance . It is found that almost 81 % of the isolated were resistant to it between Jul- Dec , further the combination of ceftazidime avibactam plus aztreonam resistance also increased from 7% in the first six months to 25 % in the last six months

### **Conclusion:**

Strict isolation practices would be very important to prevent the spread of such notorious organisms , proper hand hygiene , Strict adherence to antibiotic policy , creating an antibiotic stewardship committee and preventing the over use of restricted antibiotics



ABSTRACT NO: *ICCPDR-SPS-183*

**Mitigating Chemotherapy-Induced Nausea and Vomiting with Novel Agents: A Focus on the unique challenges present by Antibody-Drug Conjugates – A Review**

**SUBASRI.S**

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**ABSTRACT**

Common unsettling side effect chemotherapy regimen includes nausea and vomiting, which negatively impacts the quality of life and treatment adherence. Chemotherapy induced nausea and vomiting (CINV) may be mitigated or delayed with a use of appropriate anti emetic preventative therapies. Antibody drug conjugates (ADCs) have altered the way of cancer is managed by more precisely managing chemotherapy. ADCs combines the extended circulation half- life and specificity of monoclonal antibodies with a lethal efficacy of the payload linked by the chemical linkers. This study seeks to systematically assess the efficacy and safety profiles of emerging anti-emetic agents in the prophylaxis and the treatment of chemotherapy induced nausea and vomiting (CINV). Emphasizing the distinctive pharmacological and clinical challenges associated with antibody-drug conjugates (ADCs) therapies. This investigation aims to elucidate the mechanistic factors contributing to the CINV in the context of ADC administration and to develop evidence-based. Optimised intervention protocols to enhance therapeutic outcomes and patient

The methodology comprised evaluating anti emetic regimens, including unconventional combinations like netupitant/palonosetron (NEPA), Olanzapine and Corticosteroid-sparing approaches, as well as stratifying chemotherapeutic drug by emetogenic risk. ADCs were given particular considerations because of their distinct pharmacokinetic characteristics (such as their half-life and their ability to penetrate the blood brain barrier) and the enduring nausea and vomiting they cause. To put preventive efficacy in the context, risk factors such as patient demographics and prior CINV history were examined. Using objectives like occurrence rates, severity scores, and patient adherence, the effectiveness of preventive anti emetic therapies was assessed in terms of their capacity to manage acute, delayed and breakthrough nausea and

When it comes to CINV, antibody-drug conjugates ADCs present special difficulties because of high frequency, delayed start, and protracted duration of symptoms. According to recent data, ADCs such Sacituzumab Govitecan and trastuzumab deruxtecan can have moderate to high emetogenic potential: in importance clinical studies, more than 70% of patient experience nausea.

**Keywords:**

CINV, therapy, regimen, antibody-drug conjugates, breakthrough nausea, delayed, cytotoxic.



ABSTRACT NO: ICCPPR-046

## **MPharmacy's New Horizon: Transforming Patient Care**

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### **Abstract:**

Pharmacy is entering a new era where the focus extends beyond dispensing medicines to delivering patient-centred care. With innovations such as pharmacogenomics, telepharmacy, and digital health tools, pharmacists are playing a vital role in improving adherence, preventing drug interactions, and optimizing therapies. Clinical pharmacy practice now emphasizes medication therapy management, pharmacovigilance, and interprofessional collaboration, directly enhancing treatment outcomes. This abstract highlights how clinical pharmacy practice and evolving pharmacotherapeutics are redefining the pharmacist's role internationally, ensuring safer, more effective, and sustainable patient care for the future.

**Keywords:** health, medicines, treatment, pharmacotherapeutics etc.



ABSTRACT NO: ICCPPR-SPS-184

## AN OVERVIEW ON NEONATAL SEPSIS

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### **Abstract**

Across all neonatal infants in the Selenium and Cessation Study (n=596), those with confirmed sepsis at baseline (n=185) had the lowest survival (63%) at 12 months compared to infants (n=401) with negative culture results for sepsis at baseline (82%) [1]. Among infants with culture-positive sepsis, mortality is the highest in infants less than 1500 grams (80%). There is a glaring controversy between the assumption that neonates with sepsis have increased mortality risk and available evidence demonstrating that their risk is not elevated. There is little difference among infants with negative, positive, or unconfirmed sepsis status in their mortality risk at 3 months, which is very low in all groups. This is an extraordinary indication that the tools used to internally stratify such populations for high-risk neonatal sepsis are grossly inadequate. This report focuses on such difficulties in diagnosing neonatal sepsis and stresses the need for earlier detection and treatment through the optimum use of laboratory tests and timely therapeutic intervention.



ABSTRACT NO: ICCPPR-SPS-185

## **From Antioxidant to Aesthetic Obsession: The Glutathione Debate on Social Media**

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### **Introduction:**

Glutathione (GSH), the antioxidant in greatest concentration within humans, is heavily promoted as a bleaching agent for the skin, mostly in darker populations. Its medical applications for certain liver diseases and for chemotherapy-induced neurotoxicity are established, whereas its cosmetic applications are off-label and not adequately regulated. GSH operates in free radical quenching, antioxidant balance, DNA biosynthesis, protein catabolism, and immune protection.

Support for its use in bleaching is weak. Both oral clinical trials (2011, 2012) had conflicting results, with mild melanin decrease in some participants but no consistent effectiveness. A topical 2% glutathione lotion experiment had temporary improvement without side effects. Soaps and buccal lozenges have had a minimal impact in isolated case report series. On the other hand, intravenous (IV) glutathione—exceptionally promoted in clinics and medi spas—is not strongly supported. There was a placebo-controlled study in Pakistani women, which found no durable bleaching effect and included severe side effects, such as liver impairment (32%) and a single episode of anaphylaxis.

Short-term studies suggest tolerability; however, no trial has assessed the long-term systemic or intravenous use. Concerns remain about altered melanin pathways, which may increase skin cancer risk. Despite aggressive marketing, the clinical evidence is inconclusive, and the safety of chronic glutathione administration is unproven.

**Conclusion:** There is no strong evidence for glutathione's common cosmetic use off-label. Although short-term use of glutathione orally or topically seems safe, its administration intravenously is fraught with risk. Well-designed long-term research and regulatory approval are imperative in order to protect public health.



ABSTRACT NO :ICCP-SPS-186

**SCRUB TYPHUS – An Underdiagnosed cause of Acute Illness****Danush M\*, Madhan Babu M****Corresponding author: Dr. M. Dheenadhayalan- Assistant Professor****School of Pharmaceutical Sciences, VISTAS.**

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**Abstract**

Scrub typhus is an acute febrile illness caused by *orientia tsutsugamushi*, transmitted to humans by the bite of the larva of trombiculid mites (Chiggers). It causes a disseminated vasculitic and perivascular inflammatory lesions resulting in significant vascular leakage and end-organ injury. It is endemic to the “tsutsugamushi triangle,” particularly in South and Southeast Asia, and is increasingly reported in India. After an incubation period of 6-21 days, onset is characterized by fever, headache, myalgia, cough, and gastrointestinal symptoms. A primary papular lesion which later crusts to form a flat black eschar, may be present. If untreated, serious complications may occur involving various organs. Laboratory studies usually reveal leukopenia, thrombocytopenia hepatic and renal function. Diagnosis relies on clinical suspicion supported by laboratory findings, with IgM ELISA, immunofluorescence assay, and PCR as confirmatory tests. Doxycycline remains the treatment of choice, while azithromycin serves as an alternative for children and pregnant women. The recommended treatment regimen for scrub typhus is doxycycline. Alternative regimens include tetracycline, chloramphenicol, azithromycin, ciprofloxacin, rifampicin, and roxithromycin. Treatment of pregnant women with azithromycin was successfully done without relapse and with favorable pregnancy outcomes. Early diagnosis and treatment are essential in order to reduce the mortality and the complications associated with the disease. Untreated scrub typhus can be life-threatening, but with early diagnosis and appropriate antibiotics, the outcome is usually very good.

**Keywords :** Scrub typhus, *orientia tsutsugamushi*, chigger bites, eschar, doxycycline, azithromycin.



ABSTRACT NO: ICCPPR-SPS-187

## **Presymptomatic Risdiplam Treatment in Infants with Genetically Diagnosed Spinal Muscular Atrophy**

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### **Abstract**

Risdiplam, an oral pre-messenger RNA splicing modifier, is effective in symptomatic spinal muscular atrophy (SMA). Its safety and efficacy in presymptomatic infants are not well established..

**Method:** In this open-label study, infants aged 1–42 days with genetically confirmed SMA but without clinical symptoms received daily oral risdiplam (0.2 mg/kg). The primary outcome, assessed in infants with two SMN2 copies and baseline ulnar CMAP  $\geq 1.5$  mV, was the ability to sit without support at 12 months. Secondary outcomes over 24 months included survival, ventilatory support, motor milestones, feeding, growth, and SMA symptom development.

**Results:** twenty-six infants with two, three, or four or more SMN2 copies were enrolled. At 12 months, 21 infants (81%) could sit unsupported, 14 (54%) could stand alone, and 11 (42%) could walk independently. Among infants with two SMN2 copies and CMAP  $\geq 1.5$  mV, 4 of 5 (80%; 95% CI, 28–100) sat without support  $\geq 5$  seconds. Three infants were withdrawn after month 12. Of 23 infants completing 24 months, all survived without permanent ventilation or feeding support. Nine treatment-related adverse events occurred in 7 infants; none were serious.

**Conclusion:** Presymptomatic risdiplam treatment in infants with genetically diagnosed SMA improved motor function and survival compared with natural history data. Further controlled studies with larger populations and longer follow-up are needed to confirm efficacy and safety

**Keywords:** Risdiplam, Presymptomatic spinal muscular atrophy, SMN2 splicing modifier, Motor milestone development, Newborn screening



ABSTRACT NO: ICCPPR-SPS-188

## A COMPREHENSIVE REVIEW OF CYSTITIS MECHANISM AND THERAPEUTIC AND APPROACHES

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### Abstract

Cystitis, particularly acute uncomplicated cystitis, is a common lower urinary tract infection predominantly affecting women. Its incidence is influenced by factors such as age, socioeconomic status, hygiene practices, urban vs rural living, sexual behaviour, and comorbidities like diabetes or obesity. In Europe, studies report an incidence rate of approximately 2.91 per 100 person-years among women aged 15–50, with the highest rates observed in younger women (15–24 years). Risk is elevated among individuals with lower socioeconomic status and immigrant backgrounds. In contrast, Indian studies highlight unique behavioural and hygiene-related risk factors such as the use of cloth during menstruation, frequent sexual activity, vaginal infections, and inadequate hygiene practices. A multi-centred Indian study found 10.1% of community-acquired UTI urine samples positive for uropathies, 27% of women with a UTI will have another episode within 6 months, and 48% within 12 months. with a majority of cases in women aged 19–35 years. While comprehensive WHO data on cystitis alone is lacking, regional estimates suggest a lower incidence in India 1:4 male to female (1–2 per 100 person-years) compared to Europe, potentially due to underreporting and healthcare access disparities. The findings underscore the need for region-specific prevention strategies addressing lifestyle, education, and public health awareness.

**Key words:** Cystitis, Acute uncomplicated cystitis, Interstitial Cystitis, Lifestyle, Socioeconomic Status, Incidence Rate.



ABSTRACT NO: ICCPPR-SPS-189

## **ROLE OF NICOTINAMIDE WITH STZ IN INDUCING TYPE-2 DIABETES IN RATS**

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### **Abstract**

Streptozotocin (STZ) is a widely used Diabetogenic agent for experimental induction of diabetes in rodents. At higher doses, STZ selectively destroys pancreatic  $\beta$ -cells through DNA alkylation and free radical generation, leading to insulin deficiency and mimicking type 1 diabetes. However, to model type 2 diabetes, a partial  $\beta$ -cell impairment is required rather than complete destruction. Nicotinamide, a poly (ADP-ribose) polymerase (PARP) inhibitor and antioxidant, is co-administered with STZ to attenuate the extent of  $\beta$ -cell damage. This combination produces moderate and stable Hyperglycemia with residual insulin secretion, closely resembling human type 2 diabetes pathophysiology. The protective effect of nicotinamide reduces STZ-induced oxidative stress and preserves a portion of functional  $\beta$ -cells, thereby creating a reliable experimental model for studying insulin resistance,  $\beta$ -cell dysfunction, and evaluating novel antidiabetic therapies. Thus, the STZ-nicotinamide model is considered a preferred approach for investigating type 2 diabetes in rats due to its reproducibility, cost-effectiveness, and translational relevance.

**Keywords:** Streptozotocin (STZ), Nicotinamide, Type 2 Diabetes Mellitus, Experimental model,  $\beta$ -cell dysfunction, Insulin resistance, Oxidative stress, Rats.



ABSTRACT NO: CCPPR-SPS-190

## A COMPREHENSIVE REVIEW ON THE SCREENING MODELS FOR THE PHARMACOLOGICAL ASSESSMENT OF ANTIULCER DRUGS

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### Abstract

Ulcers are mucosal lesions that occur due to the disruption of protective barriers in the gastrointestinal tract, commonly caused by aggressive factors such as gastric acid, pepsin, or *Helicobacter pylori*. Antiulcer therapy aims to reduce gastric acidity, strengthen mucosal defense, or eradicate infectious agents. Among pharmacological options, H<sub>2</sub>-receptor antagonists like ranitidine play a key role by competitively blocking histamine at H<sub>2</sub> receptors on gastric parietal cells, thereby decreasing both basal and stimulated acid secretion. This mechanism promotes ulcer healing and provides symptomatic relief. Clinically, ranitidine has proven effective in the treatment of gastric ulcers, duodenal ulcers, gastroesophageal reflux disease (GERD), and Zollinger–Ellison syndrome. Despite its therapeutic benefits, prolonged use of ranitidine has been linked to rare endocrine side effects, including gynecomastia, arising from hormonal imbalance involving androgen, estrogen, or prolactin pathways.

In addition to synthetic drugs, nutraceuticals have gained increasing attention for ulcer prevention and management. Resveratrol, a natural polyphenolic compound found abundantly in grapes, berries, and peanuts, exhibits multiple pharmacological benefits. Grapes are one of the richest dietary sources of resveratrol, providing antioxidant and anti-inflammatory effects that support disease prevention. In the gastrointestinal tract, resveratrol from grapes helps reduce oxidative stress, strengthen mucosal defense, and lower the risk of ulcer formation. We aim at the preparation of a nutraceutical preparation which can be incorporated with resveratrol as a nutrient supplement. Thus, grapes act as a natural nutraceutical source of resveratrol for maintaining gastric health.

**Keywords:** Peptic ulcer, Antiulcer drugs, Ranitidine, Gynecomastia, Resveratrol.



ABSTRACT NO: ICCPPR-SPS-191

**A COMPARATIVE CLINICAL EVALUATION OF TORIPALIMAB AND NOVILIMAB:  
EFFICACY AND SAFETY IN NASOPHARYNGEAL CARCINOMA**

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**ABSTRACT**

Nasopharyngeal cancer remains a highly aggressive malignancy with a poor prognosis despite advancements in treatment. Toripalimab, a PD-1 inhibitor, has demonstrated the potential to improve clinical outcomes. This systemic review and meta-analysis assess the efficacy and safety of Toripalimab in comparison with nivolumab in treating NPC.

Toripalimab is a PD-1 targeting humanized igG4 monoclonal antibody used as first line treatment of nasopharyngeal carcinoma (NPC) compared to nivolumab in combination with chemotherapy. Currently approved PD-1 monoclonal antibodies have demonstrated significant clinical benefit particularly in patients with PD-L1 expressing tumors. However, in three multicentre on-going phase 3 trials (including NPC, Jupiter-02), Toripalimab in combination with chemotherapy has demonstrated good clinical efficacy irrespective of the PD-L1 status.

Compared with other ICIs, toripalimab + chemotherapy demonstrated increased pathological complete response rates and prolonged event-free survival in NSCLC. In patients with negative/low PD-L1 expression or squamous cell pathology, toripalimab + chemotherapy was the most effective regimen. In contrast, nivolumab + chemotherapy was preferable for patients with high PD-L1 expression or non-squamous cell pathology.

Among the evaluated perioperative immunochemotherapy regimens, toripalimab + chemotherapy indicated a significantly increased survival benefit for most resectable NPC patients. However, for high PD-L1 expression and non-squamous NPC patients, nivolumab + chemotherapy provided the most potent outcomes. The comparison between the mechanism of action and its adverse events has proven that toripalimab provides better therapeutic effects. The findings of this investigation are expected to assist clinicians in making informed decisions among promising treatment options.

***Keywords:***

Nasopharyngeal carcinoma, immunochemotherapy, squamous cells, PD monoclonal antibody, pathology, tumors,



ABSTRACT NO: ICCPPR-047

## **Simultaneous detection of nicotine and cotinine using HPLC with PDA detector**

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### **Abstract**

The quantification of nicotine and its primary metabolite cotinine in plasma is essential for assessing tobacco exposure and evaluating metabolic responses. In this study, plasma levels of nicotine and cotinine were determined using a validated high performance liquid chromatography (HPLC) method. The analysis employed a Shimadzu HPLC-LC-2010 system equipped with a photodiode array (PDA) detector operating at 254 nm. Plasma samples (0.5 mL) were alkalized with ammonia and subjected to liquid-liquid extraction using a diethyl ether and dichloromethane (60:40) mixture. The organic phase was evaporated under nitrogen at room temperature and reconstituted in ultrapure water before injection. Chromatographic separation was achieved using a C-18 column (250 × 4.6 mm, 5 μm) with an isocratic mobile phase consisting of ultrapure water (50%), methanol (15%), 0.1 M sodium acetate (25%), and acetonitrile (10%), with citric acid and triethylamine added to enhance resolution. The mobile phase pH was adjusted to 4.4 with glacial acetic acid, and the flow rate was maintained at 1.0 mL/min, yielding a total runtime of 15 minutes. Quantification was performed using calibration curves prepared in both ultrapure water and plasma over a concentration range of 0.05–10 μg/mL. This method will demonstrate reliable sensitivity and specificity for the detection of nicotine and cotinine in biological samples.



ABSTRACT NO: ICCPPR-SPS-192

## 3D Printed Tablets: The Future of Personalized Drug Delivery Systems

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### Abstract

3D printed tablets are emerging as a revolutionary advancement in pharmaceutical science, enabling highly personalized drug delivery. Using advanced additive manufacturing techniques such as fused deposition modeling (FDM), selective laser sintering (SLS), and stereo lithography (SLA), these tablets can be customized in terms of dosage, shape, drug release rate, and combination of multiple active ingredients. This level of personalization enhances treatment outcomes, reduces side effects, and improves patient adherence. The FDA's approval of Spritam, the first 3D printed drug, demonstrates both the clinical feasibility and growing regulatory support for such technologies. Furthermore, the potential for on-demand production makes 3D printing especially valuable in hospitals, remote locations, and for patients with rare or complex needs. Despite existing challenges—such as scalability, standardization, and quality control—3D printed pharmaceuticals represent a promising step toward truly individualized medicine. As the technology evolves, it is set to redefine drug development and transform the future of patient-centered healthcare.

**Keywords :** Personalized Medicine, 3D Printed Tablets, Additive Manufacturing in Pharma, On-Demand Drug Delivery, Customizable Dosage Forms, FDA-Approved 3D Drugs



ABSTRACT NO: ICCPPR-SPS-193

## CELL THERAPY IN REGENERATIVE MEDICINE AND CANCER: A COMPREHENSIVE REVIEW

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### Abstract

#### Background:

Cell therapy is a new and developing area in medicine where living cells are used as treatment. It is mainly studied for two major purposes – to repair or regenerate damaged tissues and to treat cancers. Stem cells have been shown to help in tissue healing, while immune cells like CAR-T cells and NK cells are effective in some cancers. Even though these treatments are successful in many studies, there are still challenges such as safety issues, high cost, and large-scale use.

#### Objective:

To review the role of cell therapy in regenerative medicine and cancer treatment, and to highlight its advantages and limitations.

#### Methods and Results:

Recent studies and reviews were analyzed on stem cell-based therapy for regeneration and immune cell-based therapy for cancer. Stem cell therapy showed benefits in degenerative diseases, and CAR-T cell therapy proved effective in blood cancers. However, side effects like cytokine release syndrome and graft-versus-host disease remain concerns.

#### Conclusion:

Cell therapy has the potential to improve future healthcare by combining regeneration and cancer treatment approaches. More research is needed to make these therapies safe, affordable, and widely available.

**Keywords:** Cell Therapy, Regenerative Medicine, Stem Cells, Cancer Therapy, Immunotherapy



ABSTRACT NO: ICCPPR-SPS-194

## ISOLATION, SCREENING AND CHARACTERIZATION OF ANTIMICROBIAL PRODUCING ACTINOMYCETES FROM SOIL SAMPLE

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### **Abstract**

The aim of this project is to screen actinomycetes strains from soil, determine their morphological and biochemical properties, and assess their potential for antimicrobial activity against a diverse array of pathogenic bacteria. Actinobacteria were isolated from different samples after they were subjected to serial dilution and culturing methods. Morphological properties of the isolates were analyzed by light microscopy, and biochemical testing was carried out to determine species-level features. The antimicrobial potential of the isolates was determined by the agar well diffusion method against Gram-positive and Gram-negative bacterial pathogens. A total of 23 isolates of Actinobacteria were isolated from soil samples, out of which 11 showed considerable antimicrobial activity against one or more than one pathogen. Amongst them, the isolate IGP-8 exhibited antibacterial activity against Gram-negative and Gram-positive test bacteria as well as antifungal activity by inhibiting *E. coli*, *B. cereus*, *Staphylococcus* sp., *C. albicans*, and *C. neoformans*. The antimicrobial activity of crude extract indicated that the largest zone of inhibition (10 mm) was seen against *Enterococci* sp. treated with IGP-8 extract at 150 µg/disc. Morphological analysis indicated that most of the isolates were filamentous in nature, with typical branching structures, and biochemical analysis of IGP-8 established that the actinomycete strain was a member of the *Streptomyces* genus. The findings of this study indicate the promise of soil-borne actinomycetes, especially *Streptomyces* spp., as sources of new antimicrobial agents. This highlights the significance of actinobacteria in the study of antimicrobial compounds and offers a platform for future research on the production of natural antimicrobial products derived from soil microorganisms.

**Keywords:** Actinomycetes, actinobacteria, G+ve, G-ve, *E. coli*, *B. cereus*, *Staphylococcus* sp., *C. albicans*, and *C. neoformans*, *Streptomyces* spp, *Enterococcus* sp.



ABSTRACT NO: ICCPPR-SPS-195

## DRUG REPOSITIONING: ACCELERATING NOVEL THERAPEUTICS THROUGH OLD MOLECULES

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### ABSTRACT:

Repurposing, or drug repositioning, has become an efficient and more affordable approach to discover new therapeutic uses of existing drugs to close the divide between unmet clinical requirements and the extensive cost and duration of discovery of de novo drugs. Repositioning is a novel strategy of reducing risky drug development by utilizing well-known pharmacokinetic, safety, and regulatory profiles, as demonstrated by success stories of sildenafil (antihypertensive to erectile dysfunction and pulmonary hypertension), duloxetine (antidepressant to neuropathic pain and stress incontinence), minoxidil (antihypertensive to alopecia), thalidomide (discarded teratogen to multiple myeloma therapy), and metformin (diabetes to The existing methods are computational in silico (AI, network pharmacology, omics), experimental screening, and real-life evidence analysis based on electronic health records and pharmacovigilance databases. Although repositioning has the benefit in terms of cost, safety, and increased accessibility, it also has challenges, including changed safety in new dosages, reduced intellectual properties, and strict clinical validation. However, as artificial intelligence, big data, and regulatory flexibility advance, drug repositioning is an exciting paradigm that can be used to broaden therapeutic landscapes in the field of oncology, neurology, infectious disease, rare diseases, and more.

**Keywords:** Drug repositioning, Drug repurposing, Old drugs / Existing drugs, New indications, Computational methods, Clinical evidence



ABSTRACT NO: ICCPPR-SPS-196

## **MEDICATION THERAPY MANAGEMENT (MTM) AND ITS IMPACT ON PATIENT OUTCOMES**

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### **ABSTRACT**

Drug treatment management (MTM) is a pharmacist, patient -focused service that focuses on adaptation to the use of the drug and improvement in health results. In today's health practice, patients often experience challenges such as many tips, side effects, poor farming and limited understanding of treatment. MTM deals with these problems through extensive drug reviews, patient counseling, follow -up of care and collaboration with doctors and other health professionals. Pharmacists as drug experts play an important role in identifying drug interactions, preventing errors, improving farming and ensuring rational use of medication. Unlike traditional dispensation, MTM extends the role of pharmacist for active participation in the patient's care, especially for chronic conditions such as diabetes, high blood pressure, asthma and cardiovascular disorders, where improvement and monitoring and reduces the hospital ride. Patient education is an important component of MTM, as pharmacists explain the importance of each drug, its side effects and the importance of lifestyle changes, which helps patients feel more confident and motivated in handling treatment. By reducing drug -related problems and improving the coordination of care, MTM not only increases the patient's safety, but also reduces the cost of health care and resource burden. This service transforms patients with passive recipients of care in active partners in the health trip, while at the same time strengthening the collaboration between health professionals. Ultimately, MTM demonstrates the developed role of pharmacists in modern health services by promoting the use of safe drug, better disease management and improvement in better quality of life.

**KEYWORDS:** Medication Therapy Management, Pharmacist role, Patient outcomes, Adherence, Drug safety.



ABSTRACT NO:ICCP-SPS-197

## Pharmacological evaluation of plant-derived compounds in diabetes

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### Abstract

Diabetes mellitus is a multifactorial metabolic disorder characterized by chronic hyperglycemia resulting from impaired insulin secretion, insulin resistance, or both. Current pharmacological therapies, while effective, are often associated with adverse effects, limited efficacy in long-term glycemic control, and high economic burden. This has led to increasing interest in plant-derived compounds as alternative or complementary therapeutic agents. Phytochemicals such as flavonoids, alkaloids, terpenoids, phenolic acids, and glycosides have demonstrated significant antidiabetic potential through diverse mechanisms, including stimulation of insulin secretion, enhancement of insulin sensitivity, inhibition of carbohydrate-digesting enzymes, modulation of glucose uptake, and protection of pancreatic  $\beta$ -cells against oxidative stress. Preclinical and clinical studies highlight the efficacy of extracts and isolated bioactive molecules from plants like *Gymnema sylvestre*, *Momordica charantia*, *Trigonella foenum-graecum*, and *Pterocarpus marsupium* in reducing blood glucose and improving metabolic profiles. However, challenges such as variability in phytochemical content, poor bioavailability, and limited clinical validation hinder their translation into standardized therapies. A comprehensive pharmacological evaluation of plant-derived compounds may provide a scientific basis for novel drug discovery and integrative approaches in diabetes management.

**Keywords:** Diabetes mellitus, Plant-derived compounds, Phytochemicals, Antidiabetic activity, Insulin secretion, Insulin sensitivity,  $\beta$ -cell protection, Flavonoids, Alkaloids, Terpenoids, Herbal medicine, Pharmacological evaluation



ABSTRACT NO: ICCPPR-SPS-198

**POST MARKETING SAFETY SURVEILLANCE OF NEW PSYCHOACTIVE DRUGS / NOVEL THERAPIES****RAJAMAGHALAKSHMI.M****PHARM.D 5th YEAR****Email Id: rajkanima2510@gamil.com****Vels Institute of Science, Technology and Advanced Studies****ABSTRACT**

Recent access to novel psychoactive therapeutics (e.g., rapid-acting antidepressants, neuroactive agents like esketamine, brexanolone, zuranolone, etc.) has extended the range of available treatment approaches to refractory psychiatric conditions. The critical trials and pre-marketing data, however, may not sufficiently mine for the rare, delayed, and population-specific adverse events, hence the significance of effective post-marketing pharmacovigilance. This review is based on a synthesis of post-marketing safety evidence of these agents, relying on peer-reviewed articles, pharmacovigilance reports, and regulatory surveillance reports, such as signal detection by FAERS. In real-life studies, predictable acute outcomes include dissociation, sedation, and momentary hypertension with intranasal esketamine, as well as occasional indicators of abuse, diversion, and organ-related incidences. Clinical evidence of brexanolone use indicates that excessive sedation and momentary loss of consciousness are clinically significant risks with the use of the drug, controllable with REMS, but that psychiatric and nervous system events need continuous monitoring, as shown by post-marketing data. Initial warnings in the case of zuranolone are no different, with anticipated neuropsychiatric adverse effects being reported, and there is a need to continue monitoring the safety signal as the use of the drug grows. Throughout these treatments, there has been the introduction of new post-marketing information, which has prompted labeling, boxed warnings, and safety communications, all of which have a direct impact on clinical monitoring practices. In general, post-marketing surveillance is essential in determining the presence of rare and context-specific harms of new psychoactive medications, and upcoming research must focus on prospective registries, standardized reporting, and pharmacoepidemiologic research to balance benefits and risks and patient safety.

**Keywords:** Post marketing surveillance, Pharmacovigilance, Psychoactive Drugs, Adverse Drug Reactions, Safety Signals



ABSTRACT NO: ICCPPR-SPS-199

## PHARMACISTS IMPACT ON DRUG DISCOVERY AND RESEARCH

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### ABSTRACT

There has been a growing interest in global health education in the pharmacy curriculum over recent years. Few models and approaches to assess structures

of courses have been discussed, however. The general aim was to outline the organization of our global health elective for pharmacy students, and evaluate

educational outcomes regarding perceived or formal knowledge and attitudes related to global health. Our elective was created with a competency-based

approach to global health education that included reflection, projects, service and game-learning. Beyond course evaluation, a pre-post survey questionnaire

measuring attitudes, perception of knowledge, formalized knowledge, and opinions was used. Generally speaking, students exhibited legitimate performance on

course evaluation, improving temporally during longitudinal projects. The survey showed substantial improvements in knowledge perception due to the course,

but no improvement in formalized knowledge through the survey test. Moreover, adding game-learning to the course was positively accepted by students. In the

future, revisions of the course will emphasize the application of various assessment strategies to address learning outcomes. Pharmacists play a significant role in

the early stages of drug discovery. They utilize their understanding of drug mechanisms and interactions to assist in identifying leads for potential

drugs. Pharmacists continue to make a contribution to the drug, even after its approval. In day-to-day practice, particularly in a clinical environment, they detect

and report new or uncommon ADRs that might not have surfaced during trials.

**Keywords:** Pharmacy education, global health, active learning, curriculum, elective course.



ABSTRACT NO:ICCPR-048

## TELEPHARMACY & TELEHEALTH

### Unleashing The Revolutionary Potential in Medication Management and Revolutionizing Pharmacy Practice for Empowering Future Generations

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#### ABSTRACT

Telepharmacy and Telehealth integration, using remote platforms, expands healthcare access by overcoming geographical barriers, improving medications adherence and enhancing patient education, ultimately leading to better patient outcomes and more efficient healthcare systems. Technologies like video conferencing and mobile apps allow pharmacists to conduct remote medication reviews, collaborate with other providers, and manage chronic conditions, reducing costs and burden for both patients and providers. While benefits are clear, successful implementation requires addressing digital literacy, ensuring data privacy and security and establishing supportive legal and ethical frameworks. These platforms enable patients in rural, underserved or remote areas to access pharmaceutical care without the need for in-person travel. This review article explores how Telepharmacy and Telehealth technology is revolutionizing medication management, pharmacist workflow, and patient care in pharmacy practice. Authors also explore the various applications and recommendations to overcome the barriers, providing valuable insights for pharmacists, healthcare professionals and policymakers.

**Keywords:** Applications, ethical, telepharmacy, pharmacists and remote



ABSTRACT NO: ICCPPR-SPS-200

## PHARMACOVIGILANCE OF NOVEL ORAL ANTICOAGULANTS: SAFETY BEYOND CLINICAL TRIALS

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### ABSTRACT

Novel oral anticoagulants (NOACs, abbreviated as direct oral anticoagulants, DOACs) like apixaban, dabigatran, edoxaban, and rivaroxaban have been progressively used as either preventive or therapeutic in thromboembolic disorders, because of their superiority over older vitamin K antagonists (VKAs), including fixed dosage, reduced drug and food interactions, and without the need to monitor with laboratory tests. Nevertheless, because under optimal conditions, randomized controlled trials (RCTs) provide crucial efficacy and safety information, post-marketing pharmacovigilance has also shown that further safety concerns and adverse event (AE) signals, which are less evident in trials, are present. Indicatively, a recent study of the FAERS database revealed non-bleeding adverse drug events that were linked to NOACs and affected various organ systems, including endocrine disorders, psychiatric disturbance, reproductive system, and metabolism imbalance, which usually remain under-reported in clinical risk, with age, renal function, comorbidity, and co-medication being some of the factors that differ. Meta-analysis of special populations like cancer-related venous thromboembolism and patients with diabetes also highlights the fact that NOACs retain efficacy as compared to LMWH or VKAs, though safety results might differ in clinical practices. Such results highlight the significance of continuous pharmacovigilance signal detection, adverse events reporting, trials. Observational data in the real-world support that major bleeding rates and thromboembolism are generally similar to those in RCTs, although there are also differences in real-world studies, and potentially risk stratification, which are required to comprehensively describe the safety of NOACs in the long-term beyond the confines of clinical trials.

**Keywords:** *Novel Oral Anticoagulants, Direct Oral Anticoagulants, Post Marketing Surveillance, Bleeding risk*



ABSTRACT NO:ICCP 049

## DESIGN AND VALIDATION OF PRIMER FOR B-CELL ACTIVATING FACTOR (BAFF) IN HUMAN BLOOD SAMPLES

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### Abstract

#### Introduction:

B-cell activating factor (BAFF), a member of the TNF ligand superfamily, plays a pivotal role in B cell survival, maturation, and immune response. Aberrant expression of BAFF has been implicated in autoimmune diseases and certain cancers, making it a valuable target for diagnostic and therapeutic research. Efficient amplification of BAFF cDNA through PCR requires highly specific primers. This study aims to design and validate optimal primers for the accurate amplification of the BAFF gene.

#### Aim and Objective:

To design and validate a specific and efficient primer pair for the B-cell activating factor (BAFF) gene for accurate amplification and downstream gene expression studies.

#### Materials and Methods:

Primers were designed using NCBI Primer-BLAST and verified for specificity, GC content, melting temperature, and the absence of secondary structures using OligoAnalyzer. The target sequence was obtained from the NCBI reference sequence (NM\_006573.4). PCR was performed using human peripheral blood mononuclear cell (PBMC) cDNA. Amplification specificity and efficiency were assessed by agarose gel electrophoresis and real-time PCR (qPCR) melt curve analysis.

#### Results:

The selected primer pair amplified a 198 bp fragment specific to the BAFF gene with high efficiency (96%) and no off-target binding, as confirmed by a single peak in melt curve analysis. Gel electrophoresis showed a single, sharp band with no primer-dimer formation. Sequencing of the PCR product further confirmed the identity of the BAFF fragment.

#### Conclusion:

This study successfully designed and validated a specific and efficient primer pair for the BAFF gene. The primers can be reliably used for gene expression studies, facilitating further research into BAFF's role in immunological disorders and its potential as a diagnostic biomarker and therapeutic target in numerous diseases .



ABSTRACT NO:ICCP 2ND-SPS-201

## **NEEDLE RADIOFREQUENCY COMBINED WITH TOPICAL EXOSOME THERAPY FOR MODERATE TO SEVERE ACNE**

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### **Abstract**

Acne vulgaris is a multifactorial skin disorder with significant physical and psychological impact. Conventional pharmacological treatments are often limited by side effects, antibiotic resistance, and poor adherence. This study aimed to evaluate the efficacy, safety, and patient satisfaction of combining needle radiofrequency (RF) with topical exosome therapy in patients with moderate to severe acne.

**Method:** A case series involving 22 patients (12 females, 10 males; 18–35 years) was conducted. Patients underwent 6–10 weekly sessions of needle RF followed by application of adipose-derived mesenchymal stem cell exosomes. Acne severity was assessed using the Investigator's Global Assessment (IGA) scale, while patient satisfaction was recorded on a 5-point Likert scale. Standardized photographs and adverse event monitoring were included.

**Results:** All patients demonstrated improvement in acne severity, with a mean reduction of 2.5 points on the IGA scale. Sixteen patients achieved “almost clear” status, and six reached “mild” acne levels. Patient satisfaction averaged 4.2/5, with notable improvements in skin texture and lesion reduction. Reported side effects, including transient erythema and edema, resolved within 24 hours. No cases of scarring or post-inflammatory hyperpigmentation were observed.

**Conclusion:** The combination of needle RF and topical exosome therapy is a safe, well-tolerated, and effective approach for moderate to severe acne. This dual modality not only reduces acne lesions but also enhances skin quality offering a promising alternative to conventional therapies. Larger randomized controlled trials are warranted to validate these findings.



ABSTRACT NO: ICCPPR-SPS-202

## **MOBILE HEALTH APPS FOR PATIENT ADHERENCE AND CHRONIC DISEASES MANAGEMENT**

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### **Abstract**

Mobile health applications for managing chronic diseases and patient adherence is one of the biggest obstacles to the successful management of chronic diseases is still patients' poor adherence to prescription and lifestyle advice. Applications for mobile health (mHealth) have become a viable, affordable, and easily accessible means of helping patients and filling this gap in conventional care. The purpose of this systematic review and meta-analysis is to compare the efficacy of mobile applications versus traditional care in enhancing patient adherence and managing chronic diseases in general. This study also evaluates user acceptability and looks at the essential components of popular mHealth apps. To find randomized controlled trials (RCTs) involving adult patients with chronic diseases using mHealth apps, a thorough literature search was carried out across several databases, including MEDLINE, Embase, and Cochrane Central. Future research should focus on high quality, long-term studies to identify the ideal app features and implementation strategies that will scalability and sustainability in clinical practice. This concludes that the mobile health apps represents a effective and viable intervention and supporting the patients Self-management of chronic diseases. Apps that employ strategies like medication reminders, electronic pillboxes, and educational content to help patients take their medication as prescribed. By putting health information and management tools directly into patients hands, these apps encourage active participation in their own care and decision-making. Apps that can leads to better control of chronic conditions like diabetes and hypertension, and that potentially reduces the hospital visits. mHealth apps foster greater patient engagement, making them active participants in their chronic disease management.

**Keywords:** Chronic diseases, Patient care, mHealth apps, Clinical practice.



ABSTRACT NO: ICCPPR-050

**AI-POWERED PHARMACOVIGILANCE: A NOVEL APPROACH****E.Varshnee<sup>1\*</sup>, DR.S.Ramalakshmi<sup>1</sup>****\*Pharm.D 4<sup>th</sup> year, KK College of Pharmacy, Chennai****<sup>1</sup>Department of Pharmacy Practice, KK College of Pharmacy, Chennai**

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**ABSTRACT**

The integration of artificial intelligence (AI) into pharmacovigilance is transforming the landscape of drug safety monitoring and regulatory compliance. This comprehensive review explores the multifaceted applications of AI in pharmacovigilance, including predictive modeling, signal detection, natural language processing, automation of reporting, adverse event detection, and risk-benefit analysis. By leveraging vast amounts of data, AI enhances the efficiency, accuracy, and scalability of pharmacovigilance processes, enabling real-time decision-making and reducing costs.

The benefits of AI in pharmacovigilance are numerous, including improved signal detection, enhanced patient safety, and streamlined regulatory reporting. However, several challenges and opportunities arise, such as ensuring data quality and standardization, mitigating algorithm bias, integrating AI with legacy systems, and addressing regulatory and ethical issues. To fully harness the potential of AI in pharmacovigilance, it is essential to develop clear guidelines, harmonize global efforts, and foster collaboration between industry stakeholders, regulatory agencies, and AI developers.

This review provides an in-depth examination of the current state of AI in pharmacovigilance, highlighting successful case studies, ongoing challenges, and future directions. By exploring the intersection of AI, pharmacovigilance, and regulatory compliance, this review aims to inform stakeholders about the opportunities and challenges associated with AI-driven pharmacovigilance and to facilitate the development of more effective and efficient drug safety monitoring systems.

The findings of this review have significant implications for the future of pharmacovigilance, suggesting that AI has the potential to revolutionize drug safety monitoring and regulatory compliance. As the field continues to evolve, it is crucial to address the challenges and opportunities associated with AI in pharmacovigilance, ensuring that AI-driven systems are designed to prioritize patient safety, improve efficiency, and support informed decision-making.



ABSTRACT NO: ICCPPR-SPS-203

## **Regulatory Affairs in Pharmaceuticals and Biotechnology: Balancing Innovation, Safety, and Global Access**

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### **Abstract**

Pharmaceutical and biotech industries work under a wide and growing range of regulations worldwide.. The Regulatory Affairs specialists take the center stage, making sure that companies meet the laws and regulations at every stage of the product life cycle, from R&D to clinical trials, production, and post-launch. It entails the translation of intricate global guidelines, including Good Manufacturing Practices and those of the International Conference on Harmonization , which seeks to harmonize international standards. A major justification for such extensive regulation, including safety, efficacy, quality, promotion, and price, is the natural uncertainty in drug benefit versus risk, combined with enormous R&D expense. 3 billion USD in 2005, because of high expense and failure at the preclinical stage and extensive human clinical trials. The integration of biotechnology products into the conventional regulatory framework is a challenge in itself. Advances in physicochemical characterization require reconsideration of strict process control and use of biological assays for product assessment. There are concerns that there will be an accumulation of quality control tests, such as DNA content or N-terminal methionine determination, which are sometimes required without apparent clinical rationale. Moreover, preclinical safety evaluation of biotechnology items must also use a scientific, case-by-case, flexible approach because of possible species-relatedness in pharmacological effects, as illustrated by human GM-CSF. The international regulatory landscape is constantly changing to balance innovation incentives, patent protection and market access on one side with patient safety and affordability on the other.

**Keywords:** pharmaceutical industries, Biotechnology industry, regulatory affairs, product lifecycle, efficacy, quality, promotion



ABSTRACT NO: ICCPPR-SPS-204

## Adaptive Drug Dosing: AI's Edge in Dialysis Care

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### Abstract:

Personalized pharmacotherapy in dialysis represents a paradigm shift from uniform dosing toward tailoring treatment to individual patient physiology and circumstances. In patients with compromised renal function, traditional fixed drug regimens frequently result in suboptimal efficacy or toxicity because of altered drug clearance, accumulation, and interaction effects. Artificial Intelligence (AI), particularly machine learning and model-informed precision dosing, offers a solution by integrating diverse data sources—such as demographics, body mass, laboratory biomarkers, dialysis modality and schedule, genetic polymorphisms, and comorbidity profile—to predict pharmacokinetics and pharmacodynamics in real time. Through pattern recognition and predictive modeling, AI systems can estimate how drugs are absorbed, distributed, metabolized, and excreted in each patient, thereby recommending individualized dosages that maintain therapeutic levels while minimizing adverse effects. Such adaptive models can be continuously calibrated using new patient data (e.g. drug monitoring, biochemical feedback), enabling dynamic adjustments in response to changes like residual renal clearance, fluid shifts, or comorbid acute illness. Nevertheless, multiple challenges remain: the need for large, high-quality datasets spanning varied patient populations; addressing inter-individual variability especially in underrepresented groups; ensuring model interpretability and clinician trust; facilitation of rapid, cost-effective monitoring; and regulatory oversight to safeguard safety and privacy. Despite these barriers, AI-assisted personalized dosing in dialysis has the potential to significantly enhance safety, reduce drug-related complications, improve therapeutic outcomes, and optimize resource utilization. By implementing such strategies clinically and validating them with prospective trials, the field may achieve safer, more efficacious drug therapy for dialysis patients.

**Keywords:** Personalized medicine, Dialysis, Artificial Intelligence, Drug dosing, Patient safety, Challenges, Mechanism



ABSTRACT NO: ICCPPR-SPS-205

## **Mitigating Chemotherapy-Induced Nausea and Vomiting with Novel Agents: A Focus on the unique challenges present by Antibody-Drug Conjugates – A Review**

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### **ABSTRACT**

Common unsettling side effect chemotherapy regimen includes nausea and vomiting, which negatively impacts the quality of life and treatment adherence. Chemotherapy induced nausea and vomiting (CINV) may be mitigated or delayed with a use of appropriate anti emetic preventative therapies. Antibody drug conjugates (ADCs) have altered the way of cancer is managed by more precisely managing chemotherapy. ADCs combines the extended circulation half- life and specificity of monoclonal antibodies with a lethal efficacy of the payload linked by the chemical linkers. The linked cytotoxic medication can be delivered straight to the tumour because the antibody in the ADC binds selectively to the target antigen on the surface of the cancer cells. This accuracy reduces off -target negative effects by limiting the exposure of healthy cells to harmful substance.

This study seeks to systematically assess the efficacy and safety profiles of emerging anti-emetic agents in the prophylaxis and the treatment of chemotherapy induced nausea and vomiting (CINV). Emphasizing the distinctive pharmacological and clinical challenges associated with antibody-drug conjugates (ADCs) therapies. This investigation aims to elucidate the mechanistic factors contributing to the CINV in the context of ADC administration and to develop evidence-based. Optimised intervention protocols to enhance therapeutic outcomes and patient quality of life.

When it comes to CINV, antibody-drug conjugates ADCs present special difficulties because of high frequency, delayed start, and protracted duration of symptoms. According to recent data, ADCs such Sacituzumab Govitecan and trastuzumab deruxtecan can have moderate to high emetogenic potential: in importance clinical studies, more than 70% of patient experience nausea.

The emergence of antibody-drug conjugates (ADCs) has redefined landscape of CINV, presenting distinct challenges such as delayed onset and prolong symptoms that differ from traditional regimens. In order to address persistent CINV in patients receiving ADCs, future research should concentrate to individualized regimens and cutting-edge supportive technologies.



ABSTRACT NO: ICCPPR-051

**Health-Related Quality of Life of metastatic brain tumor patients with radiation-induced fatigue.**

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**ABSTRACT**

Brain metastases (BMs) affect about 20% of cancer patients. Advances in treatments like radiation therapy (RT) have improved patient survival, but radiation-induced fatigue remains a significant issue, impacting the health-related quality of life (HRQOL) of patients. The study aims to evaluate HRQOL in metastatic brain tumor patients experiencing RT-induced fatigue. A prospective observational study was conducted with 22 brain metastatic patients evaluated weekly during radiation therapy. The HRQOL was assessed by using Functional Assessment of Cancer Therapy: Fatigue (FACT-F) questionnaires. FACT-F has a noticeable impact on physical and emotional well-being, particularly during treatment, its effect on social well-being appears negligible. However, functional well-being is notably affected, with a significant proportion experiencing moderate to severe effects after treatment. The findings revealed that the Functional well-being of the majority of the patients was affected more when compared with other domains. Understanding these dynamics can aid in tailoring interventions to address specific aspects of well-being and improve the overall quality of life for brain metastasis patients. Radiation-induced fatigue had a great impact on the HRQOL of BM patients receiving radiation therapy.

***Keywords:***

Brain Metastases, FACT-F, Health-Related Quality of Life, Fatigue.



ABSTRACT NO: ICCPPR-052

## "The Future of Pharmacy: Innovations and Opportunities"

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### Abstract

New therapeutic approaches, evolving patient requirements, and quick technical advancements are all influencing pharmacy's future. This change opens up new possibilities for enhancing patient safety, customizing care, and enhancing healthcare delivery. The application of artificial intelligence, machine learning, and big data analytics in pharmacy for clinical decision-making, treatment optimization, and drug development represents a significant shift. Remote patient care and telepharmacy are also important because they give people access to pharmaceutical services outside of physical sites, particularly in underprivileged and rural areas. Pharmacogenomics and personalized medicine are two more crucial fields. In order to optimize efficacy and minimize adverse effects, this profession focuses on tailoring medication therapy to each patient's unique genetic profile. Ethical, legal, and regulatory issues arise when these breakthroughs are implemented, particularly when it comes to patient data protection, AI-driven healthcare choices, equitable access to cutting-edge therapies, and upholding professional accountability. In conclusion, pharmacy's future lies at the intersection of patient-centered care, sustainability, treatments, and technology. In order to guarantee that the pharmacy profession keeps expanding as a vital component of worldwide healthcare, this article examines these significant sectors, highlighting chances and tactics.

### Keywords:

Digital Transformation, Telepharmacy, Pharmacogenomics, Personalized Medicine, Smart Drug Delivery Systems, Blockchain in Pharmaceutical Supply Chain, Future of Pharmacy



ABSTRACT NO: *ICCP-SPS-206*

## **Janus Kinase Inhibitors in the Treatment of Vitiligo: A Review**

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### **Abstract**

**Introduction:** Vitiligo is a reversible skin condition defined by prominent white patches caused by the loss of melanocytes. Activated CXCR3<sup>+</sup> CD8<sup>+</sup> T cells promote melanocyte detachment and apoptosis via interferon-gamma (IFN-g) secretion, and chemokines secreted by keratinocytes via the Janus kinase (JAK)/signal transducer and activator of transcription (STAT)-1 signaling pathway result in further recruitment of CXCR3<sup>+</sup> CD8<sup>+</sup> T cells and the formation of a positive-feedback loop. JAK inhibitors, which target the JAK/STAT system, are now approved to treat a wide range of immune-related conditions.

**Methods:** IFN-g-chemokine signaling pathway implicated in vitiligo pathogenesis is supported by the efficacy of JAK inhibitors, such as tofacitinib, baricitinib, and ruxolitinib, in treating vitiligo. However, more research is needed to find additional inflammatory pathways that may be involved in the pathophysiology of vitiligo and to establish the optimal dose of JAK inhibitors for treating this illness.

**Results:** In mouse vitiligo models, neutralizing IFN-g antibodies prevents CD8<sup>+</sup> T cell accumulation and lesion depigmentation. JAK inhibitors have been demonstrated to decrease IFN-g signaling, hence promoting vitiligo repigmentation. Tofacitinib (Pfizer, New York, NY, USA), ruxolitinib (Celgene, Summit, NJ, USA), and baricitinib (Indianapolis, IN, USA) are the three most often reported JAK inhibitors used in vitiligo therapy. One small-molecule inhibitor that targets JAK1 and JAK2 specifically is called rufolitinib (INCB-018424). For the treatment of moderate to severe rheumatoid arthritis, tofacitinib, a selective inhibitor of JAK1 and JAK3, is licensed. In vitiligo lesions treated with baricitinib, a specific JAK1 and JAK2 inhibitor, re-pigmentation has only been reported in one case report.

**Conclusion:** Over the last few decades, greater research into the pathophysiology of vitiligo has yielded more targeted, successful, and hopeful treatment options. Following the revelation of the significance of the IFN-g signaling axis in vitiligo, several clinical trials using JAK inhibitors were conducted, indicating significant success in vitiligo care. However, additional inflammatory pathways in the pathophysiology of vitiligo have yet to be identified. TYK2, another member of the JAK family, plays a ubiquitous role in signal transmission.

**Keywords:** vitiligo, JAK/STAT-1 signaling pathway, JAK inhibitors, chemokines, IFN - interferon.



ABSTRACT NO: *ICCP-SPS-207*

**Rapid Recovery of Donor Hearts for Transplantation after Circulatory Death Using  
Extended Ultra-oxygenated Preservation**

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**ABSTRACT**

Rapid recovery with extended ultra-oxygenated preservation (REUP) is a new method for the recovery of hearts from deceased organ donors after circulatory death (DCD). This avoids the disadvantages of two existing preservation methods. This study evaluates a novel technique, REUP designed to preserve and resuscitate donor hearts after circulatory death without full reanimation. After death, the aorta is clamped and a flush circuit is established to oxygenate two litres of a cold preservation solution consisting of packed red cells, del Nido cardioplegia, and other additives. Then the solution is administered at a mean aortic-root pressure of 80 mmHg over a period of approximately 10 to 12 minutes. To date, VUMC has used the method for 20 transplants, which shows excellent outcomes, no adverse events were reported during the perioperative period. The technique has been successful in preserving hearts for more than four hours and to as many as eight hours enabling efficient transport and transplantation. REUP is a promising, cost-effective method for rapid DCD heart recovery that mitigates ethical and logistical limitations of current techniques. The technique has great potential to expand the number of donor hearts available by making organ preservation technology and expanding the use of DCD hearts

**KEYWORDS** : REUP ; DCD ; del Nido cardioplegia

ABSTRACT NO: *ICCPR-SPS-208***TECHNOLOGY FOR CLINICAL DECISION SUPPORT AND TELEPHARMACY****Mohamed Jasim. A<sup>1</sup>, Dr.M. Kalaiarasan\***Email: [mohamedmohamedjas@gmail.com](mailto:mohamedmohamedjas@gmail.com)**Abstract**

The integration of clinical decision support systems (CDSS) and Tele pharmacy into clinical pharmacy practice has significantly changed patient care through evidence-based, real-time suggestions to pharmacists and improved access to the delivery of pharmaceutical care. CDSS are sophisticated and AI-based systems that calculate detailed patient data, including medical history, lab tests, and current medications, to detect drug interaction, unlikely dose, and potential side effects, which helps pharmacists enhance medication therapy as well as safety. CDSS further seeks to reduce the risk of medication errors by automating, and sending Actionable alerts for important checks regarding some critical components of clinical decisions. For instance, when CDSS distributions were introduced within community pharmacies, prescribers readily adopted pharmacist recommendations/interventions, partly because of prior, continuous, positive professional interaction and trust. Tele pharmacy therefore supports CDSS expansion by providing a distant modality of pharmaceutical care, especially in rural or underserved areas of the country, through virtual consultations, medication review, and adherence monitoring in real-time, thus changing geographical limits, while ensuring continuity of care, patient involvement, and patient education. Both systems enable workflows to be optimized in pharmacy practice, while promoting interdisciplinary, while facilitating personalization of medicine through uniform, consistent, and data-derived clinical advice. Although CDSS and tele pharmacy have already shown potential in-patient care, there are still challenges, such as integration into clinical workflows, that must be diligently addressed for successful use of the systems. However, both tele pharmacy and CDSS are a significant departure from the way pharmaceutical care is delivered. Thus, the coordination between CDSS and tele pharmacy represents a transformative shift toward smarter, more accessible, and patient-centered pharmacy practice. Their continued evolution will determine the future landscape of pharmaceutical care delivery worldwide.

**Key Words:** Tele pharmacy, Clinical pharmacy practice, Pharmacy care, Drug interactions, Adherence Monitoring.



ABSTRACT NO: *ICCP-SPS-209*

## **Future & Direction Of (AI)Regulatory Affairs**

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### **ABSTRACT**

The regulatory affairs of the field deals with the regulatory requirements of marketing Authorization of therapeutic products. This regulatory affairs is facing and impacting all aspects of the development and the regulation value proposition of new therapeutic products (IMP). The regulatory affairs department plays the role in ensuring that pharmaceutical products meet both national and international standards with the development, production and marketing of the drugs . It acts as a connection between the pharmaceutical company and regulatory authorities. especially in ( RA) professionals oversee the approval of drugs, medical devices and health care products by managing the legal scientific and commercial aspects. The rapid growth of the pharmaceutical industry particularly in emerging markets like India. The need for skilled regulatory affairs professionals has significantly increased.The future of Regulatory Affairs (RA) looks very dynamic because healthcare, pharmaceuticals, and medical technologies are evolving rapidly. Here are the main directions where the field is heading,AI & Automation, Regulatory submissions, document review, and compliance monitoring are increasingly supported by AI tools, cutting down manual work.Electronic Submissions Paper-based submissions are vanishing; advanced electronic formats and centralized databases are becoming the Specialized regulatory technology solutions will help companies predict, track, and manage compliance more efficiently.Agencies like ICH, WHO, FDA, EMA, CDSCO are working toward greater alignment of standards.In the future, a single global submission dossier may become reality, reducing duplication and speeding approvals.Regulatory affairs will need expertise in cell & gene therapies, mRNA platforms, CRISPR-based treatments, nanomedicine, and biosimilars.Approval pathways for orphan drugs and precision medicine will expand, demanding more adaptive regulatory strategies

**Keywords:** Regulatory Affairs, Drugs, Medical Devices, National and International standards.



ABSTRACT NO: *ICCP-SPS-210*

**IMPACT OF NOMOPHOBIA ON YOUTH ATTITUDE AND Demeanour -A  
CROSS-SECTIONAL STUDY**

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**Abstract**

**Introduction:** The mobile telephone sets are a part and parcel of everyday life all over the globe. Our obsession with mobile gadgets has become epic. Nomophobia is a term describing a growing fear in today's world, the fear of being without a mobile device, or beyond mobile phone contact.

**Aim:** To analyze the context for Nomophobia among youth and its impact on human health care.

**Methodology:** Today's smartphones, resemble mini-computers, and provide not only internet services but also access to applications. The portable and multi-functional nature of smartphone satisfies various demands of people, like online chatting, gaming, shopping, etc., which should encourage dependency. The information for this work was carried out using structured questionnaires administered to 257 students.

**Results and Discussion:** Students of age group 18 -23 were interviewed and reported that they suffered from absent mindedness ( 52), anxiety (48) tachycardia (37), obsessive thoughts (34) , trembling hands (31), Head ache (29) and boredom( 26). Generally they stated FOMO" from the acronym Fear Of Missing Out, is a form of anxiety associated to social networks and it's reflected in the necessity to be continuously online. They admitted that Anxiety may be provoked by the loss of a mobile phone, loss of reception, or even a dead mobile phone battery. They honestly agreed their academic performance decreased to greater extent by ringxiety but they feel anxious if they are advised by others regarding mobile usage and 73 % self medicate .

**Conclusion:** Technology should be a servant, not a master. the aim of public health interventions is not to prohibit smartphone use, but to promote safe, healthful and mindful use. In short, smartphone overuse is an emergent public health issue that demands public health solutions. An awareness was created using video clips, pamphlets regarding the perilous excess use of smartphone. Utmost self-realization is necessary to overcome all the hurdles.

**Keywords:** Smartphone, Nomophobia, Ringxiety.

ABSTRACT NO: *ICCP-SPS-211***INNOVATIVE DRUG DISCOVERY: AI-POWERED RETRO DESIGN  
AND ADVANCED REVERSE PHARMACOLOGY****S.Pavithra<sup>1</sup>, Mohamed Zerein****Fathima****B.Pharm, School of pharmaceutical sciences, Vels Institute Of Science, Technology And  
Advanced Studies (VISTAS), Pallavaram-600117, Chennai, Tamilnadu, India****Corresponding Author: Mohamed Zerein Fathima Department of Chemistry and Analysis,  
School Of Pharmaceutical sciences, VISTAS, Pallavaram, Chennai, Tamilnadu****E-mail id: zereinfathima@gmail.com****Abstract**

Retro drug design is also known as reverse drug design or reverse pharmacology. This is a medicinal chemistry approach that, based on a pharmacologically active drug molecule, analyses its chemical structure in reverse to develop improved drug analogs. Retro drug design (RDD) is a computational drug discovery method that starts with desired target properties (like biological activity and ADMET) and works backward to generate novel drug molecules. Applications of RDD include rapidly identifying the entirely new chemical structures with specific biological activities, such as activating a target receptor, and optimizing multiple drug properties, including ADMET (absorption, distribution, metabolism, excretion, and toxicity) properties, simultaneously. We start by comparing several synthetic accessibility scores to a binary "chemist score" as estimated by the chemists on a bench of generated molecules, as a first experimental validation that the RScore is a reliable synthetic accessibility score. The "upgrade" or current evolution of this approach involves leveraging advanced technologies like deep learning and artificial intelligence to predict and design novel drug molecules with desired properties, such as targeted delivery and improved metabolic profiles. This method integrates tools such as molecular docking, quantitative structure–activity relationships (QSAR), and expert systems to predict binding affinity, steadiness, and pharmacokinetic properties of potential molecules. Its applications extend across diverse therapeutic areas, including oncology, infectious diseases, neurological disorders, and personalized medicine, making it a vital strategy in modern drug discovery pipelines. Retro drug design plays a pivotal role in modern drug development, especially in the repurposing of existing drugs and the rational design of second-generation therapeutics.

**Keywords:** Retro drug design, biological activity, ADMET, oncology, artificial intelligence, drug development.



ABSTRACT NO: ICCPPR-SPS-212

## **Exosome-Based Wound Healing**

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### **Abstract**

Chronic and non-healing wounds are a global health problem, frequently complicated by infection, inflammation, and compromised tissue healing. Traditional wound management with dressings, antibiotics, and growth factor therapies lacks effectiveness and is bedeviled by slow wound healing or wound return. Recent findings pointed to exosomes, nanoscale extracellular vesicles secreted by various cell types, as possible vehicles of intercellular communication crucial for tissue repair. Exosomes, due to their closer link with stem cells, transport bioactive molecules like proteins, lipids, mRNAs, and microRNAs that regulate angiogenesis, collagen remodeling, epithelialization, and immune modulation. Due to their nanoscale dimensions, they can efficiently invade tissues with a lesser risk of tumor growth or immune rejection associated with the direct transplantation of stem cells. Preclinical models demonstrate that exosome therapies drive wound healing faster, promote blood vessel construction, and impede the formation of scar tissue. Additionally, exosome-loaded dressings, scaffolds, and hydrogels advance their stability and sustained release at the wound site with further technology advancement. Despite these promising results, clinical use is still hindered by issues of mass production, standardization, and regulatory clearance. Exosome-based therapies are a next-generation technology in regenerative medicine, providing safe, cell-free, and targeted treatment for wound management.

### **Keywords:**

Exosomes, Wound Healing, Regenerative Medicine, Immune Modulation, Tissue Repair



ABSTRACT NO: *ICCPR-SPS-213*

**VELS INSTITUTE OF SCIENCE, TECHNOLOGY AND ADVANCED STUDIES,  
PALLAVARAM, CHENNAI**

**Pharmacovigilance Study of Anticonvulsants in Combination with Atypical Antipsychotics  
for Mood Stabilization**

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**Abstract**

Mood disorders, especially bipolar disorder, often need a combination of medications to stabilize mood episodes and prevent relapses. Anticonvulsants like oxcarbazepine and lamotrigine are effective mood stabilizers. Atypical antipsychotics, such as olanzapine and risperidone, are often prescribed for acute mania, mixed states, and ongoing treatment. While these drug combinations can lead to better treatment results, they also increase the risk of negative drug reactions due to their combined effects and possible interactions. This pharmacovigilance study aims to assess the occurrence, patterns, and seriousness of negative drug reactions linked to the combinations of oxcarbazepine and olanzapine, oxcarbazepine and risperidone, lamotrigine and olanzapine, lamotrigine and risperidone in patients receiving treatment for mood stabilization. Patient data will be collected from psychiatry outpatient and inpatient departments, covering demographic information, medication schedules, lab results, and reported negative reactions. Each suspected negative reaction will be evaluated for cause, seriousness, and preventability using standard tools like the WHO-UMC scale, Naranjo algorithm, and Hartwig's severity assessment. Statistical analysis will help identify high-risk combinations and factors related to patients that contribute to negative drug reactions. This study is expected to provide real-world evidence on the safety of these commonly used medication combinations. This will promote better prescribing practices, improve patient monitoring strategies, and contribute to better clinical outcomes in managing mood disorders.

**Keywords:** Oxcarbazepine, Lamotrigine, Olanzapine, Risperidone, Suspected negative reactions, Identify high risk combinations



ABSTRACT NO: *ICCPR-SPS-214*

**Topic : Patient-centric safety initiatives leveraging social media and patient reporting; studies on post-market surveillance for vaccines, medical devices**

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## **Abstract**

### **Introduction**

Pharmacovigilance (PV) is the science and activities related to the detection, assessment, understanding, and prevention of adverse effects or any other drug-related problems. It ensures that medicines and healthcare products remain safe, effective, and beneficial throughout their lifecycle.

### **Objectives**

The main objectives of pharmacovigilance are to identify new adverse drug reactions (ADRs), evaluate risk–benefit profiles, promote rational use of medicines, and strengthen patient safety.

### **Methods**

Pharmacovigilance involves spontaneous reporting systems, active surveillance, cohort event monitoring, and data mining techniques. National and international regulatory bodies, healthcare professionals, and patients contribute to adverse event reporting, which is then analyzed for signals of risk.

### **Importance**

With the growing use of new drugs, biologics, and medical devices, monitoring safety has become essential. PV helps in minimizing harm, preventing medication errors, and ensuring post-marketing surveillance. It also supports regulatory decision-making, including drug withdrawals, label changes, or issuing safety alerts.

### **Conclusion**

Pharmacovigilance is a cornerstone of patient safety and public health. Continuous monitoring, reporting, and awareness are vital to build a safer healthcare system. Strengthening PV systems globally ensures that the benefits of medications outweigh their risks, ultimately improving trust in healthcare.



ABSTRACT NO: ICCPPR-SPS-215

**THE GLOBAL BURDEN OF PERIODONTAL DISEASE: TOWARDS INTEGRATION WITH CHRONIC DISEASE PREVENTION AND CONTROL****GOMATHI.V\*<sup>1</sup>**, Malarkodi velraj**<sup>1\*</sup> Student, B. Pharm IV Year, School of Pharmaceutical Sciences, VISTAS**

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**Abstract:**

Chronic diseases are escalating worldwide, impacting all regions and socioeconomic groups, with common risk factors including unhealthy diet, physical inactivity, tobacco use, excessive alcohol consumption, and psychosocial stress. Periodontal disease, a chronic inflammatory condition affecting the supporting structures of the teeth, constitutes a significant component of the global chronic disease burden. It shares many of the same essential risk factors as other non-communicable diseases such as diabetes mellitus and cardiovascular diseases. Severe periodontal disease is strongly linked to poor oral hygiene and systemic health conditions. Epidemiological data from the World Health Organization and the Global Burden of Disease Study indicate that periodontitis is the seventh most prevalent disease globally, affecting over one billion people. This report emphasizes the urgent need for integrating periodontal disease prevention and control into national public health strategies through comprehensive, common risk-factor approaches. Such integration will enhance overall chronic disease prevention, reduce the burden of tooth loss, and improve general health outcomes.

**Keywords:**

Oral hygiene, Tooth loss, Diabetes mellitus, Risk factors, Epidemiology, Chronic disease, Periodontal disease, Global burden, Non-communicable diseases, Public health.



ABSTRACT NO: ICCPPR-SPS-216

***Strobilanthes alternata*: A Promising Phytotherapeutic Agent for Burn Wound Healing**VISHNU M<sup>1\*</sup>, Dr. C. Ronald Darvin<sup>2\*</sup>**<sup>1\*</sup>Student, M Pharmacy, Department of Pharmacology, School of Pharmaceutical Sciences, VISTAS****<sup>2\*</sup> Professor & head of the Department of Pharmacology, School of Pharmaceutical Sciences, VISTAS****ABSTRACT**

Burn injuries remain a critical global health concern due to their complex pathophysiology, high risk of infection, prolonged healing times, and potential for hypertrophic scarring. Conventional therapeutic agents such as silver sulfadiazine, honey, and aloe vera are widely employed for their antimicrobial and anti-inflammatory benefits. However, these treatments are often associated with limitations including cytotoxic effects on keratinocytes and fibroblasts, delayed epithelialization, and variable therapeutic outcomes. In light of these challenges, there is growing interest in phytotherapeutic alternatives enriched with bioactive compounds. Anti-inflammatory ointments can cause several inconveniences for patients, including skin irritation, allergic reactions, and discomfort due to their greasy texture and strong medicinal odour. They often require frequent reapplication and tend to absorb slowly, making them less practical for regular use. Additionally, prolonged use especially of steroid- or antibiotic-based formulations may lead to skin thinning or microbial resistance, further limiting their long-term effectiveness. *Strobilanthes alternata*, a medicinal plant traditionally used in folk medicine, has demonstrated potent anti-inflammatory, antioxidant, and antimicrobial properties. Emerging preclinical data suggest that topical application of *S. alternata* extracts can significantly enhance wound contraction, stimulate collagen deposition, and expedite re-epithelialization. Further pharmacological validation and clinical trials are warranted to establish its efficacy and mechanistic pathways. Integration of such botanicals into standard burn care protocols could represent a paradigm shift, especially in low-resource healthcare settings. We can make this as a formulation of degradable patches to avoid the discomfort of ointments.



ABSTRACT NO: *ICCP-SPS-217*

**AVascular Access–Related Sepsis in Hemodialysis Patients: Emerging Pathogens, Antimicrobial Resistances, and the Role of Clinical Pharmacists in Prevention and Management**

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**Abstract**

Vascular access related sepsis is a leading cause of patients receiving chronic haemodialysis (HD). Central venous catheters (CVCs) are still the most common source of catheter-related bloodstream infections (CRBSIs), representing over 70% of all cases. Infection rates for recent data have ranged from 1.5–2.5 per 1000 catheter-days, with sepsis-attributable mortality rates between 18–30% if not addressed promptly there has been a significant increase in the risk of infection. New pathogens, especially multidrug-resistant (MDR) organisms, pose challenges to prevention and management strategies. Providing clinical pharmacy education to HD patients improved antimicrobial stewardship, drug monitoring, and adherence behaviour and clinical outcomes. This illustrates the importance of clinical pharmacists as interdisciplinary team members in dialysis care. This review, resistance patterns, and pharmacist interventions for maximizing patient outcomes.

**Keywords:** Hemodialysis, Vascular access, Sepsis, Catheter-related bloodstream infection, Antimicrobial resistance



ABSTRACT NO: *ICCP 2ND-053*

**EFFECT OF RISPERIDONE AMONG YOUNG PEOPLE WITH SCHIZOPHRENIA -  
AN OBSERVATIONAL STUDY**

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**ABSTRACT**

In current research, effect of risperidone among young people with schizophrenia was examined. The objective behind the study was to assess the Risperidone effect in the symptoms of schizophrenic patients. Risperidone belongs to an atypical antipsychotic medication predominantly used to treat schizophrenia, bipolar disorder and for the treatment irritability symptoms associated with autistic disorder in children. The influence of risperidone on psychiatry is multidimensional and it has strengthened the ability to treat psychotic disorders effectively, reduced hospitalization rates and significantly increase the quality of life for many patients. Schizophrenia is a complex and challenging mental health condition that affects how a person thinks, feels, and behaves. It often appears in late adolescence or early adulthood and can present with a wide range of symptoms, including unusual thoughts, false beliefs seeing, hallucinations, disorganized speech and emotional responses that may seem out of place. Result showed that among the schizophrenic participants significant improvement was shown in their symptoms using BPRS scale.

**KEYWORDS:** Risperidone, Neuropsychiatric Disorders, Young people, Schizophrenia.



ABSTRACT NO: ICCPPR-SPS-218

**"ADVANCING COPD THERAPY THROUGH  
LIPOSOMAL DRUG DELIVERY  
STRATEGIES"**

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**ABSTRACT**

Chronic Obstructive Pulmonary Disease (COPD) remains a leading cause of morbidity and mortality worldwide, characterized by chronic inflammation, mucus hypersecretion, airflow limitation and frequent exacerbations. Conventional treatments—bronchodilators, corticosteroids, and antibiotics are limited by inadequate lung targeting, systemic side effects, and poor drug retention in diseased lung tissue. Liposomal drug delivery systems present a promising strategy to overcome these limitations. Owing to their biocompatibility, biodegradability, and ability to encapsulate both hydrophilic and hydrophobic agents, liposomes can emulate pulmonary surfactant behavior and enhance drug deposition in the lower respiratory tract. Inhalation delivery of liposome-encapsulated small molecules, peptides, nucleic acids, and anti-microbial agents has shown potential to improve lung bioavailability, reduce systemic exposure, and modulate local inflammatory responses in COPD preclinical models. Further advances include stimuli-responsive liposomes (e.g., pH, oxidative stress), surface modifications for targeting alveolar macrophages or epithelial cells, and co-delivery with mucolytics or antioxidants to address mucus obstruction and oxidative damage. However, translation to clinic requires overcoming challenges in stability, aerosolization efficiency, large-scale manufacturing, and safety. In this presentation, I will review recent advancements in liposomal formulations for COPD therapy, and propose future perspectives for optimizing delivery, targeting specificity, and regulatory approval strategies.

**Keywords:** COPD, Liposomal drug delivery system



ABSTRACT NO: ICCPPR-SPS-219

## NEXT GEN ADVANCEMENT IN GREEN CHEMISTRY RELATED TO PHARMACEUTICAL ANALYSIS

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### Abstract

Green Analytical Chemistry (GAC) is reshaping pharmaceutical quality control (QC) by promoting approaches that minimize environmental impact while maintaining analytical precision. Traditional QC methods, such as high-performance liquid chromatography (HPLC) and gas chromatography (GC), often depend on large volumes of hazardous organic solvents and generate substantial chemical waste, contributing to environmental pollution and increased operational costs. GAC addresses these issues through the development and implementation of sustainable analytical practices, such as utilizing biodegradable or less toxic solvents, adopting miniaturized and automated techniques like microextraction and capillary electrophoresis, and incorporating energy-efficient technologies, including ultra-high performance liquid chromatography (UHPLC). These strategies significantly reduce solvent consumption, waste generation, and energy usage in QC laboratories. Additionally, GAC aligns with the principles of green chemistry and the broader goals of sustainable development, supporting safer laboratory environments and regulatory compliance. This review discusses the transformation of QC laboratories through GAC, with attention to greener sample pretreatment and chromatographic methods, highlighting real-world examples and quantifiable successes in reducing the ecological footprint of pharmaceutical analysis. Overall, GAC offers a pathway towards more responsible, efficient, and sustainable quality control in the pharmaceutical industry.

**Key words:** Green Analytical Chemistry (GAC) ,Quality Control (QC) ,Eco-friendly Analysis ,Chromatography ,HPLC (High-Performance Liquid Chromatography).



ABSTRACT NO:ICCP-SPS-220

## **A Review of Combination Strategies Using BTK Inhibitors and CAR T-Cell Therapy in Mantle Cell Lymphoma**

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### **Abstract**

This review explores the potential of combining Bruton's tyrosine kinase (BTK) inhibitors with chimeric antigen receptor (CAR) T-cell therapy for patients with relapsed or refractory (R/R) mantle cell lymphoma (MCL). BTK inhibitors—including ibrutinib, acalabrutinib, and zanubrutinib—are covalent, irreversible agents that have significantly improved outcomes in R/R MCL by targeting B-cell receptor signaling. Separately, CAR T-cell therapy has emerged as a transformative option, with brexucabtagene autoleucel becoming the first CAR T product approved for R/R MCL on the basis of the pivotal ZUMA-2 trial, which demonstrated high response rates and durable remissions in heavily pretreated patients. Preclinical and early clinical evidence indicates that BTK inhibition may enhance CAR T-cell activity by reducing tumor burden, modulating the tumor microenvironment, and improving T-cell fitness. These observations provide a compelling rationale for evaluating BTK inhibitors as bridging or concurrent therapy with CAR T cells to increase efficacy and potentially reduce relapse. As BTK inhibitors and CAR T-cell therapy continue to define the modern treatment landscape of R/R MCL, systematic investigation of their combined use is warranted to establish optimal sequencing, dosing strategies, and safety profiles, with the ultimate goal of extending remission and improving long-term outcomes for this high-risk patient population.

**Keywords:** Bruton's tyrosine kinase, Chimeric antigen receptor T-cell therapy, Relapsed/refractory mantle cell lymphoma, Combination therapy



ABSTRACT NO: ICCPPR-SPS-221

**“Hydrogels as Living Scaffolds: Redefining the Future of Tissue Engineering”**

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**Abstract**

Hydrogels have rapidly evolved from simple water-swollen matrices into dynamic, bioinspired platforms that are reshaping the landscape of tissue engineering. Their unique ability to mimic the hydration, viscoelasticity, and molecular architecture of native extracellular matrix makes them ideal candidates for constructing functional tissues. This review explores the transformative applications of hydrogels across diverse tissue engineering domains—including cartilage, bone, skin, neural, vascular, and cardiac regeneration—highlighting how material chemistry, crosslinking strategies, and fabrication technologies converge to create bioactive and patient-specific solutions. Beyond passive scaffolding, next-generation hydrogels are being engineered as *smart, living systems*: they can sense microenvironmental changes, release cues in a programmed or stimuli-responsive manner, and integrate seamlessly with host tissues. We also emphasize emerging frontiers such as 4D bioprinting, self-healing hydrogels, immuno-modulatory designs, and multifunctional composites that bridge biology with nanotechnology. By interlinking advances in material science, cell biology, and translational medicine, hydrogel-based platforms are no longer just supporting frameworks, but active orchestrators of regeneration—ushering in a new era where tissue engineering moves closer to personalized and adaptive therapies.

**Keywords:** Hydrogels , Tissue engineering , Regenerative medicine , 4D bioprinting , Nanotechnology .

ABSTRACT NO: *ICCPR-SPS-222***“Hydrogels for Skin Regeneration: From Passive Dressings to Intelligent Bio-Constructs”****J.THARUNA \*<sup>1</sup> , Dr. VARUNA NAGA VENKATA ARJUN UPPULURI\*<sup>2</sup>****1\* Student , B . Pharmacy IV Year , School Of Pharmaceutical Science ,VISTAS , Chennai 600117 , India****2\* Associate Professor , Department Of Pharmaceutics , School Of Pharmaceutical Sciences****Email:j.tharuna656@gmail.com****Abstract**

Skin, the body's largest organ, embodies both resilience and vulnerability—capable of withstanding environmental assaults yet limited in its ability to regenerate after severe injury. Hydrogels have emerged as transformative biomaterials in skin tissue engineering, offering a hydrated three-dimensional milieu that recapitulates the extracellular matrix while enabling precise control over biomechanical and biochemical cues. This review surveys the evolution of hydrogel-based platforms for skin regeneration, from traditional wound dressings to next-generation bioactive, stimuli-responsive, and cell-laden constructs. Particular attention is given to hydrogels engineered for accelerated wound closure, scar minimization, angiogenesis promotion, and integration with host tissue. Emerging innovations—such as self-healing hydrogels that adapt to dynamic wound environments, immunomodulatory hydrogels that orchestrate favorable healing responses, and 3D/4D bioprintable systems capable of generating patient-specific skin substitutes—are redefining therapeutic possibilities. By uniting material science, cellular engineering, and translational strategies, hydrogel technologies are not only enhancing skin repair but also advancing toward functional, aesthetic, and personalized regeneration. Ultimately, hydrogel-based skin tissue engineering signifies a paradigm shift: from passive coverings to intelligent, regenerative bio-constructs capable of restoring both the form and function of damaged skin.

**KEYWORDS:** Hydrogels , Skin Regeneration , Wound healing , Tissue engineering , 3D/4D bioprintable.



ABSTRACT NO: *ICCPR-SPS-223*

**Impact of automated dispensing solutions in long-term care facilities and closed-door pharmacies: A mixed methods study of medication management**

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**Abstract**

Automated dispensing cabinet (ADC) technology is used to improve patient care, enhance the efficiency and accuracy of medication dispensing in the medication-use system, support medication storage and security, and provide evaluation of ADC-user interactions. Financial, operational, and clinical workflow impacts of deploying an automated dispensing cabinet (ADC) in long-term care (LTC) facilities based on actual observations have not been documented in peer-reviewed literature. To evaluate the impact of a closed-door pharmacy (CDP) implementing an ADC with unique secure, removable, and transportable locked pockets in an unstudied setting (LTC facilities) for management of first and emergency dose medications. Enhancing emergency medication management and inventory tracking in an unstudied setting through implementation of an ADC system featuring unique electronically encoded medication storage pockets that can be prepared in the CDP, locked and securely transported to the LTC, and when inserted into ADC it informs staff of its presence, position, and contents. Mixed methods, pre- and poststudy to assess the impact of replacing manual emergency medication kits with an ADC. Outcomes were evaluated using rapid ethnography with workflow modeling; inventory and delivery reports; a nursing perception survey; and transactional data from the ADC during postimplementation phase. Pharmacy technician preparation time and pharmacist checking time decreased by 59% and 80%, respectively, and standing inventory was reduced by more than \$10,000 combined for the CDP and 2 LTCs by replacing emergency medication kits with the ADC. In the LTCs, this change led to a 71% reduction in emergency medication retrieval time, an increase in emergency medication utilization, and a 96% reduction in the cost of unscheduled deliveries. Over 70% of the nurses surveyed favored replacement of the emergency medication kits with the ADC system. Replacing manual emergency medication kit with the described ADC system improved workflow efficiency in the CDP and LTC. It also significantly reduced unscheduled (STAT) deliveries and standing inventory and increased the availability of medications commonly used.

**Keywords:** Automated dispensing cabinet(ADC), Medication dispensing, Medication management, Closed door pharmacy(CDP), Patient care, Emergency medication kits.



ABSTRACT NO: ICCPPR-SPS-224

DIGITAL TWINS IN HEALTHCARE – VIRTUAL PATIENT REPLICAS FOR PREDICTING  
DISEASE PROGRESSION

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**INTRODUCTION:**

The concept of digital twins, virtual replicas of physical entities, has emerged as a groundbreaking innovation in healthcare, offering new possibilities for personalized medicine. In this context, a digital twin is a dynamic, data-driven model of an individual patient that integrates genetic, physiological, lifestyle, and clinical data in real time. By continuously synchronizing with a patient's biological and clinical information, digital twins can simulate disease progression, predict treatment outcomes, and optimize therapeutic strategies with exceptional accuracy.

This transformative approach is powered by advances in artificial intelligence, big data analytics, and high-performance computing, enabling the creation of interactive models that mirror complex human biology. Notable applications include predicting cardiovascular risks using virtual heart models, simulating tumor responses to personalize oncology treatment, and supporting surgical planning with patient-specific anatomical replicas.

**CONCLUSION:**

On a broader scale, population-level digital twins can forecast epidemic spread, optimize healthcare resource distribution, and accelerate clinical research while minimizing reliance on traditional trial-and-error methods.



ABSTRACT NO :ICCPR-054

**Management and Outcomes of Reported Adverse Drug Reactions in Psychiatric Care: A Clinical Pharmacist's Perspective**

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**Abstract**

Effective ADR management is essential to reduce morbidity and improve adherence in psychiatric therapy. Clinical pharmacists play a key role in identifying, documenting, and intervening in drug-related problems. To evaluate how reported ADRs were managed and to analyze their clinical outcomes, management strategies such as drug withdrawal, dose modification, and symptomatic therapy were reviewed. Outcomes were classified as improved, unchanged, or unknown based on follow-up data. **Drug withdrawal and dose adjustments were the most common management strategies**, together accounting for more than half of the interventions. Symptomatic therapy was provided in many cases, though a considerable proportion of patients received no active treatment for their ADRs. Clinical pharmacists can enhance ADR management by ensuring timely interventions and robust documentation. Strengthening pharmacist involvement in psychiatric care will improve patient safety and therapeutic outcomes.



ABSTRACT NO:ICCPR-055

**“Pharmacy’s New Horizons: Transforming Patient Health”**

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**ABSTRACT:**

The role of pharmacy in society is undergoing a significant paradigm shift, adapting from a traditional dispensing function to a multifaceted, patient-centered clinical discipline. This abstract explores the "new horizon" of pharmacy, highlighting its pivotal transformation in enhancing patient health care. Key advancements include integrating artificial intelligence (AI), machine learning, and data analytics to improve medication management, ensure safety, and personalize treatments based on patient data, including genetic profiles. Pharmacists are increasingly recognized as essential clinical care providers, actively engaging in Medication Therapy Management (MTM), chronic disease management, preventive health services, and point-of-care testing. This expanded scope not only optimizes medication regimens and improves adherence but also alleviates burdens on other healthcare sectors. Concurrently, the strategic adoption of technology, including AI-driven automation, telepharmacy, remote monitoring via wearable technology, integrated Electronic Health Records (EHRs), and precision medicine, is enhancing efficiency, extending accessibility, and personalizing treatment approaches.

Ultimately, this transformation results into a collaborative, team-based healthcare environment where pharmacists are integral members, providing vital education and empowering patients to actively participate in their health journeys. The new horizon for pharmacy positions pharmacists as accessible, trusted, and indispensable partners in delivering comprehensive, proactive, and individualized patient care, thereby significantly improving health outcomes and reshaping the future of healthcare delivery.



ABSTRACT NO:ICCP-SPS-225

**Analytical Method Development and Validation of Selected Anticancer Drugs in Single and Combined Dosage Form Stability Indicating Studies HPLC Assay Method****G. Sandhya<sup>1\*</sup>, Dr. Mohamed Zarein Fathima M<sup>1</sup>****<sup>1\*</sup> Research Scholar, School of Pharmaceutical Sciences, Vels Institute of Science Technology and Advanced Studies (VISTAS), Pallavaram, Chennai - 600 117 Tamil Nadu, India****<sup>1</sup> Assistant Professor, Department of Pharmaceutical Analysis, School of Pharmaceutical Sciences, Vels Institute of Science Technology and Advanced Studies (VISTAS), Pallavaram, Chennai – 600 117 Tamil Nadu, India****\* Address for correspondence:** G. Sandhya, Research Scholar, School of Pharmaceutical Sciences, Vels Institute of Science Technology and Advanced Studies (VISTAS), Pallavaram, Chennai - 600 117 Tamil Nadu, India; sandhyagowlikar@gmail.com**Abstract**

The development of complete analytical methods in pharmaceutical research companies is critical during the drug discovery and development phase. Pharmaceutical Analysis covers identifying and quantifying sample analytes. Due to the sophistication of the sample matrix, Pharmaceutical Analysis is challenging. Modern Pharmaceutical Analysis requires high-performance sample preparation and hyphenated analytical methods. Tyrosine kinase inhibitors (TKI) are a group of pharmacologic agents that disrupt the signal transduction pathways of protein kinases by several modes of inhibition. The more detailed study of drug products can be performed with high extraction (HPLC), liquid chromatography coupled with double-mass spectrometry (LCMS/MS), and ultra-performance Liquid chromatography (UPLC). We are proposing the HPLC method development and validation to assist in the quality assurance of tyrosine kinase inhibitors in Pharmaceutical formulation.

**Key words:** Analytical method, drug discovery; drug development; Pharmaceutical Analysis; Sample



ABSTRACT NO:ICCP-057

**The Future of Pharmacy: Innovations and Opportunities**

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The pharmaceutical industry is rapidly evolving to address challenges such as poor bioavailability, patient non-compliance, drug resistance, and complex diseases like cancer and diabetes. Emerging technologies such as nanotechnology, 3D printing, microneedle patches, oral thin films, smart drug delivery systems, and personalized medicine have revolutionized the way medicines are designed and delivered. These novel systems improve therapeutic outcomes, reduce side effects, and enhance patient convenience. This article reviews the latest advances in pharmaceutical technologies and drug delivery systems, highlights their advantages and limitations, and discusses their future potential in transforming global healthcare.

**Key words:** drug resistance, non-compliance, pharmaceutical industry, 3D printing etc



ABSTRACT NO: ICCPPR-SPS-226

**BIOLOGICAL IMPORTANCE OF HUMAN AMNIOTIC MEMBRANE IN STEM CELLS****Divyasaraswathi.L<sup>1</sup>, Harshini.S\*****B.Pharm, Department of Pharmaceutical Chemistry and Analysis, School of Pharmaceutical Sciences , Vels Institute of science, Technology and Advanced Studies (VISTAS), Pallavaram****\*Corresponding Author: Ms.S. Harshini**Email - [harshini.sps@vistas.ac.in](mailto:harshini.sps@vistas.ac.in)**Abstract:**

The human amniotic membrane (hAM), is the placental innermost layer to the fetus, has become an attractive biological material in regenerative medicine because of its structural and functional characteristics. Dense in extracellular matrix components, growth factors, and cytokines, hAM presents a cell-compatible microenvironment that allows cell adhesion, growth, and differentiation. Interestingly, it contains two distinct populations of stem cells—human amniotic epithelial cells (hAECs) and human amniotic mesenchymal stromal cells (hAMSCs)—each with the ability for multipotent differentiation, low immunogenicity, and high immunomodulatory capacity. The biological importance of hAM-derived stem cells is that they can potentially restore damaged tissues and modulate inflammatory reactions without the ethical problem of embryonic stem cells. They have been shown by various studies to differentiate into osteogenic, chondrogenic, neurogenic, and cardiomyogenic lineages and, as a consequence, are of highly versatile use for therapeutic applications. hAM also possesses intrinsic anti-fibrotic, anti-microbial, and pro-angiogenic functions, and therefore there are additional clinical uses in wound healing, reconstruction of ocular surface, and tissue engineering. Apart from its cellular content, the amniotic membrane itself is a cellular and biocompatible scaffold that stimulates tissue repair without causing scar formation. Since it is easily obtained as medical waste following delivery, it is an ethically sound, inexpensive, and plentiful source of stem cells and biological tissue. Collectively, the human amniotic membrane is a distinct combination of biological safety, regenerative ability, and translational relevance. Its application to stem cell therapy and research is a critical milestone in the evolution of regenerative medicine and patient treatment.

**Keywords:** Human amniotic membrane, stem cells, regenerative medicine, mesenchymal stromal cells, epithelial cells, tissue engineering.



ABSTRACT NO: ICCPPR-SPS-227

## THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE STUDY OF NATURAL PRODUCTS AND PHYTOCHEMICALS

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Pallavaram, Chennai.

### Abstract

The application of **artificial intelligence (AI)**, or computational intelligence, has initiated a new era in pharmacognosy and phytochemical research, greatly improving the identification, analysis, and development of therapeutic chemicals derived from natural sources. Natural products (NPs) have long served as rich sources of biologically active compounds, with many successful drugs originating from them. Computational techniques, particularly artificial intelligence (AI), notably machine learning (ML) and deep learning (DL), have revolutionized drug development, enhancing data analysis and predictive modeling. AI has become essential for managing the growing volume of complex, high-dimensional 'omics' data, thereby facilitating the elucidation and discovery of novel potential phytochemicals and metabolites. This abstract comprehensively examines the implementation and significance of AI in these fields, highlighting its diverse applications and recent advances. Key areas of focus include AI-driven methods for **natural product identification, compound isolation, bioactivity prediction, and structural elucidation**. Machine learning algorithms and neural networks are increasingly utilized to analyse intricate biological data, predict pharmacological properties, and streamline the drug discovery pipeline. Furthermore, AI technologies are transforming research by enabling advanced metabolite profiling in plants and assisting with plant metabolomics and genomics. These tools also facilitate the optimization of extraction processes and the creation of novel formulations, which contributes to enhanced efficacy and safety profiles for natural products. The prominent computational tools and the studies illustrates how AI overcomes traditional challenges and accelerates research timelines. Example is that the discovery of novel anticancer therapeutics. Finally, it addresses the **current challenges, ethical considerations, and potential limitations** of implementing AI, proposing the integration of more AI-driven approaches to further explore applications in medicine and agriculture.

**Key words:** Artificial intelligence, natural product identification, compound isolation, bioactivity prediction and structural elucidation.



ABSTRACT NO:ICCPPr-058

## **Development of Herbal Cream and evaluate potential antifungal activity**

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### **Abstract**

The organism in the Kingdom fungi are Eukaryotic Protista and do not possess chlorophyll. They may be unicellular or multicellular, although there is a tendency for fungi to be multicellular and multinucleated. This Fungi may cause a chronic fungal infection. The herbal antifungal cream was formulated by using various herbs such as *Saraca indica* and *Aloe barbadensis*. During studies we find that having antiifungal activity, it is useful in patients having fungal infections. The cream is useful and having very few side effects. This herbal cream useful represents as natural and safe. Useful against various fungal infection such as ringworm, athletes foot.

**Keyword:** Herbal Antifungal Cream; Fungal Disease; herbs



ABSTRACT NO:ICCPR-SPS-228

## **PHARMACOVIGILANCE IN THE COVID 19 ERA- MONITORING ADVERSE DRUG REACTION AND VACCINE SAFETY**

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### **ABSTRACT:**

The COVID-19 (OR) the novel corona virus quickened the development, emergency authorization and mass distribution of vaccine and therapeutics at a unprecedented speed. As a result many lives have been saved. But, it also created a need for monitoring adverse drug reaction and vaccine safety. During COVID pandemic pharmacovigilance shifted from conventional method to real time surveillance and more adaptive methods. Spontaneous reporting system, electronic health records and post marketing analysis have been vital in identifying anomalous but serious adverse events such as thromboembolic disorders, myocarditis and anaphylaxis associated with certain vaccine for corona virus, as well as drug-drug interaction with antiviral and immunotherapies. Enhancing transparency, effective risk communication and increasing public trust are essential for sustaining vaccine confidence and promoting safe medication use. The evolving role of pharmacovigilance in crisis like COVID 19 and the future need to integrate artificial intelligence and pharmacogenomics for safety monitoring of drug and vaccines.

**KEY WORDS:** COVID-19, Pharmacovigilance, Adverse drug reaction (ADRs), pandemic, anaphylaxis.



ABSTRACT NO:ICCPR-059

## **A case series on intra-thecal tigecycline as a combination therapy for post neurosurgery meningitis**

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1-Pharm D II year SRIHER (DU) 2-Assistant Professor SRIHER FOP 3-Professor SRIHER FOP

### **Introduction:**

Post neuro-surgery meningitis is one of the most fatal complication, It's incidence is about 8.9% in India. With the growth of more resistant organisms and poorer penetration of available antibiotics the use of intrathecal antibiotics is rising.

### **Objective:**

The primary objective of the case series is to find whether IT tigecycline was helpful in culture proven carbapenem resistant organisms induced post neurosurgery meningitis

### **Methodology:**

We decided to follow the patients who had culture proven meningitis between 2022-2025 and collected only data of patients to whom we administered IT tigecycline. Data were collected using google forms by the critical care clinical pharmacists in each ICU'S

### **Discussion**

We followed up a total of 10 cases were 7 of them showed signs of clinical improvement with atleast 48 hours of intra-thecal tigecycline. Mean time to initiate IT Tigecycline from the time of suspect of meningitis was between 6 to 8 days. Mean time of meningitis onset is 4-5 days and all patients had drain insitu.

### **Conclusion**

IT/IV Tigecycline with IV/IT colistin combination therapy appears to be useful in the treatment of Acinetobacter baumannii and Klebsiella pneumoniae induced post-neurosurgery meningitis in our settings. A proper RCT is highly recommended to find out the safety and efficacy of IT tigecycline in post neurosurgery meningitis. Both IT colistin and IT tigecycline were continued for a maximum of 14 days and IV therapy was continued for 21 days. Three patients who were declared had very low GCS at admission and were declared with-in 72 hrs of tigecycline therapy.

**Keywords:** Intra-thecal Tigecycline, Colistin, Acinetobacter baumannii, Klebsiella pneumoniae, Post neurosurgery meningitis



ABSTRACT NO:ICCP-060

## **Polypharmacy as a Major Predisposing Factor for Adverse Drug Reactions in Psychiatry Practice**

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### **Abstract**

#### **Background:**

Due to the complexity of psychiatric illness, polypharmacy is common but often increases vulnerability to ADRs through drug interactions and cumulative toxicity.

#### **Objectives:**

To evaluate the association between polypharmacy and the occurrence of ADRs in psychiatric patients.

#### **Methodology:**

Patients were grouped based on the number of drugs prescribed—low ( $\leq 2$ ), moderate (3–4), and high ( $\geq 5$ ). ADR patterns and risk profiles were compared across groups.

#### **Results:**

ADR occurrence rose progressively with the number of prescribed drugs. While monotherapy contributed minimally, **regimens with five or more medications showed the highest burden**, particularly neurological ADRs such as tremors and akathisia. Moderate polypharmacy was associated with metabolic disturbances, though less frequently. These findings underscore that each incremental drug increases the chance of adverse outcomes.

#### **Conclusion:**

Polypharmacy remains a major modifiable risk factor in psychiatric pharmacotherapy. Rational prescribing, drug interaction checks, and regular regimen review are crucial to reduce ADR risk.



ABSTRACT NO:ICCPR-061

## Knowledge vs. Resistance: The Missing Link in Pharmacy Students' Understanding of Antibiotic Disposal

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Porur, Chennai, Tamilnadu, India.

### Abstract:

**Background and Objectives:** Two of the most substantial hurdles to public health are antibiotic resistance and poor waste management practices. Enhancing public awareness and compliance with guidelines for addressing antibiotic resistance and appropriate waste management is crucial in addressing this pervasive problem, which is significantly influenced by individuals' knowledge, attitudes, and practices (KAP). Currently, pharmacy students can offer reliable information to the general public. The primary goal of the current research was to evaluate the knowledge, opinions, and practices related to antibiotic resistance and disposal among pharmacy students in southern India.

**Methods:** It was found that 44% of the students displayed positive attitudes toward using antibiotics, and 58% of them had positive attitudes toward disposing of antibiotics correctly. The research tool consisted of 32 validated items, with 12 measuring knowledge, nine assessing general attitudes, and 11 evaluating practices concerning antibiotic resistance and disposal. Data analysis was done using IBM SPSS Statistics for Windows, release 23.0.

**Results:** A total of 347 pharmacy students participated in the survey. The data indicates that 59% of respondents demonstrated sufficient knowledge about antibiotic resistance, and 62% understood proper disposal methods. Among the students, 44% displayed positive attitudes toward using antibiotics, and 58% had positive attitudes towards disposing of them. Moreover, 51% and 54% of the participants showed commendable practices in using and disposing of antibiotics.

**Conclusion:** The pharmacy students who participated in the survey demonstrated a moderate grasp of antibiotic resistance and proper antibiotic disposal, suggesting that additional educational initiatives are required to enhance their comprehension and views on antibiotic resistance and disposal and their stance on antibiotics.

**Keywords:** Antibiotic Resistance, Antibiotic Disposal, Knowledge, Attitude and Practices (KAP), Healthcare professional, Eco -Pharmacovigilance.



ABSTRACT NO:ICCP-SPS-229

## ADVANCES IN THE DIAGNOSIS AND TREATMENT OF GAUCHER'S DISEASE

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### ABSTRACT :

Gaucher's disease is a rare lysosomal storage disorder which is caused by the recessive deficiency of lysosomal enzyme called glucocerebrosidase. It is a condition which is inherited and it build up a fatty lipid substances in the organs. It is generally divided into a wide phenotypic diversity such as Type 1 (non-neuropathic) which causes the anemia, bone disease, hepatosplenomegaly and etc , Type 2 (acute neuronopathic) which is a severe stage early onset action characterized by neurological involvement , Type 3 ( chronic neuronopathic) it is a intermediate severity with later onset. This disease shows a lot of symptoms like swollen belly which indicates enlarged spleen or liver, Bleeding, In lungs G-case can accumulate and cause respiratory problems. It can trigger many other conditions like Parkinson disease, myeloma (blood cancer) ,some type of cancer like liver cancer etc .This disease can be tested by BGL test (blood glucosidase leukocyte )this test is used to determine the level of enzyme in the body ,and carrier screening which is a genetic testing method . Advanced treatments are Enzyme replacement therapy. The therapy balances the low level of G-case enzyme by the modified natural human enzyme which breakdowns the excessive amount of G-case . It is administered through Iv infusions about 2 weeks, Substrate reduction therapy is different from the ERT it partially blocks the G-case producing by the body.it is administered as oral medication. Gene therapy which modifies the mutated genes to correct their behaviour .it would provide some healthy copies of GBA genes with cells , Gene therapy Now researchers working on developing the gene editing and gene augmentation and the recent research is chaperone therapy this advanced therapy can treat the Gaucher induced Parkinson and normal Gaucher.so that the recent advanced therapies which can be resulting in spectrum of clinical manifestation . Future advancement especially GT, CT, will be more effective and potentially curative for the Gaucher patients.

**Keywords:** Glycocerebrosidae , gene therapy ,enzyme replacement therapy, substrate reduction therapy, phenotype diversity, chaperone therapy.



ABSTRACT NO:ICCPR-062

## **Influencing risk factors and surgical site infection in patients with surgical antibiotic prophylaxis in Indian population**

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Porur, Chennai, Tamilnadu, India.**

### **ABSTRACT**

**Background:** Surgical antibiotic prophylaxis (SAP) is a technique for preventing infections and related consequences before surgery. SSI increases the rate of death and morbidity and the expenditures of prolonged hospitalization and antibiotic therapy.

**Objective:** To investigate the influencing risks factor and surgical site infection (SSI) in patients receiving surgical antibiotic prophylaxis (SAP) in the Indian population.

**Method:** From 2018 through 2021, a prospective cohort research was conducted in general surgery department. age of 18, of both genders, admitted for surgery, administered with surgical antibiotic prophylaxis (SAP) and willing to give informed consent were included. Influencing risk factors, microbial growth, pre-and post-operative SAP, and its relationship with surgical site infection (SSI) were investigated.

**Result:** 1362 patients were enrolled in the study, with 171 (12.56%) having SSI. Gram-positive organisms were found in 59.65% of the cases. 56.39% of a patient with SAP followed hospital guidelines and had 7.94% SSI. Various influencing risk factors, monomicrobial ( $p = 0.011$ ) and polymicrobial growth ( $p = 0.014$ ), were found significant ( $P < 0.05$ ) association with SSI.

**Conclusion:** The influencing risk factors like anemia, diabetes and hypertension, smoking and alcohol, ASA score, adherence to hospital guidelines had strong association with SSI whereas age, gender, obesity, types of surgery, pre-hospital stay had no association with SSI in this study. By considering the significant influencing risk factors before and after surgery may lead the road to reducing the incidence of SSI.

ABSTRACT NO:ICCPPr-SPS-230

## GC-MS Profiling and Assessment of Antibacterial Activity of Ethanolic Flower Extract of *Alstonia Scholaris*.

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### Abstract:

The present study investigates the phytochemical profile and antibacterial potential of ethanolic flower extract of *Alstonia scholaris* (family: Apocynaceae). The flowers were shade dried, powdered, and subjected to Soxhlet extraction using ethanol. Preliminary phytochemical screening confirmed the presence of alkaloids, flavonoids, saponins, and phenolic compounds. Thin Layer Chromatography (TLC) was employed for separation and identification of phytoconstituents, while Gas Chromatography–Mass Spectrometry (GC–MS) analysis revealed bioactive compounds such as phthalic acid derivatives, lup-20(29)-en-3-ol acetate, hexadecanoic acid esters, and squalene. Antibacterial activity was evaluated against both Gram-positive and Gram-negative bacterial strains using the agar well diffusion method, with amoxicillin as a standard. The extract exhibited notable inhibitory activity, attributed mainly to alkaloids and flavonoids. The findings confirm the therapeutic potential of *A. scholaris* flowers and highlight GC–MS as a reliable tool for identifying phytoconstituents. Thus, the study supports the traditional medicinal relevance of *A. scholaris* as a promising source of antibacterial agents.

**Keywords:** *Alstonia Scholaris*, Ethanolic flower extract, Phytochemical screening, thin layer chromatography, Gas chromatography-Mass Spectrometry, Antibacterial activity, Secondary metabolites

ABSTRACT NO:ICCPRP-SPS-231

**Pharmacist-Led Management and Self-Care Trends in Upper Gastrointestinal Disorders:  
Insights from a South Indian Cohort**

**Presenting Author: Logith Jayasankar**

**Corresponding Author: Dr . Swathy Govindaswamy  
Sri Ramachandra Faculty of Pharmacy, Sri Ramachandra Institute of Higher Education  
and Research (DU), Porur, Chennai, Tamilnadu, India.**

**Abstract**

**Background:** Community pharmacists are often the first choice for individuals seeking advice with upper gastrointestinal issues since they are easily accessible. However, it is essential to highlight that most nations do not have "triage" systems that allow community pharmacists to help patients with gastrointestinal issues. One reason for this is the need for more available patient pharmacoepidemiologic data.

**Aim and Objectives:** This study investigated the prevalence, clinical characteristics, risk factors, and symptoms of patients with upper gastrointestinal problems who visit community pharmacists for medical advice or to obtain OTC medication.

**Materials and Methods:** This observational study, which included 731 participants, was carried out over six months at 12 randomly chosen community pharmacies in southern India. Data on the participants' sociodemographic and clinical characteristics were gathered and examined using IBM SPSS software version 29.0.

**Results:** A total of 731 patients participated in the research. The mean age was 36.0±13.7 years with male predominance (54.9%). The mean BMI was 20.8±4.4 kg/m<sup>2</sup>. Coffee was the most commonly consumed beverage (22.3%). Of the participants, 64% had been experiencing symptoms for the previous three months. Of them, 76.3% did not seek medical guidance to treat the symptoms. Heartburn, reported by 40.2% of participants, is the most prevalent symptom. The overall prevalence of UGI problems was 8.3%.

**Conclusion:** The study's results highlight the significance of dietary and lifestyle changes as common risk factors for UGI symptoms, particularly for younger people who often use community pharmacies. Since community pharmacists are directly involved in treating UGI symptoms, it is essential to integrate regular training for them and harmonize their professional guiding approach. These findings inform healthcare practices and improve patient management of UGI symptoms, potentially reducing the burden on the healthcare system.

**Keywords:** Community pharmacy services, OTC drugs, Upper Gastrointestinal Tract



ABSTRACT NO:ICCP 2ND-SPS-232

## A review of chitosan-based polyelectrolyte complex as drug delivery systems for brain diseases: using Donepezil

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### Abstract

Dementia from Alzheimer's disease (AD) is the most commonly diagnosed neurodegenerative disease. As a result of the disease, aggregation of beta-amyloid, abnormal protein ( $A\beta$ ), deposits in the brain, cholinergic neurons in the brain are lost, and the level of acetylcholine (ACh) in the brain is reduced by acetylcholinesterase (AChE) enzyme. Several attempts have been afforded to prevent the effect of ( $A\beta$ ) and (AChE) enzyme activities

Developing a drug delivery strategy that can cross the blood–brain barrier is crucial to effective neurological treatment. Many researchers used Donz-NPs to increase the delivery of the drug to the brain via the olfactory pathway and across the blood-brain barrier (BBB), such as Donz-PLGA-b-PEG polymer or Donz-chitosan. Chitosan (CS) is a cationic polyelectrolyte, chemically modified biopolymer, that has a significant impact in many applications. Owing to its biocompatibility, degradability, this biopolymer has been considered as a safe carrier in drug delivery systems. Moreover, CS has the ability to form polyelectrolyte complexes (PEC) with many different anionic polymers, this paper employed a novel strategy for efficient drug delivery of Donepezil based on the preparation of polyelectrolyte complexes (PEC) nanogel from  $\beta$ -chitosan (CS) and the prepared sulfonated styrene–maleic anhydride (S-SMA). PEC nanoparticles were prepared by mixing different ratios of S-SMA with  $\beta$ -chitosan. According to the particular research article the in vitro drug release study showed a sustained release of DH for 72 h and the in vitro investigation of acetylcholinesterase inhibitory were 16.5 and 63.9% for CS-S3 and CS-S3-DH, respectively.

**Keywords:**  $\beta$ -chitosan, nanogel, S-SMA, acetylcholinesterase inhibitory, polyelectrolyte complex, Alzheimer's disease, beta-amyloid



ABSTRACT NO:ICCPPr-SPS-233

**“Beyond Antibiotics: Metal Nanoparticles in the Battle Against Superbugs”**

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**ABSTRACT:**

Antimicrobial resistance (AMR), often called the silent pandemic, is one of the most serious global health threats of our time. The rise of superbugs pathogens resistant to multiple antibiotics has rendered many conventional treatments ineffective. To overcome this challenge, new approaches beyond antibiotics are urgently needed. Metal nanoparticles (MNPs), including silver, gold, zinc oxide, and copper, have emerged as promising antimicrobial agents. Their multimodal mechanisms, generation of reactive oxygen species, disruption of bacterial membranes, inhibition of biofilm formation, and interference with DNA and protein synthesis make it difficult for bacteria to develop resistance. Unlike traditional antibiotics that usually target a single pathway, nanoparticles provide broad-spectrum activity against multidrug-resistant pathogens. Despite their potential, issues such as cytotoxicity, environmental impact, lack of standardized dosing, and limited clinical validation remain hurdles to their translation into routine therapy. This presentation will explore the opportunities and challenges of using metal nanoparticles as innovative tools in the battle against the silent pandemic of antimicrobial resistance.

**KEYWORDS:** Antimicrobial resistance, Silent pandemic, Superbugs, Metal nanoparticles, nanomedicine.



ABSTRACT NO:ICCPPr-SPS-234

## NOVEL APPROACHES IN VIGINAL DRUG DELIVERY: PROSPECTS FOR WOMEN'S HEALTH

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### Abstract

Vaginal drug delivery has emerged as a promising route due to several advantages, including rich blood supply, avoidance of first-pass metabolism, reduced systemic side effects, and potential for sustained release. Initially used mainly for contraception and local treatment with antibacterial, antifungal, and antiviral drugs, its scope has expanded with innovations. Microbicides have shown effectiveness against sexually transmitted infections, and hormone therapies benefit from the vagina's large surface area and high permeability. Common agents administered vaginally include contraceptives, prostaglandins, steroids, and antimicrobials, delivered as tablets, suppositories, gels, creams, ointments, and rings. Despite its potential, challenges such as slow drug dissolution, short residence time, and variations in pH limit effectiveness. To overcome these, mucoadhesive polymers and advanced systems like hydrogels and lipid nanoparticles are being developed to improve absorption and prolong retention. Studies suggest that drugs like insulin and human growth hormone demonstrate superior absorption through this route compared to other parenteral methods. Standardized in vitro and in vivo evaluation remains essential to optimize formulations and expand therapeutic applications of vaginal delivery.

**Keywords: Bacterial infection, cervical cancer, human immunodeficiency virus, therapy, vaginal drug delivery.**

ABSTRACT NO:ICCP-SPS-235

## INHALABLE NANOPARTICLES FOR TUBERCULOSIS THERAPY: TARGETED PULMONARY DRUG DELIVERY

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AUTHOR: Keerthana.v CO AUTHOR: Dr. M. Kalaiarasan

### ABSTRACT

#### Background

Tuberculosis (TB) is a major infectious disease requiring long treatment regimens, often complicated by poor compliance, systemic toxicity, and drug resistance. Conventional oral therapy achieves limited drug concentration in the lungs, where *Mycobacterium tuberculosis* primarily resides.

#### Objective

To highlight the potential of inhalable nanoparticle (NP) systems for targeted pulmonary drug delivery in TB therapy.

#### Methods

A literature-based review of inhalable NP formulations was conducted, focusing on particle design, spray-drying technology for stable dry powders, macrophage targeting efficiency, and preclinical therapeutic outcomes.

#### Results

Nanoparticles (100–500 nm) embedded in inhalable microparticles (1–5  $\mu\text{m}$ ) enable deep lung deposition.

Surface modifications (e.g., mannose, PEG) enhance macrophage uptake and mucus penetration.

Spray-dried formulations show improved stability and aerosolization performance.

Preclinical studies report higher lung drug deposition, reduced bacterial burden, sustained release, and decreased systemic toxicity.

#### Challenges

Issues include particle stability post-spray drying, variable aerosolization efficiency, limited long-term safety data, and scalability barriers. Few clinical trials have yet been conducted.

#### Conclusion

Inhalable nanoparticles represent a promising strategy for TB therapy, offering targeted pulmonary delivery, improved efficacy, and reduced systemic toxicity. Future research should focus on combination formulations, stimuli-responsive systems, large-scale production, and clinical validation to translate this technology into clinical practice.



ABSTRACT NO:ICCPPr-SPS-235

## **Clinical Pharmacy Interventions in Dementia Management: Enhancing Patient Safety and Caregiver Support.**

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**School of Pharmaceutical Sciences, VISTAS.**

### **ABSTRACT:**

Dementia is a progressive neurocognitive disorder that significantly affects patients, caregivers, and healthcare systems worldwide. Pharmacological treatment options are limited, and inappropriate medication use often worsens cognitive decline or leads to adverse drug reactions. Through evidence-based medicine, in education and multidisciplinary collaboration, clinical pharmacists play a vital role in optimising dementia care.

This study aims to highlight the evolving role of clinical pharmacists in dementia management, with a focus on medication safety, rational prescribing, and caregiver support in both hospital and community settings.

A narrative review used recent literature on pharmacological and non-pharmacological strategies in dementia care. Emphasis was placed on clinical pharmacy interventions such as deprescribing inappropriately prescribed psychotropics, optimising psychotropic drugs, monitoring drug–drug interactions, and providing care according to patients and Caregivers. Case-based examples from hospital practice were integrated to illustrate real-world applications.

### **Results:**

Clinical pharmacy interventions consistently improved treatment outcomes by reducing polypharmacy, minimising adverse effects, and ensuring adherence to therapy. Pharmacist-led dementia care models demonstrated better recognition of potentially inappropriate medications, enhanced caregiver awareness of symptom management, and promoted safer transitions of care. Multidisciplinary approaches, with pharmacists as integral members of the healthcare team, were associated with improved patient Quality of life and reduced hospitalisation rates.

### **Conclusion:**

Dementia care requires a holistic approach that goes beyond drug therapy. Clinical pharmacists contribute significantly by ensuring safe, effective, and patient-centred use of medicines while supporting caregivers through education and counselling. Strengthening the role of clinical pharmacists in dementia care can bridge existing gaps in healthcare delivery and improve long-term patient outcomes.

### **Keywords:**

Dementia, Clinical Pharmacy, Patient Care, Pharmacist Intervention, Polypharmacy



ABSTRACT NO:ICCP-SPS-236

## PHARMACOLOGICAL MANAGEMENT OF DIABETES

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### ABSTRACT:

In diabetes pharmacological management, utilizing a wide range of drug classes, including insulin, metformin, SGLT2 inhibitors, and GLP-1 receptor agonists, is based on patient-centered factors, including comorbidities, weight, risk of hypoglycemia, and cardiovascular risk reduction. Historically, pharmacological management of diabetes focused only on glucose control, but current approaches to drug management consider the goals of reducing/preventing micro and macrovascular complications. Since metformin's approval, SGLT2 inhibitors and GLP-1 receptor agonists can reduce the risk of acute and chronic cardiorenal outcomes in randomized controlled trials. Therefore, while pharmacotherapy for diabetes must have glycemic efficacy, there should be an individualized approach to pharmacotherapy due to potential side effects, costs, and patient-centered factors that can influence long-term outcomes for patients with type 1, type 2, or gestational diabetes. The pharmacological management of diabetes earlier in the history was focused solely on glucose control, and now there are more patient-centered approaches to pharmacotherapy management that include management of patient comorbidities and cardiovascular outcomes specifically with GLP-1 receptor agonists and SGLT2 inhibitors. Diabetes pharmacotherapy generally starts with lifestyle changes and metformin. Additional agents are subsequently added based on drug efficacy, weight, hypoglycemic risk, cost, and patient's comorbidities. The clinician drugs should serve the selected selections so minimize risk and provide any cardioprotective and renal protective outcomes when possible. Diabetes mellitus is comprised of a chronic metabolic disorder characterized by persistent hyperglycemia due to impaired insulin secretion, insulin action, or both. The pharmacological management of diabetes plays a critical role in controlling blood glucose.

**Keywords:**GLP,SGLT,Hypoglycemic



ABSTRACT NO:ICCPFR-SPS-237

## **Bioanalytical Method Development and Validation for the Quantification of Trazodone in Human Plasma by HPLC-MS/MS**

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### **Abstract:**

The Development and Validation of Bioanalytical process approach for assessing the antidepressant medication Trazodone in human plasma is the ultimate goal of the current investigation. The Method involves Tandem-Mass Spectroscopy Combined with HPLC SPE Technique Bioanalytic Method Development and Validation conducted for the first time. Using Aceton-M: 5 mM ammonium formate buffer (90:10% V/V), at 1.00 mL/min flow rate, with 10 $\mu$ l of injection volume, allowed for excellent separation and elimination. This Chromatographic analysis analyte and IS were started under isocratic conditions to develop an easier separation technique in a shorter run time. According to the method, the range of calibration curve is from 25.2640-352.3060 ng/ml. By using numerous supporting data points, including batch recovery percentages of 85.0433% and 82.3800% over TRAZ and TRAZD6, a technique validation has been established. The simple, highly accurate, precise, sturdy, reproducible and reliable HPLC-MS/MS technique was formed that proves all the stability parameters and is suitable for the bioequivalence study in the future. This method may also be applicable for the combined formulations. Trazodone is a SARI drug (Reuptake Inhibitor and Serotonin Antagonist), which prevents both serotonin transporters as well as type-II receptors. It also prevents the serotonin reuptake, blocks the release of serotonin's histamine, and blocks serotonin's release into the brain. In the US pharma market, it will be available in the form of orally administered tablets and capsules at dose levels of 50, 100, 150, and 300 mg.

**Keywords:** Trazodone, LC-MS/MS, Trazodone D6, Validation, Analytical Method Development



ABSTRACT NO:ICCPPr-SPS-238

## Unlocking the Potential of Alkaloids in Cancer Treatment: Challenges and prospects

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### Abstract

Cancer, a genetic disorder characterized by uncontrolled cell division, remains a leading cause of human mortality. Despite its lethality, various treatments, including herbally derived drugs, have shown promise in combating the disease. Natural alkaloids have emerged as vital resources for anticancer drugs, offering a range of therapeutic benefits. This review highlights the significance of alkaloids in cancer treatment, focusing on their mechanisms, advantages, and challenges. Key groups of anticancer alkaloids, such as vinca alkaloids, camptothecin derivatives, taxanes, and indole alkaloids, have demonstrated potent in vitro activity and clinical success. These compounds work through various molecular mechanisms, including microtubule interference and apoptosis induction, to inhibit cancer cell growth and proliferation. However, issues such as toxicity, drug resistance, poor pharmacokinetics, and solubility limit their therapeutic potential. To overcome these challenges, advancements in semi-synthesis, nanotechnology, synthetic biology, and new sources are necessary. These approaches can enhance the safety, efficacy, and availability of alkaloid-based cancer chemotherapy. Ultimately, alkaloids hold promise for improved cancer treatment outcomes, and future research should focus on optimizing their therapeutic potential. By exploring new sources, improving synthesis methods, and developing innovative delivery systems, researchers can unlock the full potential of alkaloids in cancer therapy, providing new hope for patients and clinicians alike. With continued research and development, alkaloid-based cancer treatments may become increasingly effective and accessible.

### Keywords

Alkaloids, semi-synthesis, nanotechnology, Vinca, microtubule interference,



ABSTRACT NO:ICCP 2ND-SPS-239

**Pharmaceutical approaches to vitiligo:  
Advances in drug development and analysis**

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\* Assistant professor, Department of Pharmaceutical Analysis

**Corresponding author mail id:** archana.sps@vistas.ac.in**Abstract:**

Vitiligo is the chronic skin condition where white patches appear on the skin due to the loss of pigment-producing cells. One of the most notable breakthroughs is the introduction of topical ruxolitinib 1.5% cream. Epidemiology of vitiligo in India (total prevalence (2.4-5.5%) and higher prevalence northern India (3.5-6.5%) and western India (3.2-5.8%), and lower prevalence southern India (1.5-3.5%) and eastern India (1.2-3.2%). There are two main types, they are localized and generalized. Established Pharmaceutical Approaches include topical corticosteroids to reduce inflammation and stimulate repigmentation in localized lesions, and topical calcineurin inhibitors (tacrolimus, pimecrolimus) as immunomodulators for non-segmental vitiligo. Systemic corticosteroids, specifically low-dose oral glucocorticoids, can stabilize rapidly progressive disease. Targeted Approaches, JAK Inhibitors are a significant focus in dermatological treatment, including vitiligo. Additionally, combination therapies, such as pairing NB-UVB phototherapy with topical corticosteroids or calcineurin inhibitors, are being explored to enhance repigmentation. Future treatments will likely involve targeted therapies addressing specific mechanisms causing melanocyte loss.

**Keywords:** vitiligo, ruxolitinib, corticosteroids, calcineurin, non-segmental vitiligo, NB-UVB phototherapy, glucocorticoids, JAK inhibitors.

ABSTRACT NO:ICCPPr-SPS-240

**PHYTOCHEMICAL ANALYSIS AND IN-VITRO ANTIOXIDANT AND  
ANTIBACTERIAL ACTIVITY OF AQUEOUS EXTRACTION FROM THE STEM OF  
ROSA DAMASCENA MILL.**

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**ABSTRACT:**

The present study evaluated the antioxidant, antibacterial activities and phytochemical investigation of aqueous extract of Rosa Damascena Mill. Stem. The antioxidant activity was evaluated by the DPPH assay method and antibacterial activity was determined by disc diffusion method. The aqueous extract showed high antioxidant activity (73.07%) and had antibacterial activity against both Gram-positive and Gram-negative bacteria. A higher inhibition zone was detected against Staphylococcus aureus -18mm, Pseudomonas aeruginosa-13mm, Bacillus subtilis-11mm, and Escherichia coli-9mm at 100µg/ml concentration. The minimum zone of inhibition was detected at 60µg/ml concentration. Preliminary phytochemical exploration indicated the presence of Alkaloids, Carbohydrates, Flavonoids, Saponins, Proteins, Starch, Free amino acids, Fixed oil and fat, and Steroids. The result indicated that the aqueous extract of R.Damascena mill stem possessed strong antibacterial and antioxidant properties and could be an important source of natural compounds for the development of a new drug.

**KEYWORDS:** Antioxidant, Antibacterial, Aqueous extract, Phytochemical, Rosa Damascena Mill.



ABSTRACT NO: ICCPPR-064

## STUDY ON ANTIBIOGRAM IN A TERTIARY CARE HOSPITAL BETWEEN 2024-2025

Vishaline saravanan

Pharm.d 2nd year

Sri Ramachandra medical College

### ABSTRACT

Antibiogram is an efficient tool often used by clinicians to assess local susceptibility rates as an aid in selecting an empiric antibiotic therapy and in monitoring resistance trends over time within an institution. Hospital antibiogram - Periodic summary of antimicrobial susceptibilities of local bacterial isolates To identify the resistance pattern of microbes reported during the year 2025

To compare the trend of Antibiogram 2025 with Antibiogram 2024 in our ICU To aid in the empirical selection of Antibiotics – syndromic approach (BSI, UTI, Pneumonia) The purpose of this audit is to examine whether the resistant microbes and its pattern is highly evolving, which is an alarming sign for Pan-drug resistance Study type: Retrospective Observational study

Study period: JAN 2024 – AUG 2025 We audited all the positive cultures reported in our ICU during the study period and subsequently determined its resistance pattern Total no. of positive cultures in 2024 – 623 Total no. of positive cultures in 2025 – 833 Number of positive cultures reported increased by 33.7% Incidence of VAP remains almost similar in 2024 and 2025, whereas incidence of BSI decreased from 35% to 32% and incidence of UTI reduced from 12% to 11%

FUTURE STRATEGIES TO PREVENT RESISTENCE Antibiotic stewardship policy has to be strictly adhered in the hospital Antibiotic escalation and de-escalation should be strict and streamlined as per protocol Proper adherence to the Hand Hygiene technique by all the Healthcare professionals



ABSTRACT NO: ICCPPR-SPS-241

**DRUG DISCOVERY IN (AI)**  
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**School of pharmaceutical sciences**  
**Vels institute of science technology and advanced studies**

Artificial Intelligence (AI) is changing the landscape of the pharmaceutical space by optimizing drug discovery and development. AI consists of data, computation, and algorithms (including both machine learning (ML) and deep learning (DL)) to identify efficiencies in areas such as target identification, molecular design, and clinical trial optimization. For example, AlphaFold and the PandaOmics platform can revolutionize protein structure prediction and target validation while generative models and virtual screening (VS) can accelerate the design of new drug candidates with improved ADMET profiles. The potential effect of AI in drug discovery is shown across several companies developing medicines, for example, both Healx and Insilico Medicine have disclosed that they are now accelerating their clinical trials in part because of AI informing their pipeline. There is potential for AI to streamline drug discovery and development, but challenges are present, including data biases, chemical limited intuition and intellectual property matters could all hinder its reliability and scale. Drug Design and De Novo Design: AI algorithms can design novel drug molecules from scratch, exploring vast chemical spaces to find compounds with desired properties. Virtual Screening: AI can rapidly screen massive compound libraries to identify molecules with a high likelihood of binding to specific disease targets, saving time and resources compared to physical high-throughput screening. Target Identification, AI can analyze complex biological data to identify novel protein targets involved in diseases. Predicting Efficacy and Toxicity: AI models can predict the efficacy and potential side effects of new drug candidates, helping researchers prioritize the most promising molecules for further development. Drug Repurposing: AI can analyze existing drugs and disease data to identify potential new therapeutic uses for approved medications. Personalized Medicine, By analyzing patient data, AI can help identify biomarkers for treatment responses, leading to more personalized and effective therapies. Protein Structure Prediction, AI models, such as AlphaFold, have significantly advanced the ability to predict the 3D structure of proteins, which is crucial for understanding their function and designing drugs that interact with them. You can watch this video to learn more about the role of AI in accelerating drug design.

**Keywords:** Artificial intelligence, Drug Discovery, Pandaomics, Machine learning.



ABSTRACT NO: ICCPPR-SPS-242

## **Clinical Pharmacist's Role In Improving Patient Safety**

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**Pallavaram, Chennai**

### **Abstract**

Clinical pharmacists are instrumental in protecting patient health through optimized medication regimens and preventing drug-related incidents. As critical members of multidisciplinary healthcare teams, they conduct comprehensive reconciliations of medications, review prescriptions, and identify potential drug incompatibilities or contraindications. Their diligence ensures rational use of drugs, thus reducing the risk of adverse drug events and promoting enhanced therapeutic outcomes. Through expertise in therapeutic drug monitoring and customized treatment plans, clinical pharmacists reduce the risks of medications. Evidence repeatedly emphasizes their role in reducing hospital readmission, preventing prescription errors, and realizing substantial cost savings. Pharmacist-led programs like patient education, medication counseling, and adherence facilitation further enhance safety by promoting compliance with prescribed therapies. Whether in hospital wards or outpatient care environments, their interventions play a key role in eliminating pharmacotherapy hazards and improving the level of care. Through gaps closure in medication management and evidence-based practice promotion, clinical pharmacists both ensure increased safety and efficacy of treatment regimens and improve individual patient outcomes as well as overall healthcare system quality.

**Keywords:** clinical pharmacy, medication safety, drug therapy optimization, therapeutic drug monitoring, prescription errors



ABSTRACT NO: ICCPPR-SPS-243

## **GREEN NANOTECHNOLOGY IN MEDICINE: NATURAL EXTRACTS AS NANOCARRIERS AND THERAPEUTICS - A REVIEW**

**Ching ngaih\*, Jayakumari**  
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### **ABSTRACT**

Nanoscale Drug Delivery Systems (NDDSs) are an innovative scientific area where nanosized materials serve as carriers to deliver drugs directly to their sites of action. Their use enhances the bioavailability of poorly water-soluble drugs, allows co-delivery of multiple drugs, provides targeted delivery, protects normal cells from toxicity, and prolongs drug action. By modifying nanoparticle size and surface characteristics and using different polymers, NDDSs improve targeted delivery, sustain and control drug release, and alter pharmacokinetics for better clinical outcomes. Natural products, despite some limitations, have shown strong therapeutic effects similar to nanocarrier drug delivery systems. Combining Eastern and Western medicine offers potential for targeted, efficient treatment with fewer side effects. Many nanoparticles loaded with traditional drugs like paclitaxel and doxorubicin, as well as natural compounds like curcumin and green tea catechins, are either available commercially or under clinical study, demonstrating remarkable results. NDDSs also successfully combine multiple substances with different solubility properties, extending formulation action. Integrating natural products with nanocarriers represents progress in clinical trials and pharmaceutical development, highlighting plant-derived drugs combined with nanocarriers as promising candidates for clinical therapy, advancing medical discovery.

**Keywords:** Nanotechnology, Drug delivery systems, Nanoparticle, Nanocarrier, Natural compounds.

ABSTRACT NO:ICCP-SPS-244

## **mRNA VACCINES : CONCEPT AND FUTURE APPLICATION – A REVIEW**

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mRNA vaccines revolutionized vaccinology, and COVID-19 established benchmarks in their scalability, time to development, and high immunogenicity. mRNA vaccines, unlike traditional inactivated pathogen- or protein-based vaccines, deliver synthetic antigenic sequences in the form of lipid nanoparticles or self-amplifying RNA, advantages of rapid design, antigenic flexibility, and extremely effective immune responses. BNT162b2 and mRNA-1273 clinical trials reported >90% efficacy with good safety, opening the way for research into infectious, parasitic, and cancer vaccines. But stability during storage, optimizing delivery, and low-frequency myocarditis are issues. Progress through mRNA modifications and self-replicating platforms has massive potential for still broader use, and mRNA vaccines themselves are a goldmine to exploit for future vaccines. Rabies, a virtually always lethal zoonosis, must be complemented pre-exposure and post-exposure by immunization and traditional inactivated rabies vaccines but are protective, multi-dose, and yield weak cell-mediated immunity with incomplete long-term protection. mRNA technology has produced RABV-G-expressing candidates through lipid nanoparticles or self-replicating RNA in preclinical models with higher titers of virus-neutralizing antibodies, strong T cell responses, and long-term protection in some instances even after licensed vaccines. Post-exposure tolerance was also improved in some of the formulations. Initial human trials with CV7201, CV7202, and RBI-4000 showed safe delivery, dose-proportional immunogenicity, and improved neutralizing response. Collectively, these technologies brought mRNA rabies vaccines into the spotlight as game-changers that could potentially simplify dosing regimens, optimize immune persistence, and enhance rabies prevention worldwide.

**Key words** - mRNA vaccines , Self-amplifying RNA , Rabies , RABV-G , Virus-neutralizing antibodies , Immune persistence



ABSTRACT NO:ICCP 2ND-SPS-245

**NAEGLERIA FOWLERI: UNDERSTANDING THE “BRAIN-EATING AMOEBEA” AND ITS IMPACT ON THE HUMAN BRAIN****Albin Binu<sup>1</sup>, Dr.V.Jayashree<sup>2</sup>****<sup>1</sup>Pharm D, 2<sup>nd</sup> year, School of Pharmaceutical Sciences,****Vels Institute of Science Technology and Advanced Studies, Chennai****<sup>2\*</sup>Corresponding Author – Dr.V.Jayashree<sup>2\*</sup>****Associate Professor, Department of pharmacology,****School of Pharmaceutical Sciences,****Vels Institute of Science Technology and Advanced Studies, Chennai****Phone: 9961251761**Email: [albinbinu205@gmail.com](mailto:albinbinu205@gmail.com)**ABSTRACT**

The free-living amoeba *Naegleria fowleri*, widely referred to as the “brain-eating amoeba,” is the causative agent of **Primary Amoebic Meningoencephalitis (PAM)**, a rare but highly lethal brain infection. Although PAM occurs infrequently, its outcomes are devastating, with a mortality rate of nearly 98% and death usually occurring within two weeks of exposure. This review consolidates current understanding of *N. fowleri*, emphasizing its mechanisms of brain invasion, the molecular pathways driving its **pathogenicity**, and the extent of **neurological** damage. In addition, recent progress in **therapeutic approaches** is discussed, drawing on evidence from case studies and experimental models, with special focus on the potential of immunomodulatory therapies to reduce brain injury.

**KEYWORDS:** *Naegleria fowleri*, Primary Amoebic Meningoencephalitis, Pathogenicity, Neurological, Therapeutic approaches



ABSTRACT NO: ICCPPR-SPS-246

## **Evaluating Melatonin as a Safe and Effective Prophylactic for Episodic Migraine: A Randomized Controlled Trial**

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### **Abstract:**

Migraine is a prevalent neurological disorder with a substantial impact on quality of life, often causing frequent use of analgesics resulting in medication-overuse headache. Preventive approaches that are effective and safe are essential. Melatonin, a circadian rhythm regulator, has also shown promise as a migraine preventive based on its analgesic activity as well as sleep-modulating properties. This double-blind, randomized, placebo-controlled clinical trial will be performed in Sunshine Neuro and Ortho Clinic, Chennai, to study the prophylactic role of melatonin in migraine. Sixty adults between the ages of 18 and 55 years with episodic migraine will be randomized to receive melatonin 3 mg immediate-release at bedtime along with baseline therapy, or placebo along with baseline therapy, for a period of three months. The main endpoint is reduction in migraine frequency. Secondary endpoints are changes in attack duration, analgesic use, sleep quality (PSQI), migraine disability (MIDAS), and analgesic dependence (ADS). It is anticipated that melatonin will decrease migraine frequency and duration, enhance sleep quality, reduce analgesic intake, and alleviate migraine-related disability, confirming its status as a safe, cost-saving prophylactic choice.

**Keywords:** Migraine, Episodic Migraine, Melatonin, Prophylaxis, Randomized Controlled Trial (RCT), Placebo-Controlled



ABSTRACT NO: ICCPPR-SPS-247

**Biomimetic and Functionalized Nanoparticles:****New Horizons in Targeted Cancer****Yazar.J\*****Mohamed ZereinFathima<sup>2</sup>****B.Pharm,School of pharmaceutical sciences, Vels Institute Of****Science,Technology And Advanced Studies (VISTAS),****Pallavaram-600117,Chennai, Tamilnadu, India****Corresponding Author: Mohamed Zerein Fathima Department of Chemistry and Analysis,  
School Of Pharmaceutical sciences, VISTAS, Pallavaram, Chennai, Tamilnadu**

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**Abstract:**

Biomimetic and functionalized nanoparticles represent a rapidly evolving area of cancer therapy for the purpose of improving therapeutic specificity by integrating materials science, nanotechnology, and biology principles to achieve maximal therapeutic specificity. Biomimetic platforms such as cell membrane-coated nanoparticles and extracellular vesicle (EV)-mimic nanocarriers seek to mimic nature-like biological structures and, therefore, improve immune evasion, long-term systemic circulation, and aspecific tumor accumulation through passive and active targeting routes. Simultaneously, functionalization approaches—i.e., ligand, antibody, peptide, aptamer, or biotin surface modification—offer receptor-targeting binding to cancer cells with greatly improved intracellular delivery and reduced systemic toxicity. The design attributes are merged to allow the creation of multifunctional nanotheranostic platforms for co-delivery of chemotherapeutic agents, nucleic acids, and immunomodulators and real-time simultaneous in vivo imaging diagnostics. These nanotechnologies do not only improve the therapeutic index but also solve significant clinical problems like multidrug resistance, tumor heterogeneity, and toxic pharmacokinetic profiles of traditional anticancer drugs. The most important ones are biomimetic and functional nanoparticles, which can perhaps improve the effectiveness of immunotherapy through modulation of the tumor microenvironment and antigen presentation. Their clinic translation is inhibited by limitations of large-scale reproducibility, biosafety testing, regulative approval, and cost advantage although being with favorable preclinical results. But the union of biomimicry and rational functionalization places precision oncology on a new paradigm that holds potential for highly personalized, less toxic, and more potent anti-tumor therapy.

**Keywords:** Biomimetic nanoparticles , functionalized nanoparticles, Targetd cancer therapy, drug delivery, extracellular vesicles , vell membrane coating, immunotherapy, multidrug resistance,precision oncology.



ABSTRACT NO: ICCPPR-SPS-248

## **Integrative Analysis Of Tumor Genomics and Host Pharmacogenomics to Improve Therapeutic Outcomes in Colorectal Cancer**

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**School of Pharmaceutical sciences**

**Vels Institute of Science, Technology and Advanced Studies**

**Pallavaram, Chennai**

### **Abstract**

Treatments for colorectal cancer are not the same for all patients due to the variation in every person's genes and tumor biology. Standard chemotherapy may be beneficial for one patient while it may be detrimental or not effective for another. Understanding how genes influence drug response pharmacogenomics is an important part of developing personalized therapy for colorectal cancer. Evidence that contains genetic markers can provide valuable information; for instance, KRAS and NRAS mutations predict resistance to anti-EGFR monoclonal antibodies, and DPYD variants identify patients at risk of serious toxicity from fluoropyrimidines. Similarly, BRAF mutations serves as crucial targets for targeted therapy. The ability to detect changes in DNA within a colorectal tumor has evolved with the advent of next-generation sequencing (NGS) with complex bioinformatics to detect such alterations quickly and accurately, thereby enabling oncologists to make more individualized treatment decision. All of this allows for a more effective therapeutic result, while preventing drug exposure to excess drug levels, and lessening treatment side effects, which ultimately leads to better patient quality of life. For all of these reasons, pharmacogenomics will change how we treat colorectal cancer as we begin to further integrate precision medicine into the clinic. Going forward, it is likely that integrating even more new biomarkers, liquid biopsy platforms, and AI-based predictive tools will improve personalization of treatment decision making in colorectal cancer.

**Key Words:** Pharmacogenomics, Colorectal cancer, personalized therapy, KRAS, NRAS, and BRAF



ABSTRACT NO: ICCPPR-066

**NOVEL DRUG DELIVERY SYSTEMS IN FUTURE SCOPE IN PHARMACY.****Ms. Pranali Patil; Dr. K. G. Bhutkar****patilpranali6715@gmail.com, Ketanbhutkar.tcop@kjei.edu.in****KJEI's Trinity College of Pharmacy Pune.****Abstract:**

Pharmacy is entering a new phase in which innovation is transforming all aspects of drug development, distribution, and patient care. A highly encouraging field propelling this transformation is Novel Drug Delivery Systems (NDDS). These systems seek to address the constraints of conventional dosage forms and develop treatments that are safer, more efficient, and centered on patients. They permit regulated release, targeted delivery to specific sites, and improved therapeutic efficacy. This presentation explores the relationship between NDDS and the future of the pharmaceutical industry. It highlights the connection between these technologies and broader developments such as personalized medicine, pharmacogenomics, and digital health. Pharmacists play an essential role in this change. They participate in development, investigation, regulatory advice, clinical studies, and patient instruction for novel treatments. Pharmacists have increasing opportunities in fields like nanomedicine, smart inhalers, mRNA delivery systems, and health tech startups centered on groundbreaking drug delivery. Simultaneously, obstacles such as significant development expenses, regulatory intricacies, and patient awareness must be addressed to completely unlock the potential of NDDS. By adopting innovation and adapting to these emerging systems, pharmacists can transform their professional roles, significantly impact global healthcare, and pave the way for a future where medication delivery is as accurate and tailored as the drugs themselves.

**Keywords:** development, innovation, nanomedicine, patient etc.

ABSTRACT NO:ICCPRP-SPS-249

## **Development and validation of clinical prediction models for treatment resistance and coronary complications**

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### **ABSTRACT**

Kawasaki disease is an acute systemic vasculitis affecting medium and small blood vessels in children, characterized by prolonged fever and mucocutaneous inflammation. It poses a risk of serious cardiovascular complications, especially coronary artery aneurysms. Early diagnosis and treatment are essential to prevent lasting heart damage. Its exact cause is unknown but may involve immune dysregulation and infectious triggers. Diagnosis is clinical, based on prolonged fever lasting more than five days with signs including rash, conjunctival injection, cervical lymphadenopathy, and mucocutaneous changes. Diagnostic confirmation involves blood tests showing inflammatory markers and echocardiography to evaluate cardiac status. Early treatment with intravenous immunoglobulin (IVIG) and high-dose aspirin is standard. Timely administration of IVIG and aspirin reduces inflammation and risk of coronary artery complications. Despite advances, the etiology remains unclear, with autoimmune and infectious triggers suspected. Untreated cases risk life-threatening coronary aneurysms and myocardial damage. Prompt diagnosis and treatment significantly improve outcomes, underscoring the importance of vigilance in pediatric care. Long-term cardiovascular monitoring is essential. Kawasaki disease remains a leading cause of acquired heart disease in children and is actively researched to better understand its pathogenesis and optimize management.

**KEYWORDS:** Kawasaki disease; acute vasculitis; pediatric vasculitis; intravenous immunoglobulin; aspirin therapy; coronary artery inflammation.



ABSTRACT NO: ICCPPR-SPS-250

**"Therapeutic Convergence: AI, CRISPR, and Pharmacogenomics for Mutation-Centric Medicine"****Author name: 1.Theyshnee S\*, 2. V. Nivethra\*****Department of pharmaceutical chemistry and analysis****School of pharmaceutical sciences****Vels institution of Science and technology and Advance studies****Pallavaram, Chennai****Abstracts:**

The intersection of AI, CRISPR-Cas9, NGS and pharmacogenomics This combination is changing the face of biomedical research and precision medicine. AI supports improved gRNA design, off-target effects prediction and identification of novel CRISPR enzymes for safer genetic therapies which better address individuals. In oncology, NGS is used for high-resolution tumor mutation profiles and liquid biopsy monitoring and CRISPR/Cas9 also offers a way to precisely edit mutations (e.g., improve immunotherapy such as CAR-T cells or target resistance). Emerging CRISPR tools, like prime editing, base editing, and CRISPRon improve the targeting accuracy and specificity. Pharmacogenomics brings forward the prospect of individualizing drug therapy through such drugs and treatments that will have optimum safety and efficacy. It speeds identification of biomarkers and prediction of drug response in oncology, neurology, and metabolic disease. Both allow treatment to be tailored on a patient-treatment specific level and both enable mutation-focused therapy. However, ethical, regulatory and data privacy issues persist. The use of the technology in society requires support from experts and stakeholders to ensure equal.

**Keywords:** Artificial Intelligence (AI), CRISPR-Cas9, Next-Generation Sequencing (NGS), Pharmacogenomics, Precision Medicine



ABSTRACT NO: ICCPPR-SPS-251

**VELS INSTITUTE OF SCIENCE, TECHNOLOGY & ADVANCED  
STUDIES(VISTAS), PALLAVARAM, CHENNAI**

**Submitted by:**

**SANJAY S (B Pharmacy 4th YEAR)**

**Under the Guidance of**

**Dr. Kalaiarasan**

**PHARMACIST INTERVENTIONS IN POLYPHARMACY  
AMONG ELDERLY PATIENTS**

**Abstract:**

Consequently, the use of many medicines due to high spread of chronic diseases in this age group, while using many medicines, is common in elderly patients. This increases the risk of side effects, drug interactions, non-feeding and hospitalization, which can adversely affect the patient's health and quality of life. Pharmacists play an important role in various interventions such as drug reviews, drug harmony, identify inappropriate prescriptions and identify patient counseling. These interventions help to adapt drug therapy, improve drug farming and reduce the risk of drug -related problems. Collaboration between pharmacists, doctors and other health professionals is necessary to ensure the use of safe and effective medicines. Pharmacist -educated education gives elderly patients the opportunity to understand their medicines better and follow their treatment plans properly. Regular monitoring and follow -up of possible pharmacists can detect, prevent complications and reduce the cost of health care. Including pharmacists interventions in a medical treatment, promoting a comprehensive approach to handling polypharmacy, the patient's safety and therapeutic consequences increase. This essence emphasizes the importance of pharmacist participation in polypharmacy management among elderly patients and is a lawyer to expand pharmacy exercises to improve the health care distribution of this weaker population.

**Keywords:** Polypharma, elderly, pharmacist intervention, drug safety, drug farming, weak medicine care.



ABSTRACT NO: ICCPPR-SPS-252

## ROLE OF AI IN PERSONALISED MEDICINE

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Artificial intelligence is used in personalized medicine to interpret vast, complex patient information from various sources, including electronic health records, as well as lifestyle factors, to forecast diseases, diagnose illnesses, and provide treatments. In pharmacogenomics, data-driven decisions allow the implementation of innovative tools in personalized care. AI systems primarily enhance drug therapy optimization, predict treatment responses, and assist in personalized care solutions. A study in 2024 A recent one Discusses regarding an analysis of pharmacogenomics techniques based on AI, assessing drug-gene interaction algorithm and dosage adjustment. A similar article in 2022 reviewed 63 studies particularly on cancer patients using randomized controlled trials and predictive modelling to check the efficacy of AI for diagnosis and treatment. Another 2025 study examines the use of AI in health records, genomic sequencing, and immune biomarkers in autoimmune disease, comparing real-world data to machine learning-based prediction models. All of the articles utilized a literature-informed synthesis of preclinical and clinical trial data. Outcomes: In pharmacogenomics, AI has an important role to predict adverse drug reactions and optimize dosing, thus improving efficacy and safety. AI platforms focusing on oncology prove highly accurate in tumour categorization, response to treatment assessment, and outcome monitoring, with random forests and deep neural networks performing better than conventional methods. Integrating health records into genomic and immunological data allowed precise patient categorization,, improved treatment, and early disease prediction methods. All studies reported challenges including model interpretability, variability in data, and requiring large validation. AI rapidly advances individualized medicine by improving pharmacogenomics-based medication treatment, revolutionizing cancer treatment outcomes, and integrating multiple patient data for tailored care. All the while, its outstanding performance, though highly effective, is hindered by formidable barriers, including the lack of standard methods, limited portability, and ethical issues.



ABSTRACT NO: ICCPPR-SPS-253

## RECENT PHARMACOLOGICAL INNOVATIONS IN ALZHEIMER'S AND PARKINSON'S DISEASE: TOWARDS DISEASE-MODIFYING THERAPIES

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### ABSTRACT:

The neurodegenerative disorders like the Alzheimer disease (AD) and the Parkinson disease (PD) represent one of the greatest health issues causing problems worldwide, and the current pharmacological interventions have provided only the symptomatic relief and not the disease modification. Recent developments are however ushering in the new treatment approaches that focus on the molecular causes of neurodegeneration. Monoclonal antibodies such as lecanemab, aducanumab and donanemab have demonstrated a capacity to decrease the amyloid plaque burden in AD, and in certain instances, delay cognitive deterioration but issues such as amyloid related imaging abnormality still persist. Parallel approach targets tau hyperphosphorylation, oligomer toxicity, neuroinflammation, oxidative stress and metabolic dysfunction, and multi target directed ligands (MTDLs) and small molecules have a greater therapeutic range. The therapies targeting the inhibition of alpha synuclein aggregation, promoting the survival of dopaminergic neurons, and regulating the oxidative and inflammatory processes are actively developed in PD and involve new compounds and nanomaterial-based systems. Although some preclinical and early clinical studies have been promising, they are not easily translated to effective therapies in humans due to a number of issues, including low percentages in blood-brain barrier penetration, safety, high cost of treatment and the multifactorial nature of these diseases. Such new strategies in precision medicine as pharmacogenomics, biomarker driven stratification, and gene based therapies have the potential to enhance efficacy and personalization of therapy. All these pharmacological innovation products are a move towards disease modifying rather than symptomatic management of AD and PD providing fresh hope of slowing or changing the course of the disease. Further research in combination therapy, early diagnosis, and better mechanistic insight is the key to surpassing the existing constraints and attaining positive clinical gains towards patients already affected by these crippling neurodegenerative diseases.

**Keywords:** *Neurodegenerative Disorder, Parkinson's disease, Alzheimer Disease, Pharmacological Intervention, Neuroinflammation*



ABSTRACT NO: ICCPPR-SPS-254

## FORMULATION AND *IN VITRO* EVALUATION OF LURASIDONE ORAL THIN FILMS

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### ABSTRACT

Fast dissolving drug delivery system offers a solution for those patients having difficulty in swallowing tablets/capsules. The present research work is to develop oral thin films of Lurasidone by using solvent casting method. Oral thin films were developed by using various super disintegrants like Lycoat and Ludiflash in different concentrations with Xanthan Gum, Poly vinyl alcohol as a film forming agents and Propylene Glycol as Plasticizer. The prepared formulations of films were evaluated for film thickness measurement, folding endurance study, in-vitro disintegration time, *in-vitro* drug release pattern (in pH 6.8 phosphate buffer). Drug content, and drug-polymers interaction study (IR spectroscopy). Among all formulations, the formulation (F12) prepared by 180 mg of Lycoat show good drug release ( $99.37 \pm 1.45\%$ ).

**Keywords:** Lurasidone, Poly vinyl alcohol, Lycoat, oral thin films and FTIR



ABSTRACT NO: ICCPPR-SPS-255

**Pharmaceutical Chemistry and Petrochemistry: Exploring Their Interconnection****SARON MICAHVEL S****Vels Institute of science and technology****20408117@VELSUNIV.AC.IN****Abstract**

Pharmaceutical chemistry and petrochemistry are interconnected disciplines, with petrochemicals serving as essential raw materials, solvents, and intermediates in drug synthesis and formulation. This relationship underpins drug discovery, large-scale production, and the development of excipients and polymers. Emphasis on sustainable methods highlights the need for greener approaches while addressing regulatory and economic challenges. Strengthening this interconnection can enhance innovation in both industries.

**Keywords:** Pharmaceutical chemistry, Petrochemistry, Drug synthesis, Excipients, Sustainable processes, Interconnection



ABSTRACT NO: ICCPPR-SPS-256

## “IVIG: A Key Therapy for Autoimmunity”

**Name: Lingeswar. B**

**Guide: Dr. P. Monika**

### **Abstract:**

Intravenous immunoglobulin (IVIG) is a pooled antibody, and a biological agent used to manage various immunodeficiency states and a plethora of other conditions, including autoimmune, infectious, and inflammatory states. **IVIG**: is a sterile, highly purified preparation of these antibodies (mainly IgG) from the plasma of thousands of donors. Autoimmune disorders are conditions where the immune system mistakenly damage its own body cells, tissues and organs. Which leads to a chronic inflammation, tissue damage and affects the normal function of the body. IVIG works by supplying the body with healthy antibodies that help control an overactive immune system. It blocks harmful autoantibodies, reduces inflammation, and balances immune responses. In this way, it protects the body from attacking its own cells. include neutralization of pathogenic autoantibodies, modulation of Fc receptors, inhibition of complement activation, and regulation of cytokine networks. Clinically, IVIG has proven that effective against the disorders like Guillain–Barré syndrome, myasthenia gravis, immune thrombocytopenia, Kawasaki disease, dermatomyositis, and certain neurological disorders, and chronic inflammatory demyelinating polyneuropathy (CIDP). Even though Intravenous immunoglobulin is safe and beneficial but it has some limitation like they are expensive, insufficient supply meanwhile they have some side effects like headache, flushing, severe allergic reaction and kidney failure. Still, for patients who do not respond to other treatments, but IVIG provides significant improvement in symptoms and quality of life. The research and clinical studies shows that, IVIG continues to developed in the field of autoimmune disorders.

**Keywords:** Intravenous immunoglobulin (IVIG), antibodies (mainly IgG), Guillain–Barré syndrome, myasthenia gravis, immune thrombocytopenia, Kawasaki disease

ABSTRACT NO: ICCPPR-SPS-257

## ITRACONAZOLE BEYOND FUNGUS: TARGETING THE HEDGEHOG IN RECURRENT BASAL CELL CARCINOMA – A CASE STUDY

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### **ABSTRACT:**

**Basal cell carcinoma (BCC)** is the most prevalent form of skin cancer, often managed by surgical excision. However, recurrent cases pose a significant therapeutic challenge, necessitating exploration of novel target intervention. Recent clinical evidence highlights the role of **Hedgehog (Hh) signalling pathway** in the pathogenesis of BCC.

**CASE PRESENTATION:** A 68-year-old female patient was developed with BCC of left parotid gland and underwent a surgical treatment for two times, and yet experience a tumor relapse. In view of aggressive tumor recurrence and limited surgical benefit, **itraconazole- an antifungal drug** with off-label anticancer potential was considered.

**FINDINGS:** Itraconazole in treatment of BCC exhibit a dual advantage by inhibiting Hedgehog signalling pathway by suppressing **Smoothened protein** activity, thereby disrupting tumour cell proliferation and it is economically affordable and accessible compared to currently available Hedgehog pathway inhibitors like vismodegib, sonidegib.

**CONCLUSION:** This case underscores the significance of **drug repurposing in oncology**. The use of itraconazole in recurrent BCC highlights a therapeutic avenue, in resource limited settings. Its integration into oncology practice exemplifies drug repurposing, bridging pharmacology with personalised cancer care.

**KEYWORDS:** Basal cell carcinoma, Hedgehog pathway, Itraconazole, Antifungal drug, Smoothened protein.

ABSTRACT NO: ICCPPR-SPS-258

## ITRACONAZOLE PULSE THERAPY IN SEBORRHEIC DERMATITIS: EFFICACY AND QUALITY OF LIFE OUTCOMES

**HEPSIBA SELVA KUAMRI K****Vels Institute of Science and Technology**[hepsibakrishnamoorthy@gmail.com](mailto:hepsibakrishnamoorthy@gmail.com)

### ABSTRACT

To evaluate the effectiveness of itraconazole, improvements in patient-reported quality of life (QoL), and its safety. The dosage was 200 mg once daily for 7 days each month in adults with moderate to severe SD.

### Methods:

This was a single-arm study involving 60 adults aged 18 to 60 with moderate to severe SD. Patients took itraconazole 200 mg once daily for 7 consecutive days, repeated after 4 weeks (a total of 2 pulses, with an option to extend to 2 months). We assessed clinical severity at the start, Week 4, and Week 8 using a validated severity score. We measured QoL with the Dermatology Life Quality Index (DLQI) at the start and Week 8. Safety was monitored with liver function tests (LFTs) at baseline and Week 8, along with tracking adverse events at each visit. We used repeated measures ANOVA to assess changes over time, and a paired t-test to evaluate changes in the DLQI ( $\alpha = 0.05$ )

### Result

Sample: 60 patients (54% male, 46% female); highest age group 27 to 33 years (28%). Intervention: Itraconazole 200 mg once daily for 7 days each month for 2 months (pulse therapy).

Clinical Severity Scores (Itraconazole group):

Baseline: ~30

Week 4: ~22

Week 6: ~19

Week 8: <18

Week 8: Significant reduction, showing improved quality of life ( $p < 0.001$ ).

Safety: No major adverse events reported.

**Conclusion:** Itraconazole pulse therapy significantly reduces the severity of seborrheic dermatitis with steady improvement over 8 weeks while also improving patient quality of life. Treatment was well-tolerated with no serious safety concerns.

ABSTRACT NO: ICCPPR-SPS-259

## Healing Made Simple: Moringa Oil Adhesive Tapes

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### **ABSTRACT:**

Wound healing is a complex process. Many factors can influence it, such as germs, stress, and inflammation. These factors can delay healing and create additional issues. A small cut can get infected if it isn't kept clean, which will make it take longer to heal. Regular adhesive tapes keep wounds safe, but they don't actually help them heal. They protect the injury but don't have special healing abilities. A bandage can keep dirt away, but it won't speed up the healing of the skin. Moringa seed oil is a natural product that may help heal wounds. It has beneficial compounds such as flavonoids and essential fatty acids. "They help kill germs and lessen swelling." Eating fruits high in antioxidants can help your body fight infections. Moringa oil helps heal wounds by encouraging new skin growth. It helps keep the wound wet, which is important for good healing. Applying moisturizer to dry skin keeps it healthy and stops it from cracking. Using moringa oil in adhesive tapes makes them more than just simple coverings. They can help wounds heal while keeping them safe. This allows patients to feel more at ease and reduces the need for frequent dressing changes. A soft bandage can help someone heal faster from a scrape. In summary, moringa oil adhesive tapes are a clever and environmentally friendly option for treating wounds. They mix natural healing methods with modern design to help patients heal more quickly. Using natural ingredients in everyday products can lead to better health.

### **KEY WORDS:**

Bioactive dressing, Antimicrobial activity, Antioxidant properties, Anti-inflammatory effect, Moist wound environment, Tissue regeneration

ABSTRACT NO: ICCPPR-SPS-260

## PRECISION PHARMACOGENOMICS IN EPILEPSY: PREVENTING CARBAMAZEPINE-INDUCED SJS THROUGH HLA-B\*15:02 SCREENING

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### Abstract

Stevens–Johnson Syndrome (SJS) is a rare but potentially fatal cutaneous adverse drug reaction strongly associated with carbamazepine and other aromatic antiepileptics. Despite its severity, carbamazepine remains widely prescribed for epilepsy and neuropathic pain due to its therapeutic efficacy. Growing evidence has linked the HLA-B\*15:02 allele to a markedly increased risk of carbamazepine-induced SJS, particularly among Asian populations. This discovery has highlighted the urgent need to incorporate pharmacogenomic screening into routine prescribing practices, especially in genetically diverse countries such as India. HLA-B\*15:02 screening offers a transformative approach to epilepsy management by enabling pre-emptive identification of at-risk individuals. Patients testing positive for the allele can be guided toward safer alternatives such as levetiracetam or valproate, thereby avoiding catastrophic outcomes. Internationally, countries including Taiwan and Singapore have integrated mandatory screening programs, resulting in significant reductions in SJS incidence. However, widespread adoption in India remains limited, partly due to cost, lack of awareness, and infrastructural gaps. Emerging studies on allele prevalence in South Indian subpopulations underscore the clinical relevance of region-specific strategies. Implementing pharmacogenomic testing not only improves patient safety but also reduces healthcare burden associated with ADR-related hospitalizations. By bridging pharmacogenomics and clinical decision-making, HLA-B\*15:02 screening represents a major leap toward safer antiepileptic drug use. As advancements in genetic testing become more accessible, this approach has the potential to transform epilepsy management in India, making precision pharmacotherapy a cornerstone of next-generation clinical practice.

### Keywords:

Carbamazepine, Stevens–Johnson Syndrome, HLA-B\*15:02, Pharmacogenomics, Precision Medicine, Antiepileptic Drugs

ABSTRACT NO: ICCPPR-SPS-261

## **“SCRUB TYPHUS IN INDIA: AN EMERGING RICKETTSIAL INFECTION AND CURRENT PHARMACOLOGICAL MANAGEMENT”**

**S.SHAJITHKHAN, PHARM D, VI YEAR, SCHOOL OF PHARMACEUTICAL SCIENCES, VISTAS.**

### **ABSTRACT:**

Scrub typhus, caused by *Orientia tsutsugamushi*, is increasingly being recognized in more locations in India, particularly in hilly rural areas experiencing monsoon weather patterns. The illness usually presents with fever and a constellation of symptoms including headache, myalgia, occasional rash or eschar, etc.; and can infrequently progress to severe disease with multi organ involvement. The challenges of diagnosis, overlap with other febrile illnesses, and associated delay in therapy contribute to preventable morbidity and mortality. Recently, there have been randomized controlled clinical trials and meta analyses that have assessed first-line treatment efficacy. Doxycycline remains the drug of choice to treat most adult scrub typhus. An adjunctive option is azithromycin in certain populations, specifically children, pregnant women, or sometimes just where contraindications exist. In the recent INTREST trial (2023) - combination (in an IV formulation) of doxycycline + azithromycin was associated with meaningfully improved distance outcomes of death, persistent fever or complications) compared to monotherapy with either oral drug in patients with severe scrub typhus. In another randomized controlled study of children with uncomplicated scrub typhus, there was no statistically significant difference identified with resolution of fever at 72 hours after treatment via oral azithromycin vs oral doxycycline. A recent meta analysis suggests doxycycline may be faster to resolve fever especially in severe disease during a disease course, but failure rates and adverse events were similar between both antibacterials. Early initiation of therapy, appropriate antibiotic choice, and monitoring are critical. Pharmacists play a key role in ensuring drug availability, correct dosing, patient counseling, detection of side effects, and adapting therapy in severe or complicated cases.

### **KEYWORDS:**

Scrub typhus, *Orientia tsutsugamushi*, India, doxycycline, azithromycin, combination therapy, severe disease, pharmacological management, pharmacists' role

ABSTRACT NO: ICCPPR-SPS-262

**“From Plaques to Progress: Lecanemab and the Future of Alzheimer’s Treatment”****Aishwarya Saikumar,****Dr. Dheenadhayalan****School of Pharmaceutical Sciences, VISTAS, Tamilnadu, India-600117****Abstract:**

Alzheimer’s disease (AD) is a progressive neurodegenerative disorder characterized by amyloid- $\beta$  ( $A\beta$ ) plaque deposition, neurofibrillary tangles, and cognitive decline. Conventional therapies such as donepezil and memantine provide symptomatic benefit without altering disease progression. Recently, monoclonal antibodies (mAbs) targeting  $A\beta$  have emerged as potential disease-modifying therapies. Lecanemab, a humanized IgG1 mAb that selectively binds soluble  $A\beta$  protofibrils, demonstrated significant clinical benefit in the CLARITY-AD phase III trial, reducing amyloid burden and slowing cognitive decline by 27% compared to placebo over 18 months.

Systematic reviews and meta-analyses further support the efficacy of anti- $A\beta$  mAbs while highlighting safety concerns, notably amyloid-related imaging abnormalities (ARIA), and limitations regarding cost and applicability in advanced stages

Collectively, these findings position lecanemab and related antibodies as a major breakthrough in AD management, offering the first robust evidence of disease modification and reshaping therapeutic strategies for early Alzheimer’s disease.

**Keywords:**

Alzheimer’s disease (AD), Neurodegeneration, Amyloid- $\beta$  ( $A\beta$ ) plaques, neurofibrillary tangles, Cognitive decline, Conventional therapies (donepezil, memantine), Monoclonal antibodies (mAbs), Lecanemab.



ABSTRACT NO: ICCPPR-SPS-263

## **“Schizophrenia: Mechanisms, Pharmacotherapy, and the Pharmacist’s Role”**

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### **ABSTRACT:**

Schizophrenia is a serious mental health disorder that affects how a person thinks, feels, and behaves in daily life. It is marked by symptoms such as hallucinations, delusions, confused thoughts, lack of motivation, and social withdrawal. These symptoms greatly reduce the quality of life for patients and create challenges for families and healthcare providers. The condition is mainly linked to chemical changes in the brain, especially involving dopamine and serotonin. Too much dopamine activity can cause hallucinations and delusions, while low dopamine levels in some areas of the brain lead to poor memory, reduced focus, and negative symptoms. Medicines called antipsychotics are the main treatment. First-generation antipsychotics mostly act on dopamine but often cause movement-related side effects. Second-generation antipsychotics act on both dopamine and serotonin, giving better symptom control with fewer side effects. Even with treatment, problems such as resistance to therapy, weight gain, and poor adherence are common. Long-acting injections and clozapine for resistant cases are useful options. Non-drug methods like counseling, cognitive behavioral therapy, and family education also improve outcomes. Pharmacists play an important role by ensuring correct medicine use, monitoring side effects, counseling patients, and supporting adherence. Their active role helps patients manage symptoms and improve quality of life.

### **KEY WORDS :**

Neurotransmitters, AntiPshycotics, Hallucination, Cognitive Behavioral Therapy



ABSTRACT NO: ICCPPR-SPS-264

**ANALYTICAL METHOD DEVELOPMENT AND VALIDATION OF TELMISARTAN  
USING HPLC: A COMPREHENSIVE STUDY ON CHROMATOGRAPHIC  
CONDITION, PRECISION AND STABILITY**

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**Abstract:**

A reliable analytical technique is needed to provide the higher level of safety and quality for telmisartan, an angiotensin II receptor blocker used to treat hypertension. In order to quantify telmisartan in bulk and pharmaceutical dosage forms, a straightforward, accurate, and exact high-performance liquid chromatography (HPLC) approach was to created and validated in this work. Clear peak resolution and consistent retention period were attained by carefully adjusting the chromatographic settings. By variables including specificity, linearity, accuracy, precision, sensitivity, and robustness, the method verified in accordance with ICH guidelines. Studies of forced decline under various stress situations demonstrated its capacity to show stability. The created technique turned out to be sensitive, repeatable, and effective for frequent quality control and legal compliance.

**KEY WORDS:**

Telmisartan, Hypertension, Angiotensin II Receptor Blocker, High-Performance Liquid Chromatography (HPLC), Method Validation, ICH Guidelines, Specificity, Linearity, Precision, Stability-Indicating Method, Forced Degradation, Quality Control, Regulatory Compliance



ABSTRACT NO: ICCPPR-SPS-265

**Food & cosmetic toxicology – adulterants, preservatives, additives****Mohamed Riyas ,****Mohamed zerein fathima****B. Pharm, School of pharmaceutical sciences, Vels Institute Of Science, Technology And Advanced Studies (VISTAS), Pallavaram-600117, Chennai,****Tamilnadu, India****Corresponding Author: Mohamed Zerein Fathima Department of Chemistry and Analysis, School Of Pharmaceutical sciences, VISTAS, Pallavaram, Chennai, Tamilnadu**

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**ABSTRACT:**

Food and cosmetic toxicology compares the study of harmful effects from adulterants, preservatives, and additives present in eatables and beauty products. Adulterants are substances that are purposefully or unintentionally added which is to increase bulk, enhance appearance, or substitute for costlier ingredients. Common food adulterants include artificial colors, fillers like starch or organic acids, sawdust, and low-cost substitutes such as soymilk in dairy products. These are known to compromise nutritional quality and can cause acute and chronic health risks, ranging from gastrointestinal disturbances and allergic responses to severe conditions like organ failure, cancer, neurological or cardiovascular diseases. Preservatives are chemicals added primarily to extend shelf life by inhibiting microbial growth, but excessive or unregulated use may result in disturbances to the nervous system, kidney, liver and other organs. Examples may include formaldehyde in seafood and benzoates in soft drinks. Additives broadly include artificial flavorings, colorings, antioxidants, and sweeteners. In cosmetic toxicology, preservatives and artificial steps in formulation may lead to skin irritation, dermatitis, or systemic toxicity, especially upon chronic exposure. Toxicology provides the scientific basis for regulatory standards, safety evaluation, and preventive measures. Reinforced testing, consumer education are essential to minimize the health hazards posed by chemical adulterants, unsafe preservatives, and unregulated additives in food and cosmetic products.

**KEYWORDS :** Toxicology , adulterants , preservatives, harmful effects



ABSTRACT NO: ICCPPR-SPS-267

**Mechanical Thrombectomy: A Game Changer in Stroke Management****SRIMATHI. R (PHARM.D (PB)- II YEAR)****Under the guidance- Dr. M. DHEENADHAYALAN****Department of Pharmacy Practice, School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies, Pallavaram, Chennai 600117, Tamil Nadu, India.**Email ID – [srimathi09012003@gmail.com](mailto:srimathi09012003@gmail.com)

Stroke is a leading cause of disability and death worldwide, with ischemic stroke accounting for approximately 85% of all cases. Rapid restoration of cerebral blood flow is critical to minimize neuronal damage and improve clinical outcomes. While intravenous thrombolysis using tissue plasminogen activator (tPA) has been the cornerstone of acute ischemic stroke treatment, its effectiveness is limited by a short therapeutic window (4.5 hours) and reduced efficacy in large vessel occlusions (LVOs). Mechanical thrombectomy has emerged as a transformative intervention in stroke management, particularly for patients with LVOs. This endovascular procedure involves the physical removal of the thrombus using specialized devices such as stent retrievers or aspiration catheters. Landmark clinical trials, including MR CLEAN, ESCAPE, REVASCAT, SWIFT PRIME, and EXTEND-IA, have demonstrated that mechanical thrombectomy significantly improves functional outcomes and reduces mortality when performed within 6 to 24 hours of symptom onset in selected patients. The procedure has now been incorporated into major stroke management guidelines as standard care for eligible individuals. Compared to pharmacological thrombolysis alone, mechanical thrombectomy offers superior recanalization rates, broader treatment windows, and enhanced neurological recovery. Despite its success, challenges such as timely access, need for specialized expertise, and infrastructure limitations remain. Continued advancements in device technology, imaging, and stroke systems of care are expected to improve accessibility and outcomes further. Mechanical thrombectomy represents a paradigm shift in the treatment of acute ischemic stroke, offering new hope for patients previously considered untreatable.

**Key words:** large vessel occlusions, tissue plasminogen activator, mechanical thrombectomy.



ABSTRACT NO: ICCPPR-SPS-268

## **EFFICACY AND SAFETY OF DONEPEZIL IN THE MANAGEMENT OF ALZHEIMER'S DISEASE**

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### **ABSTRACT:**

Efficacy of Donepezil (How well it works). Improves memory and thinking – Donepezil helps slow down memory loss and confusion in early to moderate stages of Alzheimer's. Improves daily function – Helps some patients stay independent a little longer (e.g., dressing, eating). Slows progression – Can delay worsening of symptoms for about 6–12 months in many patients Better response in early stages – Works best when started early in the disease. Also helpful in severe Alzheimer's – At higher doses (23 mg), it can help with symptoms in more advanced stages. Improves behavior – May reduce aggression, apathy, and agitation in some people. Small but meaningful effect – It doesn't stop the disease, but offers mild to moderate benefit in many. Works for most, not all – Some patients may not respond noticeably. Improvement seen in weeks – Effects often begin within 2 to 12 weeks of starting. Long-term benefit varies – Some patients maintain gains for over a year, others decline gradually despite treatment. Safety and Side Effects (How safe it is). Common (Usually Mild) Side Effects: Nausea – Feeling sick is the most common side effect. Diarrhea – Some people have loose stools, especially early on. Loss of appetite – Can lead to mild weight loss. Muscle cramps – Legs or arms may feel sore or cramp. Fatigue – Feeling tired or weak is common. Trouble sleeping – Vivid dreams or insomnia, especially if taken at night. How Donepezil Works (in simple terms), Boosts brain chemicals. Donepezil increases a natural chemical in the brain (called acetylcholine) that helps with memory and thinking. Works like a signal booster Think of it like turning up the volume on weak brain signals -it helps messages in the brain get through more clearly (for a while). Doesn't grow new brain cells. It helps the brain use what it has left -but it can't rebuild damaged parts of the brain.

### **KEYWORDS:**

Memory, Thinking, Daily Function, Progression, Stages (early, moderate, severe), Response, Behavior (aggression, apathy, agitation), 23 mg (high dose), Alzheimer's.

ABSTRACT NO:ICCPPr-SPS-269

# A Review on Exploring the Phytochemical and Pharmacological Significance of *Indigofera astragalina*

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## Abstract

*Indigofera astragalina*, a versatile medicinal plant, has gained significant attention because of its rich phytochemical composition and diverse therapeutic properties. *I. astragalina* contains sterols, phenolics, alkaloids, and flavonoids, making it ideal for a variety of therapeutic purposes. In this review, an in-depth look at the phytoconstituents and their biological activity is presented. The anti-microbial properties of the plant extracts have been demonstrated against drug resistant *Enterococcus* and *Staphylococcus aureus* strains resistant to vancomycin and methicillin. Moreover, the plant exhibits moderate to potent anti-protozoal activity against *Trypanosoma brucei* and weak anti-protozoal activity against *Plasmodium falciparum*. In various cancer cell lines, astragalina extracts have demonstrated significant cytotoxic effects, suggesting their potential as anti-cancer agents. Due to its high phenolic content, the plant has an antioxidant effect, which has contributed to its traditional use for managing oxidative stress. In addition, *I. astragalina* is packed with essential amino acids, minerals (such as iron, manganese, and zinc), and vitamins. The comprehensive analysis of *I. astragalina* emphasizes its important role in drug discovery, nutrition, and healthcare, as well as its tremendous therapeutic potential.

## Keywords

*Indigofera astragalina*, anti-microbial activity, anti-protozoal activity, cytotoxicity, antioxidant activity



ABSTRACT NO: ICCPPR-SPS-270

**Penicillin causes non-allergic Anaphylaxis by activating The contact system****John Peter S****Dr. M. Dheenadhayalan- Assistant Professor****School of Pharmaceutical Sciences, VISTAS.****ABSTRACT:**

Anaphylaxis is typically considered an IgE-mediated allergic reaction. However, increasing evidence highlights that certain drugs, including penicillin, can trigger non-allergic anaphylaxis through immune-independent pathways. Among these, the activation of the contact system—comprising factor XII, prekallikrein, and high-molecular-weight kininogen—plays a pivotal role in bradykinin generation and vascular permeability. This abstract aims to elucidate the mechanism by which penicillin induces non-allergic anaphylaxis through contact system activation, emphasizing its clinical implications for diagnosis and management. Findings demonstrate that penicillin can directly activate the contact system, bypassing the classical IgE pathway. This leads to excessive bradykinin release, resulting in hypotension, angioedema, and shock-like symptoms resembling allergic anaphylaxis. Such reactions are often misdiagnosed, delaying appropriate treatment. Conventional antihistamines and corticosteroids provide limited benefit, while bradykinin antagonists and C1 esterase inhibitors show therapeutic promise. Penicillin can induce non-allergic anaphylaxis by activating the contact system, underscoring the need for heightened awareness among clinicians. Differentiating between allergic and non-allergic mechanisms is critical for selecting appropriate therapy and improving patient safety in clinical pharmacy practice.

**Keywords:** Penicillin, Non-allergic anaphylaxis, Contact system, Bradykinin, Clinical pharmacy practice



ABSTRACT NO: ICCPPR-SPS-271

**MORINGA SEED OIL As A NATURAL ALTERNATIVE TO SYNTHETIC ANTIFUNGALS A REVIEW****J Kumaresan\* Ms.P.Indhumathy****Email:kumaresanjumaresan05572@gmail.com****B.Pharm 4<sup>th</sup> Year, Department of Pharmaceutical Chemistry and Analysis, School of Pharmaceutical Sciences, Vels Institute of Science, Technology and Advanced Studies, Chennai, Tamil Nadu, India.****Abstract**

Moringa (*Moringa oleifera*) seed oil has emerged as a natural source of bioactive compounds with significant antifungal potential. Rich in oleic acid, phenolic compounds, flavonoids, and isothiocyanates, the oil exhibits strong inhibitory activity against fungal pathogens such as *Candida albicans*, *Aspergillus niger*, and *Fusarium* species. Its antifungal action is attributed to disruption of fungal cell wall integrity, alteration of membrane permeability, and inhibition of spore germination. Compared to conventional antifungal agents, moringa seed oil offers advantages including biocompatibility, biodegradability, and minimal side effects, making it suitable for pharmaceutical and biomedical applications. Furthermore, it can be incorporated into wound healing formulations, topical treatments, and preservative systems to enhance antimicrobial protection. Current evidence supports its role as a promising alternative to synthetic drugs; however, further research is needed to standardize extraction methods, optimize formulations, and evaluate clinical efficacy for safe therapeutic use.

Keywords: Moringa seed oil, antifungal activity, *Moringa oleifera*, bioactive compounds, natural therapeutics, wound healing.

**Keywords:** Moringa seed oil, antifungal activity, *Moringa oleifera*, bioactive compounds, natural therapeutics, wound healing

ABSTRACT NO: ICCPPR-SPS-272

## **Moringa Seed Oil Infused Adhesive Tapes for Pain Relief: A Novel Approach to Topical Analgesic Delivery.**

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### **ABSTRACT:**

Transdermal drug delivery systems have gained popularity due to their non-invasive nature and potential for long-term drug release. In this context, the current study seeks to create and test adhesive tapes infused with Moringa oleifera seed oil for effective local pain relief. Moringa seed oil contains numerous bioactive compounds, including oleic acid, flavonoids, and tocopherols, which contribute to its anti-inflammatory and analgesic properties. The adhesive tapes were created using a solvent casting method and biocompatible polymer matrices. The prepared formulations were tested for physicochemical properties such as adhesion strength, oil retention, drug release profile, and skin compatibility. The results showed that the infused tapes provided consistent drug release over time, had good adherence, and caused no skin irritation. This novel approach provides a natural, safe, and convenient alternative to traditional topical analgesics by combining the advantages of phytotherapy with the simplicity of adhesive systems. It has the potential for further clinical investigation and commercialization, particularly in the management of musculoskeletal and inflammatory pain conditions.

**Keywords:** Moringa seed oil, transdermal system, adhesive tape, pain management, and herbal therapeutics.



ABSTRACT NO: ICCPPR-SPS-273

**Artificial Intelligence in Cancer Diagnosis: Transforming Detection and Precision Medicine.****BALAMURUGAN. T <sup>1</sup>, R. GANDHIMATHI\*<sup>2</sup>****Department of Pharmaceutical Chemistry and Analysis,****School of Pharmaceutical Sciences, Vels Institute of Science, Technology, and Advanced****Studies, Chennai, Tamil Nadu, India. 600117****Corresponding Author e-mail: drgmathipharm2017@gmail.com****Abstract**

Artificial Intelligence (AI) is revolutionizing oncology by enabling earlier, faster, and more accurate cancer diagnosis. Traditional diagnostic methods often face challenges such as inter-observer variability, high workload, and limited sensitivity in early detection. Recent studies have demonstrated the potential of AI to complement and, in some cases, surpass human expertise in cancer diagnostics. For instance, McKinney et al. (2020) showed that an AI system for breast cancer screening achieved higher accuracy than radiologists in mammography interpretation, reducing false positives and negatives. Similarly, Ardila et al. (2019) applied deep learning to low-dose CT scans for lung cancer detection, achieving expert-level performance in identifying malignancies. In pathology, Coudray et al. (2018) used deep learning to classify non-small cell lung cancer subtypes and predict genetic mutations directly from histopathological images, while Esteva et al. (2017) demonstrated dermatologist-level performance in skin cancer classification using convolutional neural networks. These advances illustrate how AI can enhance precision, reduce diagnostic errors, and support personalized oncology through genetic and phenotypic correlation. However, integration into clinical practice faces challenges, including data privacy, algorithm transparency, and regulatory approval. Despite these hurdles, the evidence strongly supports AI as a transformative tool in oncology, offering significant potential to improve diagnostic workflows, patient outcomes, and the overall efficiency of cancer care.

**Keywords**

Artificial Intelligence, Cancer Diagnosis, Deep Learning, Medical Imaging, Digital Pathology, Precision Oncology.

ABSTRACT NO: ICCPPR-SPS-274

## Comparing The Safety and Efficacy of Sitagliptin Vs Dapagliflozin and The Risk of Hyperkalaemia Among People with Type 2 Diabetes Mellitus and Kidney Disease

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### ABSTRACT

Type 2 diabetes mellitus (T2DM) is a leading cause of chronic kidney disease (CKD), and the coexistence of both conditions complicates glycemic management. Novel oral antidiabetic agents, including dipeptidyl peptidase-4 (DPP-4) inhibitors such as sitagliptin and sodium-glucose co-transporter-2 (SGLT2) inhibitors such as dapagliflozin, have expanded therapeutic options. However, the risk of electrolyte disturbances, particularly hyperkalemia, remains an important consideration. To compare the safety and efficacy of sitagliptin and dapagliflozin in patients with T2DM and CKD, with emphasis on the risk of hyperkalemia. A narrative review of available clinical trial and observational data was conducted, focusing on glycemic efficacy, renal and cardiovascular outcomes, and electrolyte effects of sitagliptin and dapagliflozin in patients with varying degrees of CKD. Sitagliptin improves glycemic control by enhancing glucose-dependent insulin secretion and suppressing glucagon, with minimal effects on serum potassium. It is well tolerated in moderate-to-severe CKD when dose adjusted. Dapagliflozin exerts renoprotective and cardioprotective benefits by lowering intraglomerular pressure, promoting natriuresis, and improving metabolic parameters. Clinical evidence indicates dapagliflozin slows CKD progression and reduces hospitalization for heart failure, including in advanced CKD. However, by modulating the renin-angiotensin-aldosterone system, it may influence potassium balance, necessitating electrolyte monitoring, particularly in patients receiving concomitant renin-angiotensin inhibitors. Dapagliflozin appears to provide superior renal and cardiovascular outcomes compared to sitagliptin in T2DM with CKD, but requires vigilance for potential hyperkalemia. Sitagliptin remains a safe alternative for glycemic control with stable electrolyte effects. Individualized treatment should consider renal function, comorbidities, and concomitant therapies. Large-scale randomized controlled trials are needed to better define the relative hyperkalemia risk and guide optimal therapeutic strategies in this high-risk population.

**Keywords:** Type 2 diabetes mellitus, chronic kidney disease, sitagliptin, dapagliflozin, hyperkalemia, renal outcomes

ABSTRACT NO: ICCPPR-070

## 5-Fluorouracil–Induced Leukoencephalopathy: A Clinical Perspective

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### Abstract

5-Fluorouracil (5FU) is a pyrimidine analogue widely used to manage various solid malignancies, including gastrointestinal, breast, and head and neck cancers. While gastrointestinal, cardiac, and dermatological toxicities are frequently reported, central nervous system toxicity is uncommon. One of the rare complications is 5FU-induced leukoencephalopathy, with an incidence of <5% and an associated mortality rate of approximately 17%. The condition may manifest as acute or chronic neurotoxicity, with acute episodes being potentially reversible on drug withdrawal.

We present a case of a 38-year-old male diagnosed with poorly differentiated adenocarcinoma of the stomach, initiated on a neoadjuvant FLOT regimen including 5FU. During the second cycle, the patient developed severe vomiting, hypotension, and altered mental status. Clinical features included confusion, agitation, speech disturbances, and abnormal motor posturing. Initially suspected as septic shock, further investigations, including blood and urine cultures, were unremarkable. MRI brain demonstrated acute drug-induced leukoencephalopathy with symmetrical white matter changes. Serum ammonia was mildly elevated but not diagnosed.

The patient was managed with immediate discontinuation of 5FU, supportive care, and pharmacological interventions including thiamine, methylcobalamin, corticosteroids, and levetiracetam. Over the course of a week, the patient gradually improved and was discharged without neurological deficits.

### Keywords:

1. 5-Fluorouracil
2. Leukoencephalopathy
3. FLOT regimen
4. Methylcobalamin



ABSTRACT NO: ICCPPR-SPS-276

## **AI-Powered Lifestyle Modification Programs for Diabetes Remission: A Paradigm Shift in Diabetes Evolution 2025**

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### **ABSTRACT:**

Diabetes mellitus is a growing global health crisis, and its prevalence is expected to increase by 2030. While medications and blood sugar control are key to management, recent findings show that lifestyle changes can lead to remission. This abstract examines how artificial intelligence (AI) can improve the customization, monitoring, and sustainability of lifestyle changes aimed at diabetes remission in the context of Diabetes Evolution 2025. AI-powered platforms use continuous glucose monitoring, wearable sensors, dietary tracking, and electronic health records to create personalized behavior suggestions. Machine learning algorithms analyze large datasets to forecast blood sugar responses, improve nutrition plans, and customize exercise routines. Virtual AI coaching systems provide real-time feedback and promote ongoing patient engagement. Recent clinical studies suggest that structured, AI-assisted programs can improve metabolic outcomes, boost adherence, and, in some cases, achieve diabetes remission without escalating medication. Notably, AI use supports remote monitoring and predictive analytics, enhancing access for underserved populations and reducing gaps in diabetes care. AI-driven lifestyle change programs represent a significant shift in diabetes management. By combining personalized medicine with digital tools, these systems have the potential to not only improve blood sugar control but also reverse disease progression. Addressing challenges like data privacy, algorithm clarity, and fair implementation is essential to unlocking their full potential. In the era of Diabetes Evolution 2025, AI strategies mark an important step forward in global diabetes care.

**Keywords:** Artificial intelligence, diabetes remission, lifestyle modification, precision medicine, digital health, machine learning

ABSTRACT NO: ICCPPR-SPS-277

## **Drug Formulations and Drug Delivery: Herbal Formulations**

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### **Abstract**

Herbal formulations have emerged as a vital component in the evolution of drug delivery systems, offering biocompatible, cost-effective, and therapeutically potent alternatives to synthetic drugs. This review explores the formulation strategies and delivery mechanisms of herbal-based therapeutics, emphasizing their role in enhancing bioavailability, stability, and targeted action. By integrating phytoconstituents into modern carriers such as liposomes, nanoparticles, transdermal patches, and bioadhesive systems, researchers have achieved improved pharmacokinetics and patient compliance. The synergy between traditional medicinal knowledge and advanced pharmaceutical technologies has paved the way for innovative solutions in treating chronic diseases, infections, and inflammatory conditions. Challenges such as standardization, scalability, and regulatory acceptance are also discussed, highlighting the need for interdisciplinary approaches in future development. This work underscores the transformative potential of herbal formulations in personalized and sustainable drug delivery.

### **Keywords**

Herbal drug delivery, phytopharmaceuticals, bioavailability enhancement, transdermal systems, liposomes, nanoparticles, controlled release, natural therapeutics, biocompatible carriers, formulation strategies

ABSTRACT NO: ICCPPR-069

## An Interventional case report on the lip swelling induced by the concomitant administration of piperacillin tazobactam and hydroxyzine

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### Abstract

We describe a clinically significant drug-related problem in a 13-year-old boy with chronic kidney disease, recurrent urinary tract infections (UTIs), and multiple urological surgeries. The patient presented with high-grade intermittent fever, burning micturition, and suprapubic tenderness. His history was notable for recurrent pyelonephritis, multidrug-resistant UTIs, and metabolic acidosis. Imaging revealed severe bilateral hydronephrosis with parenchymal thinning, while urine culture confirmed *Klebsiella* resistant to multiple antimicrobial agents. Empiric therapy was initiated with piperacillin–tazobactam, despite previous reports of carbapenem-resistant *Enterobacteriales* and meropenem resistance. Susceptibility testing later demonstrated resistance to this regimen, with colistin as the only effective option. Continuation of the ineffective agent underscored gaps in antimicrobial stewardship. During therapy, the patient developed lip swelling consistent with angioedema. A review of prior records revealed a similar reaction to levofloxacin, suggesting cross-reactivity among structurally related piperazine derivatives. Concomitant hydroxyzine use, also a piperazine derivative, likely contributed to the adverse event. Hydroxyzine was discontinued and replaced with desloratadine as a safer alternative. Management included targeted antibiotic therapy, correction of metabolic acidosis with intravenous sodium bicarbonate, vitamin D supplementation, and counselling regarding hydration, nutrition, and hygiene to prevent recurrence. This case highlights three critical aspects: (1) the importance of rational antibiotic selection to prevent resistance propagation, (2) recognition of structural similarities between drugs that may predispose to cross-reactivity, and (3) the essential role of clinical pharmacists in detecting adverse reactions, optimizing therapy, and strengthening antimicrobial stewardship in pediatric patients with recurrent infections.

**Keywords:** Piperacillin–tazobactam, Hydroxyzine, Cross-reactivity, Recurrent UTI, *Klebsiella*, Clinical pharmacist intervention.



ABSTRACT NO:ICCPDR-SPS-279

## Prediction of Liquid Chromatographic Retention Time: A Review

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### Abstract:

Prediction of liquid chromatographic retention time (RT) is an increasingly important area in analytical sciences, particularly for enhancing small molecule identification in liquid chromatography–mass spectrometry (LC–MS). Retention time provides complementary information to mass spectral data, enabling more confident structural annotation and reducing false positives. Traditionally, RT prediction relied on linear regression, random forests, and support vector machines using physicochemical properties, molecular descriptors, or chromatographic conditions as inputs. While useful, these approaches often lacked robustness, suffered from limited datasets, and showed poor generalization across different chromatographic systems. Recent advances in artificial intelligence, particularly deep learning and graph neural networks (GNNs), have transformed RT prediction. Unlike conventional methods, GNNs learn directly from molecular structures, capturing both topological and chemical information without requiring predefined descriptors. This has improved accuracy, scalability, and transferability across datasets. Public resources such as the METLIN Small Molecule Retention Time (SMRT) dataset have further supported the development of powerful models. RT prediction now plays a vital role in metabolomics, drug discovery, environmental monitoring, and forensic analysis. As predictive models become more accurate and widely accessible, their integration into LC–MS workflows promises to accelerate compound identification, enhance data reliability, and expand the scope of applications in chemical and biological research.

**Keywords:** Retention Time Prediction, LC–MS, Small Molecule Identification, Graph Neural Networks, Metabolomics

ABSTRACT NO: ICCPPR-SPS-280

**Prediction of Liquid Chromatographic Retention Time: A Review**  
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Dr. P. Monika

**Treatment of non-albicans Candida vaginitis with amphotericin B  
vaginal suppositories form**

**Abstract**

Non-albicans Candida vaginitis, particularly infection by species like Candida glabrata, is an important clinical issue because it is invariably resistant to standardazole antifungal treatment. These recalcitrant infections can produce chronic or recurrent symptoms, and new therapies become indicated. Amphotericin B, an antifungal polyene with broad-spectrum activity, has been an effective and useful therapy for such difficult-to-treat infections. While stereotypically linked to its fatal systemic side effects 'when administered intravenously, the drug in topical preparation as a vaginal suppository allows it to act directly at the point of infection with negligible risk of systemic toxicity. The only significant side effects of amphotericin B vaginal suppositories are local and usually minor in severity, including vulvovaginal burning, itching, or stinging. These local side effects are well tolerated in most patients. Through action on the fungal cell membrane with an action independent of azoles, amphotericin B vaginal suppositories are a valuable and often effective treatment for patients who have not responded to other antifungal therapy, and are consequently an integral component of the management strategy of resistant non-albicans candidiasis.

**Keywords:**

Non-albicans Candida vaginitis, Candida glabrata, Azole antifungal treatment, Recalcitrant infections, Chronic or recurrent symptom's, Antifungal polyenes, Broad-spectrum activity



ABSTRACT NO: ICCPPR-SPS-281

## Pharmacists in achieving UN Sustainable development goals (SDG's)

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### Abstract

Pharmacists play a pivotal role in advancing the United Nations Sustainable Development Goals (SDGs) through their contributions to healthcare, education, and environmental stewardship. By ensuring access to safe, effective, and affordable medicines, pharmacists directly support SDG 3: Good Health and Well-being. Their involvement in promoting rational medicine use, patient counseling, vaccination programs, and chronic disease management further strengthens public health systems. Pharmacists also contribute to SDG 4: Quality Education by engaging in health literacy, community awareness, and professional training. Through active participation in supply chain optimization and responsible waste disposal, they address SDG 12: Responsible Consumption and Production and SDG 13: Climate Action, reducing pharmaceutical pollution and promoting sustainable practices. Additionally, pharmacists' roles in research, policy development, and equitable distribution of essential medicines align with SDG 10: Reduced Inequalities. Collectively, pharmacists act as vital change agents in bridging healthcare access, fostering innovation, and driving sustainable practices, thereby accelerating global progress toward achieving the SDGs.

### Key words:

Global health, Rational medicine use, Access to essential medicines, Health literacy, Vaccination, Chronic disease management, Pharmaceutical waste management



ABSTRACT NO: CCPPR-SPS-282

## **Application of Analytical Quality by Design in RP-HPLC Method Development and Validation for Milrinone.**

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### **Abstract**

The application of Analytical Quality by Design (AQbD) principles in pharmaceutical analysis has gained prominence as a systematic, risk-based approach for robust method development and validation. In this study, an AQbD-driven Reverse Phase-High Performance Liquid Chromatography (RP-HPLC) method was developed and validated for the estimation of **Milrinone**, a phosphodiesterase-3 inhibitor widely used in the management of congestive heart failure. Critical Method Attributes (CMAs) and Critical Method Parameters (CMPs) were identified through risk assessment and Design of Experiments (DoE), ensuring method robustness and regulatory compliance. Chromatographic separation was achieved using a C18 column with an optimized mobile phase composition, flow rate, and detection wavelength. The method demonstrated excellent linearity ( $r^2 > 0.999$ ) across the therapeutic concentration range, with high sensitivity reflected by low limits of detection (LOD) and quantification (LOQ). Validation, conducted in accordance with ICH Q2(R1) guidelines, confirmed the method's accuracy, precision, specificity, and robustness. The AQbD framework enabled systematic evaluation of variability, enhancing method reliability and lifecycle management. This approach not only ensured regulatory alignment with emerging guidelines (ICH Q14) but also emphasized efficiency and reproducibility in pharmaceutical quality control. Thus, the proposed AQbD-based RP-HPLC method provides a reliable analytical tool for routine estimation of Milrinone in bulk and dosage forms, contributing to quality-driven drug development and patient safety.

### **Keywords**

Analytical Quality by Design; RP-HPLC; Milrinone; Method Development; Validation; ICH Guidelines



ABSTRACT NO: ICCPPR-SPS-283

## A REVIEW ON DEVELOPMENT AND VALIDATION OF HPTLC METHODS FOR HERBAL DRUG ANALYSIS

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### ABSTRACT

Densitometric evaluation using High-Performance Thin-Layer Chromatography (HPTLC) is a highly effective method for the standardization of medicinal plants and other natural products, particularly those employed in various medical systems. This technique has been validated as an authoritative method of analysis in several pharmacopeia's, including the United States Pharmacopeia (USP) and the Indian Pharmacopeia (IP). Laboratory studies on numerous medicinal plants have demonstrated that TLC-densitometry offers a more advantageous strategy compared to High-Performance Liquid Chromatography (HPLC) or Gas-Liquid Chromatography (GLC). With improvements in resolution, HPTLC serves as a valuable tool for investigating herbal products concerning various quality aspects, with sensitivity and reproducibility being its fundamental attributes. HPTLC plays a crucial role in the characterization of marker compounds for the development and standardization of herbal medicines. This approach is particularly well-suited for examining herbs and herbal preparations, as it facilitates easy sample comparison through fingerprints and quantitative determination via scanning densitometry. Standardizing herbs and herbal mixtures presents significant challenges. Many contemporary medications for various ailments are derived from plants and plant-based products. This review focuses on the diverse HPTLC methods employed in the analysis of herbal drugs. For each drug, both the extraction processes and the HPTLC analytical method have been optimized.

**Key words:** HPTLC, Herbal Drug Standardization, Densitometric Evaluation, Marker Compounds, Phytochemical Analysis



ABSTRACT NO: ICCPPR-SPS-284

## ADVANCES IN BONE-ADHESIVE TECHNOLOGIES FOR FRACTURE MANAGEMENT

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### ABSTRACT

Bone fractures represent a critical global health concern, with millions of new cases each year requiring surgical stabilization. Conventional fixation methods such as plates, screws, and pins remain the standard of care but are limited by complications including invasiveness, infection risk, and extended healing periods. In recent years, bone-adhesive biomaterials—particularly bone glues and adhesive membranes—have gained attention as innovative alternatives for fracture management. However, an ideal bone-adhesive material that combines biocompatibility, adequate mechanical strength, and long-term durability is yet to be realized. This review outlines the recent progress in bone-adhesive technologies, examining their clinical requirements, underlying adhesion mechanisms, and challenges in clinical translation. It also emphasizes the role of rational design strategies in developing adhesives with improved affinity for bone tissue. By summarizing current developments and future prospects, this work aims to encourage ongoing research toward clinically effective bone-adhesive solutions.

**Key words:** Bone fractures, Bone-adhesive biomaterials, Bone glue, Fixation devices, Tissue engineering, Rational design



ABSTRACT NO: ICCPPR-SPS-285

**Kicking Out Hemophilia: Breakthroughs in Gene Therapy and Next-Gen Cures (2025)”****S. Haribaskar<sup>1</sup>, P. Shanmugasundaram\*****Department of Pharmaceutical Chemistry and Analysis,****School of Pharmaceutical Sciences, Vels Institute of Science, Technology, and Advanced****Studies, Chennai, Tamil Nadu, India. 600117****Corresponding Author:** Dr.P. Shanmugasundaram

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**e-mail:** dean.sps@vistas.ac.in**Abstract:**

Hemophilia is an inherited bleeding disorder characterized by a deficiency of clotting factor VIII (Hemophilia A) or factor IX (Hemophilia B), leading to impaired hemostasis and recurrent bleeding episodes. Conventional factor replacement therapy has improved survival but is limited by the need for lifelong intravenous infusions, high cost, and incomplete protection against joint damage. Recent advances in molecular medicine have transformed the treatment landscape, introducing long-acting non-factor therapies, gene therapy, and gene editing approaches with the potential for functional cures. Fitusiran (Qfitlia), an siRNA therapy that lowers antithrombin, received FDA approval in 2025 for hemophilia A and B with or without inhibitors, demonstrating significant reduction in bleeding frequency. Emicizumab, a bispecific antibody, remains widely used in hemophilia A prophylaxis, while extended half-life factor concentrates such as alfa enable less frequent dosing with effective bleed protection. Gene therapy using adeno-associated viral (AAV) vectors, exemplified by valoctocogene roxaparvovec (Roctavian), has demonstrated sustained reduction in bleeding over five years of follow-up; however, durability, immune response, and cost remain challenges. Early clinical trials of lentiviral stem cell gene therapy have provided encouraging evidence of stable factor VIII expression and potential long-term benefits. Furthermore, gene editing technologies such as CRISPR and base editing have successfully corrected hemophilia mutations in preclinical studies, highlighting the next frontier for precision therapy. Collectively, these developments mark a paradigm shift from traditional replacement to transformative genetic and non-factor strategies, bringing the long-standing vision of “kicking out hemophilia” closer to clinical reality.

**Keywords:** Hemophilia, Gene Therapy, Fitusiran, CRISPR, Non-Factor Therapy, Lentiviral Therapy



ABSTRACT NO: ICCPPR-SPS-286

## COMPARATIVE ASSESSMENT OF ANALYTICAL METHODS FOR ANTIDIABETIC MEDICATIONS: REVIEW

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### ABSTRACT

Diabetes mellitus is one of the most important global health difficulties of this century, involving long-term management through pharmacological interventions. A wide range of antidiabetic agents, including biguanides, sulfonylureas, thiazolidinediones, meglitinides, DPP-4 inhibitors, SGLT2 inhibitors, GLP-1 receptor agonists, amylin analogues, and insulins, are constantly given for glycemic control. perfecting their quality, safety, and efficacy through asseveration on robust logical approaches. This review delivers a relative evaluation of chromatographic styles( HPLC, UPLC), spectroscopic styles( UV – Vis, FTIR), electrochemical styles( potentiometry, voltammetry), and hyphenated(LC-MS/ MS, GC- MS) ways employed in antidiabetic medicine studies. Each system is estimated for its advantages, limitations, perceptivity, particularity, cost-cost-effectiveness, and nonsupervisory compliance. While HPLC and UPLC remain necessary for routine quality control, LC- MS/ MS is the gold standard for pharmacokinetic studies due to its superior sensitivity and selectivity. UV – Vis and FTIR offer rapid-fire, low- cost webbing, whereas electrochemical styles are suited for electroactive medicines and biosensor operations. Emerging trends similar as green logical chemistry, miniaturized systems, and advanced biosensors punctuate unborn directions in sustainable and individualized diabetes operation. Overall, the review emphasizes that system selection should be guided by medical characteristics, logical objects, and nonsupervisory conditions. **Keywords:** Antidiabetic drugs; Analytical methods; HPLC; UPLC; LC-MS/MS; UV–Vis spectroscopy; FTIR; Electrochemical methods; GC-MS; Green analytical chemistry; Miniaturized systems; Method validation.



ABSTRACT NO: ICCPPR-SPS-287

## PHARMACIST ROLE IN CHRONIC DISEASE MANAGEMENT

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### **Abstract**

Chronic diseases such as diabetes, hypertension, asthma, and cardiovascular conditions are long-term health challenges that require continuous care and lifestyle management. Pharmacists play a vital role in supporting patients with these conditions beyond simply dispensing medicines. They provide medication counseling, monitor treatment effectiveness, identify and resolve drug-related problems, and encourage adherence to therapy. Pharmacists also educate patients on lifestyle modifications, such as diet, exercise, and smoking cessation, which complement medical treatment. By collaborating with doctors, nurses, and other healthcare providers, pharmacists help improve patient outcomes, reduce hospital admissions, and lower overall healthcare costs. Their accessibility and frequent contact with patients make pharmacists an important partner in chronic disease management.

### **Keywords**

Pharmacist,Chronicdisease management,Diabetes,Hypertension,Asthma,Cardiovascular conditions,Medication counseling,Treatment monitoring



ABSTRACT NO: ICCPPR-SPS-288

## **Method Validation in High-Performance Liquid Chromatography in Principles and Pharmaceutical Applications: A Review**

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### **Abstract:**

High-Performance Liquid Chromatography (HPLC) has become one of the most reliable and versatile analytical techniques in pharmaceutical analysis, providing high sensitivity, selectivity, and reproducibility. To ensure that HPLC methods generate dependable results, validation is a critical requirement in accordance with international guidelines such as ICH, USP, and FDA. Method validation involves assessing parameters including accuracy, precision, linearity, limit of detection (LOD), limit of quantitation (LOQ), specificity, robustness, and system suitability. Each parameter ensures that the developed method is capable of delivering consistent and reliable data for routine quality control and research applications. This review highlights the scientific basis of these validation parameters, their practical application in HPLC method development, and their role in maintaining regulatory compliance. By consolidating recent advancements and regulatory perspectives, the article underscores the importance of method validation in enhancing the credibility of analytical results and ensuring the quality and safety of pharmaceutical products.

### **Keywords**

HPLC, Method validation, Accuracy, Precision, Linearity, LOD, LOQ, Robustness, Specificity, System suitability, Pharmaceutical analysis, ICH guidelines.

ABSTRACT NO:ICCPPr-071

## **Gender and Age Differences in the Occurrence of Psychotropic-Induced Adverse Reactions**

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### **Abstract**

Demographic variables such as age and gender influence drug metabolism, response, and vulnerability to ADRs. Exploring these factors helps identify high-risk groups and tailor patient monitoring. To assess age- and gender-related differences in the occurrence of psychotropic-induced ADRs, patients who experienced ADRs were stratified by gender and further grouped into age bands ( $\leq 10$ , 11–20, 21–30, 31–40, 41–50, 51–60, >60 years). Frequencies and patterns of ADRs were analyzed. A slightly higher proportion of ADRs occurred in females compared with males, reflecting potential biological and hormonal influences. Young adults (21–30 years) emerged as the most affected age group, accounting for the largest share of ADRs, followed by those aged 31–40 years. Children and older adults reported fewer ADRs, although the clinical consequences were more impactful in the latter group. The types of ADRs also varied—metabolic ADRs were more common in younger patients, whereas neurological ADRs predominated in both genders. Gender and age exert a notable influence on ADR occurrence. These findings support the need for gender-sensitive prescribing practices and targeted monitoring of young adults as the most vulnerable demographic in psychiatry.



ABSTRACT NO: ICCPPR-SPS-289

## **Advanced Spectroscopic Techniques: Emerging Innovations and Applications in Modern Analytical Science**

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### **Abstract-**

Spectroscopy has long been a cornerstone of analytical science, providing precise insights into the structural, functional, and compositional attributes of matter. In recent years, remarkable advancements in spectroscopic techniques have expanded their sensitivity, selectivity, and applicability across diverse scientific domains. This review highlights the evolution and current trends in advanced spectroscopy, including high-resolution nuclear magnetic resonance (NMR), Fourier-transform infrared (FTIR), Raman spectroscopy, ultraviolet-visible (UV-Vis), fluorescence spectroscopy, and mass spectrometry-based hybrid methods. Cutting-edge developments such as two-dimensional (2D) spectroscopy, time-resolved spectroscopy, terahertz spectroscopy, and hyperspectral imaging are explored for their ability to probe ultrafast dynamics, provide molecular fingerprints, and enable non-destructive analysis. The integration of spectroscopy with artificial intelligence (AI), machine learning algorithms, and microfluidic platforms is also discussed, emphasizing their role in enhancing data interpretation and enabling real-time, point-of-care applications. Additionally, the review covers advancements in miniaturization and portable spectrometers, which are reshaping field-based and clinical diagnostics. Collectively, these innovations not only improve analytical performance but also open new horizons in pharmaceuticals, environmental monitoring, food safety, materials science, and biomedical research. The article concludes with perspectives on challenges, including standardization, cost, and data handling, while highlighting the transformative potential of advanced spectroscopy in driving future scientific and technological progress.

### **Keywords:**

Spectroscopy, Advanced Techniques, NMR, FTIR, Raman, UV-Vis, Fluorescence, Hyperspectral Imaging, Terahertz Spectroscopy, Time-resolved Spectroscopy, Artificial Intelligence, Machine Learning, Miniaturized Spectrometers, Biomedical Applications, Pharmaceutical Analysis.

ABSTRACT NO:ICCPPr-072

## METABOLIC SYNDROME IN NAFLD MANAGEMENT AND ITS TREATMENT APPROACHES IN TERTIARY CARE HOSPITAL

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**Introduction:**

Non alcohol-associated fatty liver disease (NAFLD) is a spectrum of disease characterized by hepatic steatosis in the absence of excessive alcohol consumption. NAFLD may progress to cirrhosis and is likely an important cause of cryptogenic cirrhosis

**Treatment approaches:**

**Patients with NASH but without diabetes** — For patients with biopsy-proven NASH and fibrosis stage  $\geq 2$  who do not have diabetes mellitus, we generally suggest vitamin E, at a dose of 800 international units daily.

**Patients with NASH and diabetes** — For patients with diabetes mellitus, the presence of NASH can inform the choice of glucose lowering therapy in some cases. Although initial therapy for type 2 diabetes mellitus is typically with metformin, which does not improve liver histology, the beneficial impact on liver histology with glucagon-like peptide-1 (GLP-1) receptor agonists are reasonable options.

**Therapies with uncertain benefit:**

Atorvastatin – Pilot studies found a benefit from atorvastatin on aminotransferase levels in patients with NAFLD.

Abstain from alcohol – We suggest that patients refrain from alcohol, and in particular, recommend avoiding heavy alcohol use (ie, >14 drinks per week or >4 drinks on a given day for males and >7 drinks per week or >3 drinks on a given day for females).

The subject's metabolic syndrome was assessed using National Cholesterol Education Program Adult Treatment Panel III (2001) (NCEP/ATP-II).

**Conclusion:**NAFLD is a major health concern that can progress to cirrhosis if untreated. Lifestyle changes remain the cornerstone of management, with pharmacological therapy used in select cases. Individual treatment tailored to comorbidities is essential for better outcomes.

ABSTRACT NO ICCPPR-073

## Severity and Preventability of Adverse Drug Reactions in Psychotropic Drug Therapy

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### Abstract

#### Background:

Understanding the severity and preventability of ADRs is essential for prioritizing interventions and allocating resources in clinical psychiatry.

#### AIM AND Objectives:

To evaluate ADRs based on their severity (Hartwig's scale) and preventability (Schumock & Thornton criteria).

#### Methodology:

Each ADR was graded as mild, moderate, or severe, and further assessed for its preventability status. Findings were analyzed to identify patterns and areas for clinical improvement.

#### Results:

Most ADRs were **mild or moderate in intensity**, and severe cases were rare. Preventability analysis revealed that a substantial proportion were **either definitely or probably preventable**, suggesting scope for proactive interventions such as dose optimization, monitoring, and patient counselling. A smaller group was categorized as non-preventable, mostly due to unpredictable idiosyncratic reactions.

#### Conclusion:

The predominance of preventable ADRs emphasizes the critical role of clinical pharmacists and prescribers in minimizing harm. Proactive strategies can reduce both the severity and frequency of ADRs, thereby improving patient safety in psychiatric practice.



ABSTRACT NO: ICCPPR-074

## IMPACT OF CLINICAL PHARMACIST IN ANTIBIOTIC STEWARDSHIP AND BARRIER TO PRACTICE:

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### Introduction

The growing threat of antimicrobial resistance (AMR) has emerged as a global public health crisis, compromising the effectiveness of life-saving antibiotics and increasing morbidity, mortality, and healthcare costs. Antimicrobial Stewardship Programs (ASPs) have therefore become essential to optimize antibiotic use, improve patient outcomes, and curb resistance. This paper explores the vital role of clinical pharmacists in antibiotic stewardship, highlights barriers to their effective practice, and discusses strategies for enhancing their involvement in the Indian and Asian context.

### Example of a typical Case Scenario:

A 60-year-old male patient was admitted to the CCU due to complaints of respiratory distress and tachypnea. After three days of admission, the patient underwent a tracheostomy for mechanical ventilation support. On the day of admission, the patient received Cefoperazone sulbactam 1.5g twice daily as empirical therapy for five days. An ET culture on the fifth day, revealed *Acinetobacter* species. Subsequently, a culture sensitivity test was performed, indicating resistance to Meropenem. Meropenem was initiated on the seventh day of admission. The patient received a non sensitive drug for another three days. The clinical pharmacist intervened with the physician and recommended discontinuing Meropenem, prompting the physician to switchover to Colistin.

### Conclusion:

Clinical pharmacists are indispensable members of antimicrobial stewardship programs, promoting rational antibiotic use through evidence-based interventions and timely recommendations. Although their integration into stewardship teams is strongly supported by global and regional guidelines, barriers such as workforce shortages and limited career advancement opportunities continue to hinder widespread implementation in Asia. Overcoming these challenges through structured training, greater institutional support, and innovative tools like software-based pre-authorization systems can expand their role in the future. Strengthening the presence of clinical pharmacists within healthcare teams is not only a professional necessity but also a public health imperative to combat the rising tide of antimicrobial resistance. **KEY WORDS:** Antimicrobial stewardship, Clinical Pharmacist, Prior Authorisation, Case Scenario



ABSTRACT NO: ICCPPR-076

## 5. Causality Assessment of Adverse Drug Reactions in Psychiatric Patients Using WHO, Naranjo, and Karch–Lasagna Scales

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### Abstract

Attributing causality to an observed ADR strengthens pharmacovigilance findings, supports clinical decision-making, and helps distinguish genuine drug-related events from coincidental illness manifestations. To assess the causality of psychotropic-related ADRs using three established tools: WHO-UMC, Naranjo's algorithm, and Karch–Lasagna criteria. Each ADR was systematically analyzed using the three scales, and outcomes were categorized as definite, probable, or possible. Comparative assessment highlighted the consistency and differences between tools. Across scales, **probable associations predominated**, though the proportion varied (higher in WHO-UMC, moderate in Naranjo, lower in Karch–Lasagna). Possible cases were more frequently identified by the Karch–Lasagna method, reflecting its stricter criteria. None of the ADRs were unanimously classified as “certain” across all tools, underlining the difficulty in establishing definitive causation in psychiatry. Causality assessment confirmed that most ADRs were likely attributable to psychotropic drugs. Employing multiple scales improves reliability and strengthens pharmacovigilance outcomes, guiding safer clinical practice.

## **Formulation and Evaluation of Mouth Dissolving Films of Flunarizine Dihydrochloride Using Natural Polymers**

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### **Abstract:**

In the present research, mouth dissolving films of Flunarizine dihydrochloride were developed using natural polymers. The main objective of the study was to enhance the bioavailability and provide a rapid release dosage form of Flunarizine, which suffers from extensive first-pass metabolism and low solubility. Films were prepared by the solvent casting method using pullulan as the primary polymer and varying concentrations of sodium alginate, guar gum, taro gum, and xanthan gum. The prepared formulations were evaluated for surface pH, thickness, folding endurance, weight variation, disintegration time, in vitro release, and stability. FTIR studies confirmed no incompatibility between drug and polymers. Among all formulations, F1 (pullulan and taro gum) showed optimum physicochemical properties, with disintegration time below 10 seconds, acceptable thickness and weight variation, folding endurance above the required limit, drug content of 99.73%, and first-order release kinetics. The study concludes that pullulan and taro gum combination provides a promising natural polymer base for the development of effective buccal films of Flunarizine.

### **Keywords:**

Flunarizine dihydrochloride, mouth dissolving films, pullulan, taro gum, natural polymers, drug release kinetics.



ABSTRACT NO: ICCPPR-SPS-290

## DISCOVERY AND OPTIMIZATION OF NOVEL TRIAZOLO THIADIAZINE DERIVATIVES AS PROMISING ANTI-CANCER AGENTS: AN INTEGRATED INSILICO AND IN VITRO STUDY

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### ABSTRACT

Cancer is a disease characterized by uncontrolled growth of cells, often spreading to other parts of the body. Despite the availability of modern diagnostic and therapeutic tools, cancer remains a leading global health burden. Current anticancer agents usually lack selectivity between cancerous and normal cells, leading to toxicity. Therefore, the search for new agents with improved efficacy and reduced toxicity is crucial. Among nitrogen-containing heterocyclic compounds, triazoles and their fused analogs, particularly triazolo-thiadiazines, have attracted interest due to their broad spectrum of pharmacological activities, including anticancer potential. This study aims to design, synthesize, and evaluate novel triazolo-thiadiazine derivatives through an integrated in silico and in vitro approach to identify potent anticancer agents. In silico design and virtual screening were performed using molecular docking and QSAR approaches. The best-scoring derivatives were synthesized and characterized using analytical and spectroscopic techniques (IR, NMR, MS). In vitro evaluations included antioxidant assays (DPPH) and anticancer screening on cancer cell lines (MTT and Trypan blue assays). Docking studies identified 22 derivatives with superior binding affinity compared to the standard drug Sorafenib. Preliminary in vitro assays confirmed their cytotoxic potential, supporting further investigation of their mechanisms of action. The findings suggest that triazolo-thiadiazine derivatives are promising scaffolds for anticancer drug development. **Keywords:** Triazolo-thiadiazine, Anti-cancer agents, Molecular docking, In silico, In vitro models, Spectral characterization



ABSTRACT NO: ICCPPR-079

## ADVANCEMENTS IN IMMUNOTHERAPY AND CANCER TREATMENTS

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### ABSTRACT:

Immunotherapy is an innovative cancer treatment approach that harnesses the power of the immune system to fight cancer. Recent advancements in immunotherapy have resulted in significant improvements in cancer treatments. Some of these advancements include the development of checkpoint inhibitors, which remove the “brakes” on the immune system, allowing it to better attack cancer cells; CAR T-cell therapy, which genetically modifies a patient’s T-cells to recognize and attack cancer cells; and personalized cancer vaccines, which use a patient’s own immune cells to target specific cancer cells. These advancements have shown promising results in treating various types of cancer and have the potential to revolutionize cancer treatment in the future.

**Key words:** Immunotherapy, CAR T-cell therapy, Anti cancer agents.



ABSTRACT NO:ICCPR-080

## **PLANT-DERIVED BIOACTIVE COMPOUNDS: BRIDGING TRADITIONAL MEDICINE AND MODERN SCIENCE**

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### **ABSTRACT:**

Plant-derived bioactive compounds have been fundamental to traditional medicinal practices across diverse cultures for centuries, providing a rich source of natural therapeutic agents. This review article aims to bridge the gap between ancient ethnopharmacological knowledge and modern scientific research, emphasizing the integration of plant-based bioactives into contemporary healthcare. It systematically examines a broad spectrum of bioactive phytochemicals, including alkaloids, flavonoids, terpenoids, and phenolic compounds, detailing their pharmacological effects and underlying mechanisms of action supported by recent experimental and clinical studies. This article analyzes significant obstacles to converting traditional treatments into evidence-based medicine, including standardization problems, variations in bioactive content brought on by processing and environmental factors, and low bioavailability in human systems. Additionally, it emphasizes developments in extraction techniques and delivery systems based on nanotechnology, which enhance these compounds' stability, solubility, and targeted distribution, thereby augmenting their medicinal potential. Through a multidisciplinary lens that combines botany, chemistry, pharmacology, and clinical sciences, this article underscores the growing importance of plant-derived bioactives in drug discovery and development pipelines. It advocates for rigorous scientific validation of traditional knowledge to ensure safety, efficacy, and reproducibility in medicinal use. Lastly, the review explores future perspectives, calling for increased collaborative research efforts to unlock the full potential of these natural compounds in addressing modern health challenges such as chronic diseases, infections, and drug resistance. Finally, bioactive chemicals originating from plants provide promising pathways for the integration of new treatments and serve as an essential bridge connecting modern scientific advancement with traditional medicine.

**KEY WORDS:** Plant-derived bioactive compounds, Traditional medicine, Modern Science, Phytochemicals, Drug discovery, Nanotechnology-based delivery.

ABSTRACT NO: ICCPPR-081

## A SYSTEMATIC REVIEW ON ZEBRAFISH AS AN ANIMAL MODEL

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### ABSTRACT:

From cancer research to drugs screening, the zebrafish (*Danio rerio*) is being employed in a wide range of biological investigations. Zebrafish are a developing model organism for the investigation of complicated brain disorders. Studies on the neurobiology of zebrafish are expanding at an exponential rate, far exceeding those using rats or other model species. The objective of this review article is to provide a comprehensive overview of the advantages and applications of zebrafish models in the screening of CNS drugs. Zebrafish are a useful model for screening drugs for use in the central nervous system, as they have a high fertility rate and develop externally. Additionally, zebrafish embryos are transparent, making it easy to see the effects of drug treatments on the developing brain. which is crucial for evaluating the safety and efficacy of potential medicinal agents. Additionally, the similarity between the zebrafish and human genomes makes it possible to test potential CNS drug targets in zebrafish models, providing valuable insights into the potential efficacy and safety of drugs in humans. Zebrafish models are being used to study a variety of CNS disorders, including epilepsy, autism spectrum disorders, and Alzheimer's disease. In addition, zebrafish models have been used to study the effects of drugs on the developing nervous system, which can provide important information for evaluating the safety of potential drugs in children. Despite its many advantages, there are some limitations in using zebrafish models for CNS drug screening. For example, the relative simplicity of the zebrafish nervous system compared to mammals may limit its applicability in some areas of research. Additionally, the ethical considerations of using animals for scientific research must be carefully weighed against the potential benefits of the research.

**Keywords:** Zebrafish, CNS drug screening, epilepsy, Alzheimer's disease.



ABSTRACT NO: ICCPPR-082

## A OVERVIEW ON SEMAGLUTAMIDE –ANTIDIABETIC DRUG

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### ABSTRACT:

Semaglutide is a long-acting glucagon-like peptide-1 (GLP-1) receptor agonist that has emerged as an effective therapeutic option for the management of type 2 diabetes mellitus (T2DM). By enhancing glucose-dependent insulin secretion, suppressing glucagon release, and delaying gastric emptying, semaglutide improves glycemic control while reducing body weight. Clinical trials have demonstrated its efficacy in lowering HbA1c levels and its cardiovascular benefits, making it superior to many conventional antidiabetic agents. Available in both subcutaneous and oral formulations, semaglutide offers flexibility in treatment and improved patient compliance. Beyond glycemic management, it has shown promise in reducing cardiovascular risk and supporting weight management in obese individuals, broadening its clinical significance. Common side effects include gastrointestinal disturbances such as nausea and vomiting, which are generally mild and transient. This overview highlights the pharmacological profile, clinical benefits, safety, and therapeutic potential of semaglutide, positioning it as a valuable drug in modern diabetes care and associated comorbidities.

**Keywords:** Semaglutide; GLP-1 receptor agonist; Type 2 diabetes mellitus; Glycemic control; Weight reduction; Cardiovascular benefits.



ABSTRACT NO: ICCPPR-083

## A REVIEW ON BRAIN TUMOR IN CHILDRENS

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### ABSTRACT:

Brain tumors are the most common solid tumor in children and are the leading cause of cancer related morbidity and mortality in the pediatrics year. They affect in 1000 people by 25 years of age and have diverse histological, biological and anatomical characteristics. Treatment divisions are based on the type of tumor and its location in the central nervous system, but also on the age of the child and the effects therapy may have on the developing nervous system. Chemotherapy has taken on an increasing role in the treatment of childhood medulloblastoma, low grade gliomas and high grade gliomas. Some tumor type, especially atypical teratoid tumor, brainstem gliomas, malignant gliomas, remain significant therapeutic dilemmas.

**Keywords:** Medulloblastoma, brainstem gliomas, Cardiomyopathy.

ABSTRACT NO: ICCPPR-084

**A SHORT REVIEW ON DIABETIC CARDIOMYOPATHY****K.Harsha Priya Reddy<sup>1\*</sup>, Dr. Afroz Patan<sup>2</sup>****1\*III year Pharm.D, Ratnam Institute of Pharmacy, Pidathapolur (V & P), Muthukur (M), SPSR Nellore District-524 346.****2. Department of Pharmacy Practice, Ratnam Institute of Pharmacy, Pidathapolur (V & P), Muthukur (M), SPSR Nellore District-524 346.****ABSTRACT:**

Diabetes mellitus and the associated complications represent a global burden on human health and economics. There is a close relationship between diabetes mellitus and heart failure, and diabetes is an independent risk factor for heart failure. Diabetes and heart failure are linked by not only the complication of ischemic heart disease, but also by metabolic disorders such as glucose toxicity and lipotoxicity based on insulin resistance. Diabetic cardiomyopathy is defined as the presence of abnormal cardiac structure and performance in the absence of other cardiac risk factors, such as coronary artery disease, hypertension, and significant valvular disease. Diabetes affects every organ in the body and cardiovascular disease accounts for two-thirds of the mortality in the diabetic population. Despite a growing interest in the pathophysiology of diabetic cardiomyopathy, there are no specific guidelines for diagnosing patients or structuring a treatment strategy in clinical practice. Interestingly, several drugs currently in use can improve cardiac health beyond their ability to control glycemia. GLP-1 receptor agonists and sodium-glucose co-transporter 2 inhibitors have been shown to have a beneficial effect on the cardiovascular system. This review provides an overview on diabetic cardiomyopathy, and explains the evolution of Diabetic cardiomyopathy, Drugs used and their mechanism and with a conclusion of future treatment on Diabetic cardiomyopathy.

**Key words:** Diabetic cardiomyopathy, GLP-1 receptor agonists, Sodium glucose co-transporter 2 inhibitors.



ABSTRACT NO: ICCPPR-085

## A REVIEW ON DRUG REPURPOSING

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### ABSTRACT:

Drug repurposing is using an existing drug for a new treatment that was not indicated before. It has received immense attention during the COVID-19 pandemic emergency. Drug repurposing has become the need of time to fasten the drug discovery process and find quicker solutions to the overexerted healthcare scenario and drug needs. Drug repurposing involves identifying the drug, evaluating its efficiency using preclinical models, and proceeding to phase II clinical trials. Using artificial intelligence algorithms and other bioinformatics tools, investigators systematically try to identify the interaction between drugs and protein targets. The strategies involved in drug repurposing and enlists a series of repurposed drugs and their indications.

**Keywords:** Drug repurposing, preclinical models, phase II clinical trials.



ABSTRACT NO: ICCPPR-086

## A REVIEW ON ROLE OF ARTIFICIAL INTELLIGENCE IN PHARMACEUTICAL INDUSTRY

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### ABSTRACT:

Artificial Intelligence (AI) has emerged as a transformative tool in the pharmaceutical industry, revolutionizing traditional approaches to drug discovery, development, manufacturing, and patient care. By leveraging advanced algorithms, machine learning, and data analytics, AI enables rapid identification of drug targets, prediction of molecular interactions, and optimization of lead compounds, thereby significantly reducing the time and cost associated with drug development. In clinical research, AI enhances patient recruitment, trial design, and real-time monitoring, leading to improved efficiency and reliability of outcomes. Furthermore, AI-driven technologies support precision medicine by tailoring treatment strategies based on individual patient profiles and predictive models. In pharmaceutical manufacturing, AI ensures quality control, process automation, and supply chain management with enhanced accuracy and safety. Despite its immense potential, challenges such as data privacy, regulatory frameworks, and ethical considerations remain critical for its widespread adoption. This review highlights the diverse applications, benefits, and limitations of AI in the pharmaceutical sector, while emphasizing its future prospects as a key enabler of innovation in healthcare.

**Keywords:** Artificial Intelligence; Pharmaceutical industry; Drug discovery; Machine learning; Precision medicine; Clinical trials; Drug manufacturing; Healthcare innovation.



ABSTRACT NO : ICCPPR-087

**METHOD DEVELOPMENT AND VALIDATION OF STABILITY INDICATING UV-VISIBLE SPECTROPHOTOMETRIC METHOD FOR LEVONORGESTREL IN BULK AND TABLET DOSAGE FORM**

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**ABSTRACT:**

A simple, specific, accurate, and stability-indicating UV Spectrophotometric method was developed for the estimation of levonorgestrel, using a Lab India UV-3000 plus double beam. Methanol was used as a solvent. Linearity was established for Levonorgestrel in the range of 15- 75 $\mu$ g/ml. The percentage recovery was found to be in the range of 99.93-100.08%. The drug was subjected to acid, alkali, oxidation, and photolytic degradation study. Validation experiments were performed to demonstrate specificity, precision, linearity, accuracy, LOD, and LOQ. While determining the marketed formulation there was no interference of excipients and other additives. The LOD and LOQ value was found to be 0.0707 $\mu$ g/ml and 0.2142 $\mu$ g/ml. Hence this method can be used for routine determination of levonorgestrel in bulk and the pharmaceutical dosage form. The proposed method for stability studies shows that there was appreciable degradation found in stress conditions of levonorgestrel.

**Keywords:** levonorgestrel, specificity, UV-Spectrophotometric method.



ABSTRACT NO:ICCPPr-088

## HETEROCYCLIC NITROGEN COMPOUNDS AS POTENTIAL ANTICANCER AGENTS

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### ABSTRACT:

Heterocyclic nitrogen compounds represent one of the most promising classes of bioactive molecules in modern drug discovery due to their structural diversity and wide range of pharmacological activities. Their ability to interact with critical biological targets such as DNA, enzymes, and signaling proteins makes them highly relevant in anticancer research. Structural motifs such as pyridines, pyrimidines, imidazoles, indoles, and quinolines form the backbone of several clinically used chemotherapeutic agents. These heterocycles exhibit anticancer potential through mechanisms including inhibition of kinases, induction of apoptosis, suppression of angiogenesis, and interference with cell cycle progression. Recent advances in synthetic and computational approaches have enabled the design of novel heterocyclic scaffolds with enhanced selectivity and reduced toxicity. This review highlights the role of heterocyclic nitrogen-containing compounds as potential anticancer agents, emphasizing their mechanisms of action, therapeutic significance, and future prospects in cancer drug development.

**Key words:** Drug discovery; Chemotherapy, Kinase enzyme.

ABSTRACT NO:ICCPPr-089

**REVIEW OVER PROTON PUMP INHIBITOR DRUGS AND GLOBAL LEVEL FUTURE ESTIMATION MARKETING THEN COMPARING WITH INDIAN TRADITIONAL MEDICINE**

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**ABSTRACT:**

Proton pump inhibitors (PPIs) are a class of drugs used to treat acid-related disorders such as gastroesophageal reflux disease (GERD) and peptic ulcers. These drugs work by reducing the production of acid in the stomach. PPIs have become one of the most widely prescribed classes of drugs globally, with an estimated market size of over \$11 billion in 2020. However, long-term use of PPIs has been associated with various adverse effects such as increased risk of infections and fractures. In contrast, traditional Indian medicine (Ayurveda) has long been used to treat acid-related disorders using natural remedies such as herbs, spices, and dietary changes. Ayurvedic treatments have gained popularity in recent years, with the global market size estimated to be around \$4.4 billion in 2020. However, there is limited scientific evidence to support the efficacy and safety of Ayurvedic treatments, and they may interact with other medications.

**Keywords:** Proton pump inhibitors (PPIs), gastroesophageal reflux disease (GERD).

ABSTRACT NO: ICCPPR-SPS-319

## Novel Nano gel-Based Approach for Accelerated Wound Healing: In-Vitro and In-Vivo Evaluation

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### ABSTRACT

In Ancient times there was no any Allopathic medicine, so that our Ancestors were used the plants and their fresh extracts for the treatment of many diseases and disorders including wound healing. The present research formulation of tamarindus indica nanogel and evaluate the enhancement of wound healing in an experimental wound model. The tamarindus indica bark were extract by aqueous and ethanolic solvent using succive soxhlet extraction. The both extract was formulated and charactrized of nanogel and the potency of wound healing was investigated. Cell cytotoxicity assay for the Ethanol extract nanogel formulation sample and aqeous extract nanogel formlation were performed on Vero Cell lines. After 24 hours the cell viability effect of Ethanol extract nanogel formulation and aqeous extract nanogel formlation against Vero cell lines at different concentrations were determined using the MTT assay. The IC<sub>50</sub> value was found to be 94.87 µg/ml for ethanol extract nanogel formulation and 241.50 µg/ml Aqueous extract nanogel formulation. From this findings, in aqueous extract nanogel formulation IC<sub>50</sub> value was obtained as above the concentration level. So, the ethanolic extract of nanogel were investigated invivo (Excision wound model) potency of wound healing. It compared to the control untreated group, excision wounds treated with TEEN demonstrated a higher rate of wound contraction and faster healing, as seen by the increased healed area and compared to the group administered a commercial brand of povidone iodine ointment, the TEEN was found to be similarly efficacious, albeit at a smaller scale than usual. The histopathological study was finding. So Finally we concluded the tamarindus indica ethanolic extract of nanogel have excellent wound healing properties as compared to standard.

**Key words:** Tamarindus indica, nanogel, invitro, invivo, and wound healing



ABSTRACT NO: ICCPPR-SPS-320

## Empowering Patients Through Mobile Health Apps and Wearables

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### ABSTRACT

The integration of mobile health (mHealth) applications and wearable technologies is revolutionizing patient-centered healthcare by enabling continuous monitoring, personalized interventions, and real-time data sharing between patients and providers. These tools empower individuals to play an active role in managing chronic conditions, monitoring vital signs, tracking physical activity, and supporting medication adherence. mHealth apps offer features such as lifestyle coaching, reminders, and teleconsultation access, while wearable devices generate continuous streams of physiological and behavioral data that enhance early disease detection and preventive strategies. The combination of these digital health solutions not only strengthens patient engagement and self-efficacy but also improves clinical decision-making through data-driven insights. Furthermore, integration with electronic health records (EHRs) and cloud-based platforms allows for more coordinated and efficient care delivery. However, challenges such as ensuring device accuracy, interoperability across platforms, sustained patient adherence, and safeguarding sensitive health data remain critical barriers to widespread adoption. Addressing these issues through robust regulatory frameworks, user-centered design, and advanced data security solutions is essential for maximizing their impact.

**KEYWORDS:** Mobile health (mHealth); Wearable devices; Patient empowerment; Chronic disease management; Personalized medicine; Digital health

ABSTRACT NO: ICCPPR-SPS-321

## Telemedicine: Bringing the gap between patients and providers

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### Abstract

Telemedicine has emerged as a transformative approach to healthcare delivery, bridging geographical, temporal, and accessibility gaps between patients and providers. By leveraging digital communication technologies, telemedicine enables remote consultations, follow-up care, chronic disease management, and emergency triage, thereby expanding healthcare access to underserved and rural populations. It enhances patient convenience, reduces travel burden, and supports continuity of care while optimizing the use of healthcare resources. For providers, telemedicine facilitates efficient monitoring, interdisciplinary collaboration, and integration of patient data into clinical workflows. Advances in video conferencing, mobile health applications, and remote diagnostic tools have further strengthened its role in modern healthcare ecosystems. Despite its rapid adoption, particularly accelerated during the COVID-19 pandemic, challenges remain in ensuring data security, regulatory compliance, technology accessibility, and maintaining the quality of patient-provider interactions. Overcoming these barriers requires robust infrastructure, training, and supportive policies. Telemedicine represents a paradigm shift toward more equitable, efficient, and patient-centered care. With continued advancements in digital technologies, artificial intelligence, and secure health information exchange, telemedicine will play a pivotal role in shaping the future of global healthcare delivery.

**Keywords:** Telemedicine; Patient-provider communication; Remote healthcare; Digital health; Chronic disease management; Healthcare access



ABSTRACT NO: ICCPPR-090

## **Title: Expanding the Treatment Landscape for Oral Submucosal Fibrosis via Drug Repurposing**

**NASAM MENAKA, Research Scholar, Ph.D in Pharmacy**

**Chaitanya deemed to be university**

**Objective:** This review explores the rationale and potential of drug repurposing for OSMF management, highlighting existing medications with novel therapeutic applications and targeting key pathophysiological mechanisms.

**Methods:** Literature from 2012 to 2024 was systematically examined, focusing on randomized controlled trials, clinical studies, and mechanistic research involving repurposed drugs for OSMF.

**Results:** Conventional therapies—corticosteroids, enzymes, vasodilators, antioxidants, and physiotherapy—offer symptomatic relief but fail to reverse fibrosis or significantly alter malignant potential. Drug repurposing leverages known safety profiles and shared molecular pathways with other fibrotic diseases, expediting clinical translation. Promising agents include pirfenidone, pentoxifylline, colchicine, metformin, losartan, tamoxifen, interferon- $\gamma$ , and N-acetylcysteine, which target fibrosis reversal, inflammation modulation, angiogenesis enhancement, and oxidative stress reduction. Mechanism-based approaches focus on TGF- $\beta$  inhibition, collagen turnover modulation, vascular improvement, and reactive oxygen species scavenging.

**Conclusion:** Drug repurposing offers a cost-effective, time-efficient strategy to expand OSMF treatment options. Future research must prioritize large multicentric trials, dose optimization, and molecularly guided personalized medicine to develop effective, accessible, and sustainable therapies. By bridging mechanistic insights with clinical application, repurposed agents hold promise for improved functional outcomes and reduced malignant transformation risk in OSMF.



ABSTRACT NO: ICCPPR-091

## Development of a Prescription Audit Tool for a Tertiary Care Hospital

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Porur, Chennai – 600116.

### Abstract

**Background:** Prescription audits are vital instruments in evaluating the quality of medical documentation and rational drug use in healthcare settings. In tertiary care hospitals, where complex clinical decisions are made, a systematic and structured audit framework is essential to ensure adherence to regulatory, institutional, and patient safety standards.

**Objective:** To design and develop a comprehensive audit tool that facilitates systematic evaluation of prescriptions and related clinical documentation in a tertiary care teaching hospital.

**Methods:** A structured audit tool was developed after reviewing existing hospital policies, accreditation standards, and international best practices. The tool encompassed multiple domains, including admission records, history and physical examination charts, investigation documentation, progress notes, surgical and anesthesia records, drug charts, and patient education records. Each domain was translated into specific measurable items using a checklist-based format, enabling assessment of documentation quality, adherence to protocols, completeness, legibility, and compliance with safety measures such as allergy documentation, use of approved abbreviations, and rational drug orders.

**Results:** The finalized audit tool comprised 80 items across key documentation and prescription-related parameters. It was designed for applicability across multiple clinical departments, enabling both cross-sectional and longitudinal evaluation. The tool allows identification of gaps in prescription practices, documentation errors, and deviations from institutional standards. Its checklist structure provides a user-friendly, reproducible framework for routine and periodic audits.

**Conclusion:** The developed prescription audit tool offers a comprehensive and structured mechanism to evaluate prescribing practices and clinical documentation in a tertiary care hospital. Its implementation can enhance patient safety, improve compliance with accreditation standards, and support continuous quality improvement in healthcare delivery. Future work will focus on validation of the tool in real-world hospital settings and integration into digital audit platforms for wider applicability.

ABSTRACT NO: ICCPPR-092

## Meta-Analysis of Hub Gene and Drug–Gene Interactions Linking Pulmonary Arterial Hypertension and Heart Failure

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### Abstract

This study aims to identify hub genes strongly associated with pulmonary arterial hypertension and heart failure, and also explores related drug–drug and drug–gene interactions. Transcriptomic datasets GSE113439 and GSE116250 were analyzed using DESeq2 to identify DEGs. Functional enrichment and hub gene analysis were performed through PPI networks in Cytoscape. To enhance therapeutic translation, drug–gene and drug–drug interactions were systematically investigated using cMAP and DGIdb. Analysis identified 629 DEGs in GSE113439 (PAH) and 337 in GSE116250 (Heart failure), with 17 genes consistently upregulated and 10 downregulated across both conditions. Enrichment analysis indicated strong activation of cell cycle and mitotic processes, while extracellular matrix remodeling and cardiovascular developmental pathways were suppressed. A total of 7 upregulated genes were commonly shared between PAH and heart failure. The top hub genes included IL6, CXCL8, CXCR1, CCL24, XCL1, CXCL14, and CXCL2, which were enriched in immune signaling, cytokine regulation, and extracellular matrix remodeling. Drug–gene interaction analysis identified compounds such as dexamethasone, curcumin, quercetin, and simvastatin as potential modulators of these hubs. Drug–drug interaction mapping further suggested synergistic and antagonistic networks that may inform rational combination therapies. This integrative analysis uncovers shared molecular mechanisms between PAH and heart failure and emphasizes the therapeutic relevance of hub genes. By jointly assessing drug–gene and drug–drug interactions, the study not only identifies repurposable compounds but also highlights rational drug combinations with translational potential for targeted interventions.

**Keywords:** Pulmonary arterial hypertension; Heart failure; Hub genes; Differentially expressed genes; Protein–protein interaction; Drug–gene interaction; Drug–drug interaction; cMAP; DGIdb; Therapeutic repurposing.



ABSTRACT NO: ICCPPR-067

## **The Future of Patient Care: Innovations in Pharmacy**

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### **Abstract:**

The future of patient care is undergoing a significant transformation, driven by innovations in pharmacy that prioritize personalized medicine, digital health technologies, and advanced therapeutics. Tailoring treatment to individual patients based on genetic profiles, medical history, and lifestyle factors. Telepharmacy, mobile health apps, and electronic health records are enhancing patient engagement, improving medication adherence, and streamlining healthcare delivery. Pharmacists will play a crucial role in handling and administering these complex therapies. 3-Artificial Intelligence (AI) and Machine Learning (ML): AI-powered algorithms can analyze vast datasets, predict treatment outcomes, and identify potential drug interactions. Improved Treatment Outcomes medicine and advanced therapeutics can lead to more effective treatment outcomes and better patient outcomes. Digital health technologies empower patients to take a more active role in their healthcare, improving adherence and outcomes. Telepharmacy and remote monitoring expand access to healthcare services, particularly in rural.

**Keywords :** Personalized Medicine, Digital Health, Telepharmacy, Pharmacogenomics, Advanced Therapeutics, Artificial Intelligence (AI), Machine Learning (ML).



ABSTRACT NO: ICCPPR-068

**Bridging Oral and Systemic Health: Biomarker Insights from Dental Caries, Periodontitis, and Cardiovascular Disease Using Bibliometric-SLR Approaches**

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**Abstract:**

Oral and systemic diseases are increasingly recognized as interconnected through shared biological pathways and biomarker profiles. This study integrates bibliometric analysis with systematic literature review (B-SLR) to map research trends, collaborations, and translational gaps across three major conditions: dental caries, periodontitis, and cardiovascular disease (CVD). Databases including Scopus, Web of Science, and PubMed were systematically searched (1985–2025), and data were analyzed using Bibliometrix (R), VOSviewer, and OpenRefine. A total of 239 publications on dental caries and oral health-related quality of life (OHRQoL) and Knowledge-Attitude-Practise (KAP), 515 studies on periodontitis biomarkers, and 1,213 publications on CVD genetic biomarkers were evaluated. Annual scientific output revealed consistent growth (8.4%, 13.0%, and 16.8% respectively), with strong international collaboration but limited contributions from Malaysia. Keyword and co-authorship analyses highlighted thematic evolution from cytokine and oxidative stress markers to salivary biosensors, genomics, and epigenetic signatures. While citation metrics demonstrated the maturity of biomarker science globally, Malaysia remains underrepresented in biomarker-driven oral-systemic health research despite a high national disease burden. Findings emphasize the need for Malaysian focused multicenter studies, genomic biobanks, and integrated frameworks that link biomarkers to clinical outcomes and OHRQoL/KAP. By bridging dental caries, periodontitis, and CVD, this study underscores the potential of biomarker driven approaches to transform prevention, precision diagnostics, and patient-centered care. The B-SLR approach highlights both global advances and local gaps, offering actionable insights for policy, research capacity building, and oral systemic



ABSTRACT NO: ICCPPR-SPS-291

**Empowering Professionals through Lifelong Learning: Strategies for Success**

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**Abstract**

In today's rapidly evolving professional environment, the key to staying competitive and relevant is a commitment to lifelong learning. This seminar emphasizes the crucial role that continuous professional development plays in shaping successful careers. With industries continuously advancing, professionals must consistently adapt, improve job performance, and stay ahead of emerging trends. Lifelong learning not only enhances an individual's technical expertise but also fosters personal growth, boosts job satisfaction, and increases opportunities for career advancement. Attendees will gain insights into practical strategies for continuous learning, such as identifying skill gaps, setting career goals, and making use of networking and mentorship opportunities to drive personal and professional success. Our expert speakers will share proven methods for effective learning, from leveraging modern learning technologies to creating personalized development plans. Real-world examples and innovative approaches to skill-building and knowledge acquisition will equip participants with the tools they need to cultivate a mindset of growth and adaptability in an ever-changing professional landscape. This abstract aims to not only empower professionals with strategies to accelerate their growth but also inspire them to take active control of their careers. By the end of the session, attendees will be prepared to implement lifelong learning practices that lead to continuous professional development, enhanced career prospects, and long-term personal and organizational success.

**Keywords:** Lifelong Learning, Professional Development, Career Growth, Skill Building, Networking, Continuous Learning, Career Advancement



ABSTRACT NO: ICCPPR-SPS-292

## **The Role of Clinical Consulting in Optimizing Healthcare Outcomes and Enhancing Patient Safety**

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### **Abstract**

Clinical consulting is a specialized professional service that provides expert medical advice, decision support, and patient-centered solutions to improve healthcare outcomes. It involves collaboration between physicians, pharmacists, nurses, and other healthcare providers to optimize diagnosis, treatment planning, and therapeutic management. Clinical consultants play a key role in evidence-based practice, regulatory compliance, and risk reduction. They also assist in clinical trials, pharmacovigilance, and healthcare policy development. By integrating scientific knowledge with practical experience, clinical consulting enhances quality of care, ensures patient safety, and supports efficient use of healthcare resources **Keywords:** Clinical Consulting, Healthcare Outcomes, Evidence-Based Practice, Patient Safety, Therapeutic Management, Collaborative Healthcare



ABSTRACT NO: ICCPPR-SPS-293

**Continuous Professional Development (CPD) and Lifelong Learning****Devi Priya Kumaran\***, G. Avinash Kumar, P. Pravallika, G. Saravanan, S. Jancy Rani**Vel Pharmacy College, VMCH Campus, Vels Institute of Science, Technology and Advanced Studies, 12/123, Velan Nagar, Periyapalayam Road, Manjankaranai (V), Uthukottai (T), Tiruvallur (D)-601102, Tamil Nadu, India****Corresponding author:****Devi Priya Kumaran****E-mail:** kdevipriyakumaran09@gmail.com**Abstract**

Continuous Professional Development (CPD) and lifelong learning represent vital strategies for maintaining professional competence and ensuring sustainable growth in today's fast-changing world. In an era where knowledge, technology, and professional standards are constantly evolving, relying solely on initial academic qualifications is insufficient. CPD provides a structured and systematic approach to updating skills, enhancing knowledge, and integrating new practices into professional work. It emphasizes planned learning activities such as workshops, seminars, training programs, research, and reflective practice that support ongoing professional excellence. Lifelong learning, on the other hand, extends beyond formal training and highlights the importance of self-motivation, curiosity, and continuous personal growth throughout one's career and life. It involves both formal and informal learning experiences that help individuals remain adaptable, innovative, and resilient in the face of professional challenges. Together, CPD and lifelong learning cultivate a mindset of accountability, adaptability, and responsibility, which are crucial for ensuring high-quality service delivery, ethical standards, and professional leadership. By embracing CPD and lifelong learning, individuals not only strengthen their professional identity but also contribute positively to their organizations and society as a whole. This integrated approach builds confidence, encourages innovation, and promotes excellence, ensuring that professionals remain competent, relevant, and future-ready in a rapidly transforming global environment.

**Keywords:** Professional Competence, Sustainable Growth, Knowledge Update, Technology, Professional Standards



ABSTRACT NO: ICCPPR-SPS-294

**Transforming Healthcare: The Role of Chronic Disease Management in Sustainable Health****P. Gayatri\***, P. Pravallika, G. Saravanan, G. Avinash Kumar, S. Jancy Rani**Vel Pharmacy College, VMCH Campus, Vels Institute of Science, Technology and Advanced Studies, 12/123, Velan Nagar, Periyapalayam Road, Manjankaranai (V), Uthukottai (T), Tiruvallur (D)-601102, Tamil Nadu, India****Corresponding author:****P. Gayatri****Ph:** 7339331193, **E-mail:** gayatriqueen7339@gmail.com**Abstract**

Chronic disease management (CDM) is a comprehensive, patient-centered approach designed to improve the quality of life for individuals living with long-term conditions such as diabetes, hypertension, cardiovascular diseases, chronic respiratory illnesses, and cancer. It emphasizes continuous, coordinated care that integrates prevention, early detection, treatment, lifestyle modification, and patient education. Effective CDM relies on multidisciplinary collaboration among healthcare providers, use of evidence-based guidelines, and the application of digital health technologies for monitoring and self-management. Central to this approach is empowering patients to actively participate in their care through behavior change, adherence to medication, and regular follow-up. By reducing disease complications, hospital admissions, and healthcare costs, chronic disease management plays a vital role in achieving sustainable health outcomes and strengthening health systems worldwide.

**Keywords:** Chronic Disease Management (CDM), Patient-Centered Care, Diabetes, Hypertension, Cardiovascular Diseases, Chronic Respiratory Illnesses



ABSTRACT NO: ICCPPR-SPS-295

**From Laboratory to Life-Saving Medicine: Navigating Clinical Trials and Drug Approval Processes****S. Hemarubani\***, P. Pravallika, G. Saravanan, G. Avinash Kumar, S. Jancy Rani**Vel Pharmacy College, VMCH Campus, Vels Institute of Science, Technology and Advanced Studies, 12/123, Velan Nagar, Periyapalayam Road, Manjankaranai (V), Uthukottai (T), Tiruvallur (D)-601102, Tamil Nadu, India****Corresponding author:****S. Hemarubani****Ph:** 9445806790, **E-mail:** hemarubani18bala@gmail.com**Abstract**

The journey from laboratory discovery to a life-saving medicine is paved by rigorous clinical trials and stringent drug approval processes. Clinical trials serve as the backbone of evidence-based medicine, transforming experimental molecules into proven therapies through systematic evaluation of safety, efficacy, and quality. Each phase of the trial—spanning from initial human testing to large-scale population studies—acts as a critical checkpoint in ensuring patient well-being. Regulatory authorities worldwide, such as the U.S. FDA and India's CDSCO, uphold scientific integrity and public trust by enforcing strict guidelines before granting approval. With the rise of precision medicine, adaptive trial designs, and accelerated approval pathways, the landscape of drug development is rapidly evolving. Despite challenges like high costs, long timelines, and ethical considerations, clinical trials remain the gateway to innovation in healthcare. Ultimately, new drug approvals are not just milestones in science, but symbols of hope—turning years of research into real-world impact for patients in need.

**Keywords:** Clinical Trials, Drug Approval, Evidence-Based Medicine, Safety, Efficacy, Quality, Regulatory Authorities



ABSTRACT NO: ICCPPR-SPS-296

**Digital Transformation in Pharmacy**

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**Corresponding author:****V. Jaya Kumar****Ph:** 9042373159, **e-mail:** jaikiller2206@gmail.com**Abstract**

The pharmacy sector is undergoing a profound evolution driven by digital transformation, reshaping how pharmaceutical care is delivered, managed, and optimized. This seminar explores the pivotal role of digital technologies in modernizing pharmacy practice, enhancing patient outcomes, and streamlining healthcare operations. Key topics will include the integration of electronic health records (EHRs), e-prescribing, telepharmacy, automated dispensing systems, and the use of artificial intelligence (AI) for medication management and clinical decision support. The seminar will also delve into the impact of mobile health (mHealth) applications, blockchain for drug traceability, and data analytics in improving medication adherence and personalized therapy. Through real-world case studies and emerging trends, participants will gain insights into how digital transformation is addressing long-standing challenges in pharmacy, such as medication errors, patient non-compliance, and supply chain inefficiencies. The session will also discuss the regulatory, ethical, and workforce implications of digitizing pharmaceutical services. This abstract aims to equip pharmacy professionals, healthcare administrators, and students with the knowledge and tools to embrace digital innovations and lead the future of pharmacy practice in a technology-driven healthcare ecosystem.

**Keywords:** Digital Transformation, Pharmacy Practice, Electronic Health Records (EHRs), E-Prescribing, Telepharmacy, Automated Dispensing Systems



ABSTRACT NO: ICCPPR-SPS-297

## **The Role of Artificial Intelligence and Machine Learning in Modern Pharmacy Practice**

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### **Abstract**

Artificial Intelligence (AI) and Machine Learning (ML) are transforming modern pharmacy practice by enhancing precision, efficiency, and patient-centered care. These technologies enable predictive analytics for adverse drug reactions, optimize personalized medicine, and improve drug discovery and development timelines. In clinical pharmacy, AI-powered tools support decision-making, medication therapy management, and adherence monitoring, thereby reducing errors and improving outcomes. Machine learning algorithms further strengthen pharmacovigilance by identifying patterns in large-scale health data that may otherwise go unnoticed. Despite challenges related to data privacy, integration into existing systems, and ethical considerations, AI and ML hold immense potential to redefine the pharmacist's role from a traditional dispenser to a technology-driven healthcare innovator. This seminar explores current applications, emerging trends, and future directions of AI and ML in pharmacy, highlighting their transformative impact on healthcare delivery.

**Keywords:** Pharmacy Practice, Predictive Analytics, Adverse Drug Reactions, Personalized Medicine, Drug Discovery

ABSTRACT NO: ICCPPR-SPS-298

## **Sustainability and Ethical Practices in Pharmaceutical Supply Chains**

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### **Abstract**

The pharmaceutical supply chain plays a pivotal role in ensuring timely access to safe, effective, and affordable medicines. However, increasing concerns regarding environmental impact, social responsibility, and governance have highlighted the need for sustainable and ethical practices in this sector. This review examines the current landscape of sustainability initiatives and ethical considerations within pharmaceutical supply chains, emphasizing their relevance to global health, regulatory compliance, and corporate responsibility. Key focus areas include green manufacturing, waste reduction, energy efficiency, responsible sourcing of raw materials, and the adoption of circular economy principles. Ethical dimensions such as labor rights, equitable access to medicines, transparency, and anti-counterfeiting measures are also explored. The review further discusses challenges including high implementation costs, fragmented regulations, and limited stakeholder collaboration, alongside opportunities created by digital technologies, blockchain, and global sustainability frameworks. Strengthening sustainability and ethics in pharmaceutical supply chains is essential to reduce environmental burdens, enhance public trust, and ensure resilient, patient-centered healthcare delivery.

**Keywords:** Pharmaceutical Supply Chain, Sustainability, Ethical Practices, Green Manufacturing, Waste Reduction, Energy Efficiency



ABSTRACT NO: ICCPPR-SPS-299

**Digital capabilities for pharmacy work force****R. Lathika\***, G. Avinash Kumar, P. Pravallika, G. Saravanan, S. Jancy Rani**Vel Pharmacy College, VMCH Campus, Vels Institute of Science, Technology and Advanced Studies, 12/123, Velan Nagar, Periyapalayam Road, Manjankaranai (V), Uthukottai (T), Tiruvallur (D)-601102, Tamil Nadu, India****Corresponding author:****R. Lathika****Ph:** 9150866421, **E-mail:** laddu8106r@gmail.com**Abstract**

The rapid digital transformation of healthcare is reshaping the role of the pharmacy workforce, demanding new skills and competencies to ensure safe, efficient, and patient-centered care. Digital capabilities—including the use of electronic health records, telepharmacy, clinical decision support systems, data analytics, artificial intelligence, and digital communication platforms—are now essential for pharmacists, technicians, and pharmacy students. Developing these skills enhances medication safety, optimizes therapeutic outcomes, and supports interprofessional collaboration in an increasingly technology-driven environment. However, challenges such as digital literacy gaps, data security concerns, and varying access to technological resources must be addressed through structured education, continuous professional development, and supportive policies. Strengthening digital capabilities within the pharmacy workforce will be critical for meeting evolving healthcare needs, improving patient outcomes, and advancing the profession in the digital age.

**Keywords:** Pharmacy Workforce, Electronic Health Records, Telepharmacy, Clinical Decision Support Systems, Data Analytics



ABSTRACT NO: ICCPPR-SPS-300

**Antimicrobial Resistance: Strategies for Pharmacists****V. Mouleshwaran\***, G. Avinash Kumar, P. Pravallika, G. Saravanan, S. Jancy Rani**Vel Pharmacy College, VMCH Campus, Vels Institute of Science, Technology and Advanced Studies, 12/123, Velan Nagar, Periyapalayam Road, Manjankaranai (V), Uthukottai (T), Tiruvallur (D)-601102, Tamil Nadu, India****Corresponding author:****V. Mouleswaran****Ph:** 9788704853, **E-mail:** sumathisumathi09904@gmail.com**Abstract**

Antimicrobial resistance (AMR) has emerged as one of the greatest global health threats of the 21st century, undermining decades of progress in infectious disease management. Pharmacists, as accessible and trusted healthcare professionals, play a pivotal role in combating this silent pandemic. Their expertise in rational drug use, patient education, and antimicrobial stewardship empowers them to act as frontline defenders against inappropriate prescribing and misuse. This paper highlights key strategies for pharmacists, including promoting evidence-based prescribing, monitoring antimicrobial utilization, optimizing dosing regimens, implementing infection control practices, and engaging in public awareness campaigns. By integrating clinical vigilance with patient-centered care, pharmacists can significantly reduce resistance rates while preserving the efficacy of existing antimicrobials. Strengthening the pharmacist's role is not just a professional responsibility but a vital step toward safeguarding global health.

**Keywords:** Antimicrobial Resistance (AMR), Global Health Threat, Pharmacists, Rational Drug Use, Antimicrobial Stewardship, Patient Education



ABSTRACT NO: ICCPPR-SPS-301

## **The Future of Pharmacy Practice: Evolving Roles, Digital Advancements, and Patient-Centered Care**

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### **Abstract**

The future of pharmacy practice is rapidly evolving, driven by advancements in technology, changing healthcare needs, and an expanding role of pharmacists within multidisciplinary care teams. Pharmacists are transitioning from traditional roles of dispensing medications to becoming integral providers of patient-centered care, focusing on disease prevention, chronic disease management, personalized medicine, and health promotion. Digital health tools, telepharmacy, and artificial intelligence are expected to enhance efficiency, medication safety, and patient engagement. Furthermore, the integration of pharmacogenomics and precision medicine will enable tailored therapy, improving clinical outcomes. As healthcare systems emphasize accessibility and value-based care, pharmacists will play a crucial role in bridging gaps between patients and providers, particularly in underserved communities. Continuous professional development, interprofessional collaboration, and policy support will be essential in shaping this transformation. Ultimately, the pharmacy profession is poised to become a cornerstone of future healthcare, ensuring safe, effective, and personalized medication use.

**Keywords:** Patient-Centered Care, Disease Prevention, Chronic Disease Management, Personalized Medicine, Pharmacogenomics



ABSTRACT NO: ICCPPR-SPS-302

## **Cultivating Leadership and Entrepreneurship in Pharmacy**

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### **Abstract**

Pharmacy as a profession is undergoing rapid transformation, driven by evolving healthcare needs, technological innovations, and expanding roles of pharmacists in patient-centered care. To meet these challenges, cultivating leadership and entrepreneurship among pharmacy professionals has become imperative. Leadership equips pharmacists with the ability to influence healthcare teams, advocate for policy change, and drive innovations in practice, while entrepreneurship fosters creativity, problem-solving, and business acumen essential for developing novel services and ventures. This review explores the growing importance of leadership and entrepreneurial skills in pharmacy education, practice, and research. It highlights existing models of leadership training, entrepreneurial frameworks, and experiential learning approaches integrated into pharmacy curricula worldwide. Furthermore, it discusses barriers such as limited curricular time, lack of mentorship, and inadequate exposure to real-world business environments, along with strategies to overcome them. By fostering a culture of innovation, resilience, and accountability, pharmacy professionals can emerge as leaders and entrepreneurs who not only advance the profession but also contribute significantly to global health outcomes.

**Keywords:** Patient-Centered Care, Disease Prevention, Chronic Disease Management, Personalized Medicine, Pharmacogenomics



ABSTRACT NO: ICCPPR-SPS-303

**Continuing Professional Development for Future-Ready Pharmacists****D. Vaishnavi\***, S. Jancyrani, G. Saravanan, G. Avinash Kumar, P. Pravallika**Vel Pharmacy College, VMCH Campus, Vels Institute of Science, Technology and Advanced Studies, 12/123, Velan Nagar, Periyapalayam Road, Manjankaranai (V), Uthukottai (T), Tiruvallur (D)-601102, Tamil Nadu, India****Corresponding author:****D. Vaishnavi****Ph:** 7824089122, **E-mail:** vaishnavideva0201@gmail.com**Abstract**

Pharmacy education is at a pivotal moment, shaped by intertwined academic, social, technological, economic, and political forces, collectively known as ASTEP. The COVID-19 pandemic acted as a catalyst, accelerating the need to rethink and innovate traditional educational models. This paper explores these driving forces and their impact on pharmacy education, highlighting opportunities for transformative change. Emphasizing competency-based learning, digital integration, and equitable access, it advocates for disruptive innovation to better prepare pharmacy professionals for evolving healthcare demands. By examining the challenges and possibilities within each ASTEP domain, this work provides a strategic framework for educators and policymakers aiming to future-proof pharmacy education in a post-pandemic era.

**Keywords:** COVID-19, pharmacy education, ASTEP forces, competency-based learning, digital transformation, healthcare education



ABSTRACT NO: ICCPPR-SPS-304

**Pharmacovigilance and big data in drug safety monitoring****S. Vedhavalli\***, G. Saravanan, G. Avinash Kumar, P. Pravallika, S. Jancy Rani**Vel Pharmacy College, VMCH Campus, Vels Institute of Science, Technology and Advanced Studies, 12/123, Velan Nagar, Periyapalayam Road, Manjankaranai (V), Uthukottai (T), Tiruvallur (D)-601102, Tamil Nadu, India****Corresponding author:****S. Vedavalli****Ph:** 9344501077, **e-mail:** vadavalli2006@gmail.com**Abstract**

Pharmacovigilance is the science of detecting, assessing, and preventing adverse drug reactions (ADRs) to ensure patient safety. With the growing volume of healthcare data from electronic health records, clinical trials, social media, and spontaneous reporting systems, traditional pharmacovigilance methods face challenges in timely signal detection. Big data analytics offers powerful tools to process vast, diverse, and real-time data, enabling earlier identification of safety signals, trend analysis, and risk prediction. Techniques such as machine learning, natural language processing, and data mining enhance the accuracy and efficiency of ADR detection. The integration of big data into pharmacovigilance systems improves decision-making, supports regulatory actions, and ultimately protects public health. However, challenges remain regarding data quality, privacy, and interoperability. Leveraging big data responsibly can transform drug safety monitoring into a proactive and predictive process, ensuring safer use of medicines worldwide.

**Keywords:** Adverse Drug Reactions (ADRs), Patient Safety, Big Data Analytics, Electronic Health Records, Clinical Trials



ABSTRACT NO: ICCPPR-SPS-305

**Transformation in Pharmacy: Empowering Future Generations of Pharmacists****J. Yamini\***, P. Pravallika, G. Saravanan, G. Avinash Kumar, S. Jancy Rani**Vel Pharmacy College, VMCH Campus, Vels Institute of Science, Technology and Advanced Studies, 12/123, Velan Nagar, Periyapalayam Road, Manjankaranai (V), Uthukottai (T), Tiruvallur (D)-601102, Tamil Nadu, India****Corresponding author:****J. Yamini****Ph:** 8807975722, **E-mail:** yaminijv66@gmail.com**Abstract**

The field of pharmacy is undergoing a profound transformation driven by advances in technology, evolving healthcare systems, and the growing need for patient-centered care. This transformation necessitates a redefinition of the pharmacist's role from traditional dispensers of medication to dynamic healthcare providers, innovators, and educators. This paper explores the multifaceted changes shaping the pharmacy profession and emphasizes the importance of empowering future generations of pharmacists to adapt and lead in this evolving landscape. Key areas of focus include the integration of digital health tools, personalized medicine, interprofessional collaboration, and enhanced pharmacy education and training. By embracing innovation and fostering a culture of continuous learning, future pharmacists can be equipped with the skills, knowledge, and confidence to make impactful contributions to global health. Ultimately, empowering pharmacists is essential for building a resilient, accessible, and patient-focused healthcare system.

**Keywords:** Patient-Centered Care, Pharmacist Role, Digital Health Tools, Personalized Medicine



ABSTRACT NO: ICCPPR-SPS-306

**Biopharmaceuticals and Biosimilars – The Future of Medicine****J. Yamini\*, S. Jancyrani, G. Saravanan, G. Avinash Kumar, P. Pravallika****Vel Pharmacy College, VMCH Campus, Vels Institute of Science, Technology and Advanced Studies, 12/123, Velan Nagar, Periyapalayam Road, Manjankaranai (V), Uthukottai (T), Tiruvallur (D)-601102, Tamil Nadu, India****Corresponding author:****J. Yamini****Ph:** 7305643095, **E-mail:** yamijayabalakrishnan2007@gmail.com**Abstract**

Biopharmaceuticals and biosimilars have revolutionized modern medicine by providing highly specific, effective, and innovative treatment options for a wide range of chronic and life-threatening diseases. Unlike traditional small-molecule drugs, biopharmaceuticals are large, complex molecules—often proteins such as monoclonal antibodies, hormones, and enzymes—produced using advanced biotechnology, including recombinant DNA technology and cell culture systems. These therapeutic agents have demonstrated remarkable success in managing conditions such as cancer, diabetes, autoimmune disorders, and rare genetic diseases, thereby reshaping the therapeutic landscape. However, the high cost of developing and manufacturing biopharmaceuticals has raised concerns about accessibility and affordability. This challenge has paved the way for biosimilars—biological products that are highly similar to an already approved reference biopharmaceutical in terms of safety, purity, and efficacy. Biosimilars play a crucial role in improving patient access to advanced therapies by reducing treatment costs while maintaining therapeutic effectiveness. Their introduction not only encourages competition in the pharmaceutical industry but also supports the sustainability of healthcare systems worldwide. The future of medicine is increasingly being shaped by the expansion of biopharmaceuticals and biosimilars, driven by advances in biotechnology, genomics, and personalized medicine. With ongoing innovations such as gene therapy, cell-based therapies, and novel biologic platforms, the potential for treating complex and previously untreatable diseases is greater than ever. At the same time, the development of robust regulatory frameworks, pharmacovigilance systems, and physician–patient awareness programs is essential to ensure the safe integration of biosimilars into clinical practice. Together, they offer a balanced approach—combining innovation with accessibility paving the way toward a new era of precision, affordability, and patient-centered healthcare.

**Keywords:** Biopharmaceuticals, Biosimilars, Biotechnology, Monoclonal Antibodies, Recombinant DNA Technology, Cell Culture Systems



ABSTRACT NO: ICCPPR-SPS-307

**Pharmacists as Frontline Healthcare Providers****BT. Rohith\***, G. Avinash Kumar, P. Pravallika, G. Saravanan, S. Jancy Rani**Vel Pharmacy College, VMCH Campus, Vels Institute of Science, Technology and Advanced Studies, 12/123, Velan Nagar, Periyapalayam Road, Manjankaranai (V), Uthukottai (T), Tiruvallur (D)-601102, Tamil Nadu, India****Corresponding author:****BT. Rohith****Ph:** 8668014101, **E-mail:** rohitkag2005@gmail.com**Abstract**

Pharmacists are no longer limited to just dispensing medicines—they are becoming important frontline healthcare providers. With their easy accessibility and trusted knowledge of drugs, pharmacists play a key role in preventing diseases, managing long-term conditions, and improving patient health outcomes. Today, their role goes beyond the pharmacy counter to include counseling patients, providing vaccinations, monitoring chronic diseases like diabetes and hypertension, and promoting healthy lifestyles. By working closely with doctors, nurses, and other healthcare workers, pharmacists help reduce the burden on hospitals and ensure better care for the community. Expanding their clinical roles not only strengthens disease prevention and management but also empowers patients to take charge of their own health. This transformation highlights the vital position of pharmacists as essential partners in modern healthcare.

**Keywords:** Healthy Lifestyles, Interprofessional Collaboration, Healthcare Team, Hospital Burden, Clinical Roles



ABSTRACT NO: ICCPPR-SPS-308

**Interprofessional Collaboration and Team-Based Care in Healthcare****S. Balaji\***, P. Pravallika, G. Saravanan, G. Avinash Kumar, S. Jancy Rani**Vel Pharmacy College, VMCH Campus, Vels Institute of Science, Technology and Advanced Studies, 12/123, Velan Nagar, Periyapalayam Road, Manjankaranai (V), Uthukottai (T), Tiruvallur (D)-601102, Tamil Nadu, India****Corresponding author:****S. Balaji****Ph:** 8438832822, **E-mail:** [sweetbloody820@gmail.com](mailto:sweetbloody820@gmail.com)**Abstract**

Interprofessional collaboration and team-based care are essential strategies in modern healthcare, aiming to enhance patient outcomes, reduce medical errors, and improve overall system efficiency. This seminar explores the principles, benefits, and challenges of collaborative practice among healthcare professionals, including physicians, pharmacists, nurses, therapists, and allied health workers. It highlights how effective communication, shared decision-making, and mutual respect foster a coordinated approach to patient care. Emphasis will be placed on real-world applications, case studies, and frameworks that promote teamwork across diverse healthcare settings. The seminar also addresses barriers such as role conflicts, hierarchy, and resource limitations, while discussing strategies to overcome them. By integrating interprofessional collaboration into practice, healthcare teams can provide patient-centered, safe, and high-quality care, ultimately transforming the healthcare delivery landscape.

**Keywords:** Patient Outcomes, Medical Errors, Healthcare Efficiency, Collaborative Practice, Healthcare Professionals



ABSTRACT NO: ICCPPR-SPS-309

## Pharmacological Potential of Cinnoline Scaffolds in Breast Cancer Treatment

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### Abstract

Breast cancer remains a leading cause of cancer-related morbidity and mortality among women worldwide, necessitating the continuous search for novel therapeutic agents. Cinnoline, a nitrogen-containing heterocyclic scaffold, has emerged as a promising framework in medicinal chemistry due to its versatile pharmacological properties, including anticancer, anti-inflammatory, and antimicrobial activities. Recent studies have highlighted the potential of cinnoline derivatives as targeted therapeutics in breast cancer, owing to their ability to modulate key molecular pathways involved in tumor growth, proliferation, angiogenesis, and metastasis. Both computational and experimental approaches have been employed to design, synthesize, and evaluate these compounds, revealing their efficacy in inhibiting critical targets such as kinases, receptors, and transcription factors associated with breast cancer progression. Structure–activity relationship (SAR) analyses further provide insights into the chemical modifications that enhance potency and selectivity. This review consolidates current knowledge on the pharmacological activities, mechanistic insights, and therapeutic applications of cinnoline-based compounds in breast cancer. It emphasizes their potential as lead molecules for drug development and highlights future directions for preclinical and clinical investigations.



ABSTRACT NO:ICCPR-SPS-310

## **Green Pharmacy and Sustainable Drug Development: Bridging Pharmacognosy, Toxicology, and Regulatory Affairs**

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### **Abstract**

In the face of growing environmental concerns, Green Pharmacy is emerging as a transformative approach in drug development, integrating sustainability with pharmacology, pharmacognosy, toxicology, and regulatory affairs. Green Pharmacy focuses on minimizing the ecological footprint of pharmaceutical processes by leveraging natural products, promoting eco-friendly extraction methods, and adopting sustainable manufacturing practices. This concept emphasizes the use of biodegradable materials, plant-based pharmaceuticals, and innovative approaches to drug development, ensuring that environmental toxicity is minimized without compromising therapeutic efficacy. Pharmacognosy plays a critical role in identifying and isolating bioactive compounds from plants and other natural sources. These compounds can serve as sustainable alternatives to synthetic drugs, reducing the reliance on petroleum-based chemicals. However, this shift towards plant-derived products raises concerns regarding their toxicity and safety, which are often poorly understood. Therefore, toxicology becomes essential in evaluating the environmental and health risks posed by these natural products, ensuring their safety profile meets regulatory standards. The regulatory framework for green pharmacy remains underdeveloped, posing challenges for the integration of green practices into the pharmaceutical industry. Policymakers are tasked with establishing clear guidelines for the ethical sourcing, quality assurance, and sustainability of natural-based drugs. This abstract discusses the importance of these integrative areas—pharmacognosy, toxicology, and regulatory affairs—in promoting a future where pharmaceutical development is not only effective but also sustainable, ensuring the safety of both the environment and the consumer.

**Keywords** : Green Pharmacy, Sustainability, Pharmacognosy, Toxicology, Regulatory Affairs, Natural Products.



ABSTRACT NO: ICCPPR-SPS-311

## **Pharmacovigilance in the 21st Century: Enhancing Drug Safety and Therapeutic Outcomes through Innovation and Global Collaboration**

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### **Abstract**

Pharmacovigilance plays a pivotal role in ensuring the safety and efficacy of pharmaceuticals in real-world settings. As we progress into the 21st century, the landscape of drug safety is evolving, with innovation and global collaboration driving the future of pharmacovigilance. Modern pharmacovigilance is no longer limited to the post-market phase but is increasingly integrated into the entire drug lifecycle, from preclinical development to post-marketing surveillance. Technological advancements, including big data analytics, real-world evidence, and AI-powered signal detection, are revolutionizing the way adverse drug reactions (ADRs) are identified, monitored, and managed. By harnessing electronic health records (EHR), social media, and patient-reported outcomes, pharmacovigilance is becoming more proactive, enabling early detection of safety concerns and a more comprehensive understanding of drug risks. Global collaboration is also essential in today's interconnected world. As pharmaceutical markets become more diverse, regulatory bodies worldwide—such as the FDA, EMA, and WHO—must work together to harmonize pharmacovigilance practices and data sharing. This ensures timely and accurate drug safety monitoring across regions, improving the global therapeutic outcomes for patients. This abstract discusses the pivotal role of innovation and collaboration in enhancing pharmacovigilance systems, facilitating the identification of safety issues, ensuring patient protection, and fostering more effective therapeutic strategies globally. By embracing technological advancements and fostering international cooperation, the future of pharmacovigilance promises to contribute to safer and more effective healthcare worldwide.

**Keywords:** Pharmacovigilance, Drug Safety, Real-World Evidence, Global Collaboration, Innovation, Adverse Drug Reactions.



ABSTRACT NO: ICCPPR-SPS-312

## **Advancements in Nanomedicine: Revolutionizing Drug Delivery Systems in Pharmaceutical Biotechnology**

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### **Abstract**

Nanomedicine has emerged as a transformative field in pharmaceutical biotechnology, offering innovative solutions to long-standing challenges in drug delivery. By utilizing nanoscale materials such as liposomes, polymeric nanoparticles, dendrimers, micelles, and inorganic nanocarriers, nanomedicine enables precise drug targeting, controlled release, and improved bioavailability. These advancements not only enhance therapeutic efficacy but also reduce systemic toxicity and adverse effects. Nanocarrier-based systems have shown significant potential in treating complex diseases, including cancer, neurodegenerative disorders, and infectious diseases, by enabling site-specific delivery and overcoming biological barriers. Furthermore, the integration of nanotechnology with advanced biotechnological approaches, such as ligand conjugation, stimuli-responsive systems, and personalized nanomedicine, is driving a paradigm shift toward safer, more effective, and patient-centered therapies. Despite challenges in large-scale manufacturing, regulatory approval, and long-term safety evaluation, nanomedicine continues to revolutionize the pharmaceutical landscape, representing a promising frontier in modern drug delivery systems.

**Keywords:** Nanomedicine, Drug delivery systems, Pharmaceutical biotechnology, Nanocarriers, Targeted drug delivery



ABSTRACT NO: ICCPPR-SPS-313

## **Advances in the Management of Non-Alcoholic Fatty Liver Disease: Present and Future Approaches**

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### **Abstract**

Non-Alcoholic Fatty Liver Disease (NAFLD) has emerged as the most common chronic liver disorder worldwide and is increasingly recognized as a major global health burden. According to WGO practice guidelines, NAFLD is defined as excessive triglyceride accumulation in the liver, and its prevalence is strongly associated with obesity, type II diabetes mellitus, and hyperlipidemia. Pathogenesis involves oxidative stress, lipid deposition, lipotoxicity, and endoplasmic reticulum stress. International guidelines recommend lifestyle modifications, including a healthy diet, physical activity, and weight loss, as the first-line approach. However, pharmacological options are being increasingly explored to complement lifestyle interventions. Several agents show promise in clinical trials, including GLP-1 receptor agonists, SGLT2 inhibitors, Cenicriviroc, Vofsofovir, Resmetirom (Rezdiffra), Vitamin E, Pioglitazone, Farnesoid X receptor (FXR) agonists, PPAR ligands, lipid-lowering agents, pentoxifylline, angiotensin receptor blockers, and n-3 polyunsaturated fatty acids. This paper highlights the evolving landscape of NAFLD management, discussing both current evidence-based interventions and emerging therapeutic strategies that may transform future treatment paradigms.



ABSTRACT NO: ICCPPR-SPS-314

**Emerging Insights into Desidustat for the Treatment of Anemia in Chronic Kidney Disease****Chintha Chandran <sup>\*1</sup>, Saravanan G<sup>2</sup>****<sup>1</sup>Department of Pharmacy Practice, School of Pharmaceutical Sciences, Vels Institute of Science, Technology & Advanced Studies, Pallavaram, Chennai, Tamilnadu 600117, India****<sup>2</sup>Department of Pharmaceutical Chemistry, Vel Pharmacy College, Vels Institute of Science, Technology & Advanced Studies (VISTAS), Periyapalayam Road, Manjankaranai Village, Uthukkottai Taluk, Tiruvallur - 601102, Tamil Nadu.****\*For correspondence: chinthachandran97@gmail.com****Abstract**

Anaemia is a common and serious complication of chronic kidney disease (CKD), often appearing in early stages and worsening with disease progression. The primary cause is reduced erythropoietin (EPO) production, impairing red blood cell synthesis. Current standard therapy involves erythropoiesis-stimulating agents (ESAs) such as recombinant human erythropoietin (epoetin alfa). While effective, ESA therapy is limited by issues of hypo-responsiveness and the need for parenteral administration, highlighting the need for alternative therapeutic strategies. Prolyl Hydroxylase Domain (PHD) inhibitors have emerged as a promising class of drugs for CKD-related anaemia. Desidustat (Oxemia™), developed by Zydus Cadila, is an orally bioavailable Hypoxia-Inducible Factor Prolyl Hydroxylase (HIF-PH) inhibitor. By stabilizing the HIF pathway, it promotes endogenous EPO production and improves erythropoiesis through a physiological mechanism. Desidustat offers a significant advancement in the management of CKD-induced anaemia. Its oral formulation, unique mechanism of action, and potential applicability in chemotherapy-induced and COVID-19-related anaemia position it as a promising alternative to conventional ESAs.



ABSTRACT NO: ICCPPR-SPS-315

## Novel Cinnoline Derivatives as Potential Therapeutics for Breast Cancer via TACE Inhibition

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### Abstract

Breast cancer remains the leading malignancy among women worldwide, with rising incidence and high mortality, particularly in developing countries. Tumor progression is strongly dependent on tumor necrosis factor- $\alpha$  converting enzyme (TACE/ADAM17), which activates epidermal growth factor receptor (EGFR) signaling to drive tumor expansion and metastasis. Inhibiting TACE has therefore emerged as a promising therapeutic strategy to overcome resistance and limit tumor progression. This study investigates the therapeutic potential of cinnoline derivatives, nitrogen-containing heterocyclic compounds with known anticancer activity, as novel TACE inhibitors in breast cancer. Novel derivatives of 3-acetyl-6-(substituted benzoyl) cinnolin-4(1H)-one (C10 series) were synthesized and characterized using FTIR, NMR, and mass spectrometry. Computational analyses, including molecular docking and molecular dynamics simulations, were performed to evaluate TACE binding affinity. In vitro cytotoxicity was assessed using the MTT assay on MCF-7 breast cancer cells. Pharmacokinetic and drug-likeness profiles were predicted through ADMET analysis. The synthesized cinnoline derivatives exhibited promising binding potential toward TACE and demonstrated anticancer activity in vitro, highlighting their potential as future drug candidates for breast cancer therapy. Further preclinical evaluation is required to optimize their efficacy and pharmaceutical properties



ABSTRACT NO: ICCPPR-SPS-316

## Novel Thiazoles: Emerging Frontiers in Medicinal Chemistry

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### Abstract

Thiazole, a nitrogen–sulfur heterocyclic framework, has gained considerable attention in medicinal chemistry owing to its versatile biological properties and structural adaptability. Over the past decades, thiazole derivatives have been extensively investigated and reported to exhibit a wide range of pharmacological activities, including antimicrobial, anticancer, anti-inflammatory, antiviral, antioxidant, and analgesic effects. Their ability to interact with diverse biological targets makes thiazoles a privileged scaffold in modern drug discovery. This review summarizes the recent advances in the synthesis, design strategies, and pharmacological evaluation of novel thiazole derivatives. Special emphasis is placed on structure–activity relationship (SAR) insights that highlight how specific substitutions on the thiazole core influence potency and selectivity. In addition, computational approaches, including molecular docking and ADMET predictions, are increasingly employed to accelerate the identification of thiazole-based lead compounds. Overall, the accumulated evidence underscores the emerging frontiers of thiazoles as valuable scaffolds for the development of new therapeutic agents. Continued interdisciplinary research combining synthetic chemistry, biological evaluation, and computational modeling is expected to enhance their clinical translation potential.



ABSTRACT NO: ICCPPR-SPS-317

**Pre-eclampsia: Emerging Concepts in Prediction, Prevention, and Treatment****Paturi Pravallika\*1, Saravanan G2****1Department of Pharmacy Practice, School of Pharmaceutical Sciences, Vels Institute of Science, Technology & Advanced Studies, Pallavaram, Chennai, Tamilnadu 600117, India****2Department of Pharmaceutical Chemistry, Vel Pharmacy College, Vels Institute of Science, Technology & Advanced Studies (VISTAS), Periyapalayam Road, Manjankaranai Village, Uthukkottai Taluk, Tiruvallur - 601102, Tamil Nadu.***\*For correspondence: keerthipravallika5555@gmail.com***Abstract**

Pre-eclampsia is a multisystem hypertensive disorder of pregnancy that remains a leading cause of maternal and perinatal morbidity and mortality worldwide. Despite advances in obstetric care, its unpredictable onset and complex pathophysiology pose major clinical challenges. This review highlights recent progress in the understanding of pre-eclampsia, with a focus on emerging strategies for prediction, prevention, and treatment. Pathogenesis is now increasingly linked to abnormal placentation, angiogenic imbalance, oxidative stress, and maternal immune dysregulation. Prediction tools combining maternal risk factors, biophysical parameters, and biomarkers (such as PIGF and sFlt-1) are under evaluation for early identification of high-risk women. Preventive measures, particularly low-dose aspirin and calcium supplementation, have shown promise in reducing incidence among at-risk populations. Advances in antihypertensive therapy, novel biomarkers, and targeted interventions are paving the way for improved management, although safe and effective curative options remain limited. Continued research into molecular mechanisms and translational approaches is essential to refine prediction models, optimize preventive strategies, and improve maternal–fetal outcomes in pre-eclampsia



ABSTRACT NO: ICCPPR-SPS-318

**Emerging Role of Marine Sponge-Derived Bioactive Compounds in Wound Therapy****Sruthy PN\*1, Saravanan G2****1Department of Pharmaceutics, School of Pharmaceutical Sciences, Vels Institute of Science, Technology & Advanced Studies, Pallavaram, Chennai, Tamilnadu 600117, India****2Department of Pharmaceutical Chemistry, Vel Pharmacy College, Vels Institute of Science, Technology & Advanced Studies (VISTAS), Periyapalayam Road, Manjankaranai Village, Uthukkottai Taluk, Tiruvallur - 601102, Tamil Nadu.***\*For correspondence: sruthyprasanth23@gmail.com***Abstract**

Marine sponges are a prolific source of structurally diverse secondary metabolites with significant pharmaceutical potential. Over the past decades, extensive research has highlighted their role as reservoirs of bioactive compounds with antimicrobial, anti-inflammatory, antioxidant, and anticancer properties. Recently, increasing attention has been directed toward their therapeutic applications in wound healing, a complex biological process involving hemostasis, inflammation, proliferation, and tissue remodeling. Sponge-derived metabolites such as alkaloids, terpenoids, peptides, and polyketides have demonstrated promising activity in accelerating wound closure by modulating inflammatory responses, promoting angiogenesis, enhancing fibroblast proliferation, and stimulating collagen deposition. Additionally, their antimicrobial properties provide protection against wound infections, which remain a major clinical challenge in chronic and non-healing wounds. Advances in nanotechnology and biomaterials have further expanded opportunities for incorporating these natural compounds into wound dressings, hydrogels, and scaffolds to improve targeted delivery and therapeutic efficacy. This marine sponge-derived bioactive metabolites, their mechanisms of action, and their emerging role as innovative candidates for wound therapy.