



# ECO SCIENCE JOURNALS

We care for health & Nature

## CONFERENCE PROCEEDINGS

SOUVENIR AUSHADH 2K24

"Interdisciplinary Frontiers in Precision Medicine: A Multidisciplinary Approach"

Held on February 8-9, 2024

Organized by



VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH

In Association with



**ABSTRACT-1****METHOD DEVELOPMENT AND VALIDATION OF ETRAVIRINE IN ITS BULK DOSAGE FORM BY USING RP-HPLC METHOD AS PERICH GUIDELINESS.**

Shilaja Avula\*, Arya college of pharmacy.

A RP-HPLC method has been used for the estimation of Etravirine in pharmaceutical dosage forms, using ultra violet (UV) detector. Elution was carried out using a mobile phase consisting of acetonitrile and flow rate was set on 1 ml/min at 271 nm. The retention time for Etravirine was found to be 1.80. The method was found to be linear in the range of 10-60 µg/ml. In the linearity study, regression equation and correlation coefficient was found to be  $y=16.95x+17.148$  and 0.999.

**ABSTRACT-2  
DESMOSOMES.**

Merlin T Babu\*, N. Madhavi, CMR College of Pharmacy.

Intercellular junctions known as desmosomes facilitate cell-cell adhesion and secure the intermediate filament network to the plasma membrane, giving tissues like the heart and epidermismechanical robustness. Desmosomal proteins play essential roles in adhesion, but they are now becoming known as cell signalling mediators that are necessary for healthy cell and tissue functioning. The knowledge on desmosomal proteins controlling adhesion and signalling in healthy skin, including morphogenesis, differentiation and homeostasis, wound healing, and defence against environmental harm, is summarised in this study. We also talk about howpathogenesis is aided by human disorders that either directly or indirectly interfere with these mechanical and signalling functions of desmosome molecules. At least three distinct protein families are represented in desmosomes: armadillo proteins like plakoglobin (Pg) and plakophilin (Pkp2) isoforms, cadherin-type adhesion proteins that are members of the desmoglein (Dsg) and desmocollin (Dsc) subfamily, and the plakin family member desmoplakin (Dp). Lipid raft membrane domains closely control desmosome turnover, while post-translational changes of plaque proteins, such as Dp phosphorylation, which fine-tunes the cytoskeletal anchoring of desmosomes, control their construction and disintegration.

**KEYWORDS:** Desmosomes, Adhesion, Plakoglobin, Desmoplakin, Desmocollin.**ABSTRACT-3****3D PRINTING IN PHARMACEUTICALS: AN EMERGING TECHNOLOGY EMPOWERING PRECISION MEDICINE.**

Nelikanti Vaishnavi\*, CMR College of Pharmacy.

3D printing, also known as additive manufacturing, is revolutionizing various industries, includingtherapeutic delivery. Its ability to create intricate 3D structures with precision and customization has made it a promising approach for targeted and efficient delivery of therapeutic agents. This versatile tool has gained recognition in fields like engineering, manufacturing, and healthcare, particularly in the realm of therapeutic delivery.3D printing technology has revolutionized therapeutic delivery by enabling personalized medicine and targeted drug release. Researchers have successfully created personalized drug delivery systems for individual patients, enabling precise dosing, controlled release, and targeted delivery. These advancements have the potential to revolutionize healthcare by optimizing therapeutic efficacy while minimizing adverse side effects.

**KEYWORDS:** Additive manufacturing, Intricate 3D structures, Personalized medicine, Therapeutic delivery.

**ABSTRACT-4****NOVEL EPIGENETIC THERAPEUTIC STRATEGIES AND TARGETS IN CANCER.**

Abhiram Chilukuri\*, Dr. V. Sireesha, CMR College of Pharmacy.

The critical role of dysregulated epigenetic pathways in cancer genesis, development, and therapy has typically been established as a result of scientific and technical innovations in next generation sequencing. RNA interference, histone modification, DNA methylation and chromatin remodeling are epigenetic processes that control gene expression without causing mutations in the DNA. Although epigenetic abnormalities are thought to be a symptom of cell tumorigenesis and malignant events that impact tumor growth and drug resistance, physicians believe that related processes might be a key therapeutic target for cancer treatment and prevention due to their reversible nature of these processes. A plethora of novel strategies for addressing epigenetics in cancer therapy for immuno-oncological complications are currently available - ranging from basic treatment to epigenetic editing. – and they will be the subject of this comprehensive review. In this review, we cover most of the advancements made in the field of targeting epigenetics with special emphasis on microbiology, plasma science, biophysics, pharmacology, molecular biology, phytochemistry, and nanoscience.

**KEYWORDS:** Epigenetics, Therapeutic targets, Cancer, Nanomedicines.

**ABSTRACT-5****GENOMIC TECHNOLOGY IN MEDICINE.**

Nagulapally Sanjana\*, CMR College of Pharmacy.

Numerous industries, including bioenergy production, synthetic biology, environmental science, computational science, information technology, medicine, and health and wellness management have all benefited greatly from the development of genomic technologies. The traditional laboratory genetic techniques of microscopic cytogenetics, fluorescence in situ hybridization (FISH), Southern blotting, denaturing gel electrophoresis, single stranded conformation, and many other non-sequencing genetic laboratory methods have rapidly given way to next generation genome sequencing technologies. While Sanger sequencing has continued to play a significant role in genome sequencing, it is no longer the only method used. Several other methods, such as whole exome sequencing, array comparative genome hybridization, and whole genome sequencing, are now well established. Genomic medicine was revolutionised by the sequencing of the entire human genome. Nevertheless, little is known about the intricate interactions between genes, environments, and lifestyles, as well as the impact of non-coding genomic areas on human health. The field of genomic medicine has significant promise for the diagnosis, prognosis, and tailored therapy of diseases. However, a lot of the promising technologies in genomic medicine are still in their early stages of development, and our poor understanding may limit their use, preventing it from being used in many clinical contexts. Clinicians across all specialties can employ genomic technologies to diagnose individuals with high-risk genetic defects causing illness. Genetic data can be used to forecast a person's response to a given medication, including whether or not they will respond well to it and whether or not using it would cause any negative effects. This enables the treatment team to decide on the best course.

**KEYWORDS:** Genomic technology, Sequencing, Genome, Clinical.

**ABSTRACT-6****STABILITY INDICATING METHOD DEVELOPMENT AND VALIDATION OF GLIMEPIRIDE.**

Aliveni Patlolla\*.

A simple, precise, and accurate RP-HPLC method has been developed and validated for the quantitative analysis of Glimepiride in bulk formulation. An isocratic separation was achieved using an Inertsil ODS C18 (250mm×4.6mm) 5µm particle size column with a flow rate of 1 ml/min and UV detector at 230nm. The mobile phase consisted of Acetonitrile and methanol (70:30 v/v). The diluents consist Water, Methanol, and Acetonitrile. The method was validated for specificity, linearity, precision, accuracy robustness and ruggedness. The specificity of the method was determined by assessing interference from the placebo and by stress testing the drug (forced degradation). The method was linear over the concentration range 20–80 ppm ( $r^2 = 0.999$ ). The accuracy of the method was between 98–102%. The method was found to be Robust and suitable for the quantitative analysis. Degradation products resulting from the stress studies did not interfere with the detection of Glimepiride so the analysis is thus stability- indicating.

**KEYWORDS:** Glimepiride, Stability-indicating, RP-HPLC.

**ABSTRACT-7****ANTI-HIV ACTIVITY OF NOVEL TRIAZOLOQUINAZOLINE ANALOGS.**

Saravanan Govindaraj\*, Institute of Science, Technology and Advanced Studies (VISTAS).

Using a nucleophilic substitution reaction of 4-(2-(methylthio)-5-phenyl-[1,2,4]triazolo quinazoline (**X**) with different aryl amines a novel series of N-substituted-5-phenyl- [1,2,4]triazolo[1,5-c]quinazolin-2-amine (**XIa–o**) was synthesized. From anthranilic acid, the starting material 2-(methylthio)-5-phenyl-[1,2,4]triazolo quinazoline (**X**) was synthesized. All synthesized compounds **XIa–o** were screened for their anti-HIV activity in MT-4 cells against replication of HIV-1 (III B) and HIV-2 (ROD). The anti-HIV activity results indicated that entire test analogs displayed mild to moderate anti-HIV potency against HIV-1 and HIV-2 strains. Among the 15 compounds examined, two compounds showed MIC ranged 7.15–16.79 µg/mL, five compounds at 34.14–49.5 µg/mL, three compounds at 57.2–80.34 µg/mL, and 4 compounds at 100.0 µg/mL on HIV-1 strains. The same trend of activity profile was observed on test compounds on the HIV-2 strain. The compound with 4-pyridinyl substitution (**XIb**) showed good activity (57.2 µg/mL) than the 2-pyridinyl substituted compound (77.2 µg/mL). However, the introduction of 2-methyl (**XId**), 4-methyl (**XIe**), 2-methoxy (**XIf**) and 4-methoxy (**XIg**) groups on the phenyl ring led to a complete loss of activity. The compound with electron-withdrawing moiety (p-NO<sub>2</sub>) on the aryl ring (**XIi**) displayed potent activity (7.15 µg/mL) against HIV-1 and HIV-2. Among the various halo-substituted analogs (**XIk–o**), compounds having p-chloro substituents (**XIk**) displayed better anti-HIV activity at 16.79 µg/mL concentration against HIV-1 and HIV-2. The results obtained from this study confirm that the synthesized and biologically evaluated triazolo quinazolines showed promising anti-HIV activity.

**ABSTRACT-8****SMART PILLS: THE FUTURE OF PHARMACEUTICAL TECHNOLOGY.**

Gaddam Namitha\*, K. Mary Swarnalatha, CMR College of Pharmacy.

The healthcare industry is constantly evolving with new innovations and technologies being introduced every day. One such technology that is gaining popularity and attention is smart pills. The term "smart pills" refers to miniature electronic devices that are formed and designed within the mildew of pharmaceutical capsules however perform extremely advanced functions such as sensing, imaging, and drug delivery. They will include biosensors or image, hydrogen ion concentration, or chemical sensors. Though examples of this technology, such as capsule endoscopy, have been successfully translated from the lab into clinically used products, there are still numerous challenges that need to be overcome. Smart pills have revolutionized the diagnosing intestinal tract disorders and will replace typical diagnostic techniques like an endoscopy. Smart pills that offer a clear image of the colon are complementary to endoscopy. It is an alternative for patients who refuse invasive colon exams, have hemorrhage or sedation risks or inflammatory internal organ sickness, or have had a previous incomplete endoscopy. Hailed as the future of pharmaceutical technology, these pills could revolutionize the way we monitor and treat a wide variety of diseases. As more research is done and the technology becomes more widely available, we can expect smart pills to play an increasingly important role in the healthcare industry.

**KEYWORDS:** Microchips, Biosensors, Imaging, Diagnosing disorders.

**ABSTRACT-9****EFFECTS OF INOSITOLS IN WOMEN WITH PCOS.**

Saniaali\*.

PCOS- is endocrinological and metabolic disorder most common in women of reproductive age. The pathology exhibits alterations in the reproductive function, including hyperandrogenism, menstrual cycle irregularity, type 2 diabetes (insulin resistance). The visible conditions are phenotypical manifestations as hirsutism, acne, over weight to obesity. Various therapeutic approaches have been attempted in PCOS, including diet, oral-contraceptives or anti-androgens. The use of insulin sensitizers like metformin reduces such metabolic and hormonal impairments as metformin induces side effects, new strategies have been proposed to treat insulin resistance. Introduction of Inositol in the treatment plan has proved reasonable in countering the endocrine- metabolic disorders of this syndrome. Two inositol stereoisomers Myo-Inositol; D-chiro-Inositol are represented in Humans. Clinical evidence has demonstrated that 40:1 ratio between Myo- Inositol and D-chiro-Inositol is optimal combination to restore ovulation and PCOS in women. Many studies demonstrated that MI treatment improved ovarian functions and fertility and decreased the severity of hyperandrogenism, acne, hirsutism, positively affected metabolic aspects and modulated various hormonal parameters involved in ovulation and reproductive function. Inositol is safe and effective when compared with Metformin.

**KEYWORDS:** Endocrinology, Hyperandrogenism, Anovulation, Hirsutism, Sterioisomers.

**ABSTRACT-10****PLANTS CAN “SPEAK” TO EACH OTHER.**

B. Sunitha kumari\*, N. Bindhu.

In nature, plants live together in communities composed of one or more species that communicate through variety of complex mechanisms. They secretly talk, trade and wage war against one another. They do the things using a network of fungi that grow around and inside their roots named mycorrhiza. plant can detect the Presence of their neighbours and modify their growth behaviour accordingly. The groups of plants that are interlinked through a common mycorrhizal network are termed “guilds”. When we think about plants, we do not normally imagine them speaking to each other, but they do communicate-in many different ways. More than a century ago, the eminent biologist Charles Darwin suggested that plants have a brain -like structure at their root tips. In this case, Darwin’s root-brain hypothesis was wrong but modern research shows that plants can communicate. They speak with other plants as well as with animals and even people. They do this primarily using chemicals and sound.

**ABSTRACT-11****EVALUATION OF CYTOTOXICITY AND OXIDATIVE STRESS INDUCED BY COPPER OXIDE NANOMATERIAL.**

Ausali Saijyothi\*, Assistant professor, Department of Pharmacology, MNR College of Pharmacy.

Copper oxide (CuO) nanomaterials (NMs) have been used in diverse applications innanotechnology related fields. There is a growing body of information about hazards of NMs while little is known concerning the risks of CuO NM exposure. Hence, the present study was undertaken to understand the cytotoxicity and oxidative stress effect of CuO NM using *in vitro* and *in vivo* models. *In vitro* cytotoxicity studies were conducted in SKNSH cell lines. The results showed that CuO NM can induce dose dependent cell death and the IC<sub>50</sub> was determined as 51 µg/ml through MTT assay. The cytotoxicity was induced by CuO NM through producing ROS in a dose dependent manner in treated cell lines. This finally resulted in apoptosis in a dose dependent manner confirmed by FACS analysis. Acute and repeated (28 days) oral toxicity studies in female Wistar rats were conducted following OECD guidelines 420 & 407 respectively. In Acute study we observed no death at any concentration, hence the LD<sub>50</sub> of CuO NM was determined as 2000 mg/kg. Repeated oral study was conducted at 30, 300 & 1000 mg/kg dose levels to understand the dose dependent effect of CuO NM in liver, kidney and brain of treated rats. The results revealed that there was significant dose dependent decrease in body weights. Oxidative stress biomarkers analysis revealed significant dose dependent increase in lipid peroxidation, decrease in GSH levels in liver, kidney and brain of treated rats when compared with controls. Antioxidant enzymes assay revealed that there was significant dose dependent decrease in SOD, GR activities and increase in CAT, GPx and GST activities. Histopathological study revealed pathological changes in liver, kidney and brain of the treated rats when compared to control. On the whole it was observed that liver is mostly affected organ followed by kidney and brain. These results can be correlated with biodistribution studies which shows that the NM was mostly accumulated in liver followed by kidney and brain. This study suggests that the nano size and dose of the CuO possibly played a prime role in bringing the cytotoxicity and oxidative stress.

**ABSTRACT-12****STRENGTHENING MEDICATION DISPENSING SECURITY: BIOMETRIC PHARMACIST AUTHENTICATION WITH PVS INTEGRATION.**

Shaik Abdul Salman\*, Sultan ululoom college of Pharmacy.

The abstract outlines a comprehensive approach to enhancing medication dispensing security by implementing a biometric authentication system integrated with Pharmacy Verification Systems (PVS). This system ensures strict compliance with procurement, purchasing, and dispensing laws while improving patient safety and regulatory adherence.

Biometric authentication, utilizing features like fingerprints or iris patterns, ensures secure pharmacist identification before accessing medication dispensing functionalities. Integration with PVS devices mandates the entry of all drugs into the system, facilitating comprehensive tracking and monitoring of medication inventory. This not only enhances accountability but also streamlines the dispensing process, minimizing errors and fraudulent activities.

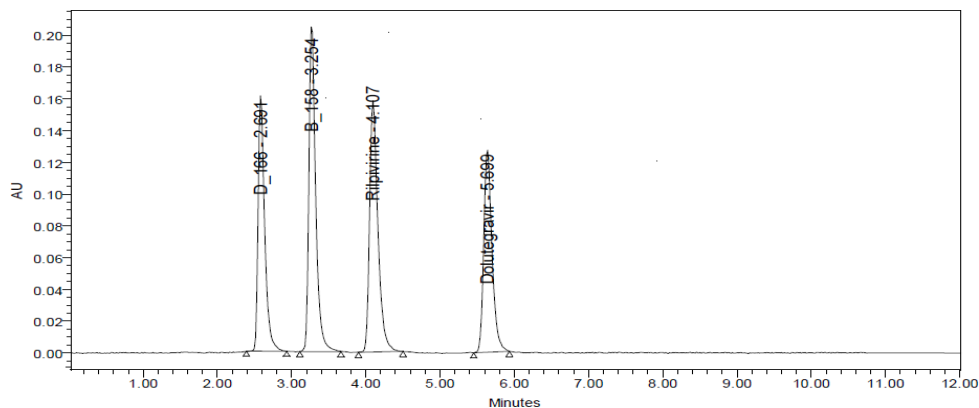
The proposed system aligns with stringent laws governing medication procurement, purchasing, and dispensing, ensuring compliance with regulatory standards. By mandating biometric authentication and PVS integration, unauthorized personnel are prevented from dispensing medications, reducing the risk of medication errors, fraud, and diversion.

In summary, the biometric pharmacist authentication system, coupled with PVS integration, represents a significant advancement in medication dispensing security. It ensures that only authorized personnel can access and dispense medications, thereby enhancing patient safety and regulatory compliance within healthcare settings.

**ABSTRACT-13****ANALYTICAL METHOD DEVELOPMENT AND VALIDATION FOR THE SIMULTANEOUS ESTIMATION OF DOULTEGRAVIR AND RILPIVIRINE RELATED IMPURITIES RILPIVIRINE Z ISOMER AND DOLUTEGRAVIR HYDROXY IMPURITY USING RP HPLC IN DOULTEGRAVIR AND RILPIVIRINE BULK DRUG FORMULATION.**

Varada Soujanya\*, Revu Baby Nalanda, GITAM School of Pharmacy.

The combination of Doulegravir and Rilpivirine is used to treat human immunodeficiency (HIV) virus. A new stability indicating RP-HPLC method has been proposed for the separation and quantification of Doulegravir and Rilpivirine related impurities Rilpivirine Z Isomer and Doulegravirhydroxy impurity in Doulegravir and Rilpivirinebulk drug formulations using WaterHPLC System (PDA detector) and auto sampler integrated with Empower 2 Software with Inertsil(250 × 4.6 mm, 5 μ) C18 column (PDA detector) was used for the present study. A mixture of 0.01N phosphate buffer and acetonitrile (50: 50, v/v) (pH adjusted to 4.8 with TEA and ortho phosphoric acid) was used as mobile phase for the chromatographic study (Flow rate: 1.0 ml/min; Injection volume: 10 μl; Detection wavelength: 257 nm) with run time 12 mins. Stress degradation studies were performed and the method was validated as per ICH guidelines. The developed method was found to be precise, specific, accurate, linear, stable and robust for the quantification of Doulegravir and Rilpivirine related impurities Rilpivirine Z Isomer and Doulegravir hydroxy impurity in its bulk drug formulation. The developed method can be applied successfully to quality control and for other analytical purposes.

**Optimized Chromatogram for quantification of impurities.****ABSTRACT-14****GENOMICS AND ARTIFICIAL INTELLIGENCE INTEGRATION: PIONEERING PERSONALIZED HEALTHCARE.**

Jaladi Yagna Priya Syamala\*, Gajjela Parvathi, Kakani Anil Kumar, Kanaka Durga Devi Nelluri,

KVSR Siddhartha College of Pharmaceutical Sciences, Vijayawada-520010, Andhra Pradesh, India.

Unprecedented insights into individual health have been made possible by the combination of genomics and artificial intelligence (AI), which has completely changed the personalised medicine landscape. This innovative integration allows for the analysis of large genomic datasets by combining the strength of powerful AI algorithms with modern genomics. Through deciphering the complex genetic makeup of an individual, this combination enables the creation of customised prognoses and therapy suggestions. This creative method represents a paradigm change in healthcare, replacing the conventional one-size-fits-all strategy with a precise and customised one. The combination of AI with genomics allows for the extremely accurate identification of genetic variants, disease indicators, and possible health hazards. AI algorithms enable large-scale genomic data processing, which not only quickens the rate of genetic discoveries but also offers a thorough grasp of the intricate interactions between genes and health consequences. Healthcare might become a proactive and preventive system with the merging of AI and genetics. Practitioners can predict possible health problems by interpreting each person's distinct genetic code. This enables early intervention and individualised treatment plans. This method helps to minimise side effects and maximise therapeutic outcomes in addition to increasing the effectiveness of healthcare interventions. Moreover, the unification of genomics with AI promotes progress in the domain of pharmacogenomics, customising medication recommendations according to a person's genetic reaction. By reducing the possibility of negative drug responses and improving treatment efficacy, precision medicine opens the door to a more patient-centered healthcare paradigm.

**KEYWORDS:** Genomics, Artificial Intelligence, Pharmacogenomics, Patient-Centered Healthcare Paradigm.



**ABSTRACT-15****NANOTECHNOLOGY AND DRUG DELIVERY: PRECISION MEDICINE UNVEILED.**

Rayala Sravya Sri\*, Mandava Sai Sowmya, Kakani Anil Kumar, Kanaka Durga Devi Nelluri,

KVSR Siddhartha College of Pharmaceutical Sciences, Vijayawada-520010, Andhra Pradesh, India.

Particularly in the area of medication distribution, nanotechnology has become a ground-breaking frontier in the healthcare industry. This research explores the novel ways that nanotechnology can be applied to create targeted drug delivery systems that will transform the way that medications are administered. These technologies provide accurate medication administration at the cellular or molecular level by utilising the special qualities of nanomaterials, thereby bringing about a paradigm shift towards individualised and successful treatment plans. The inherent problems with conventional medication administration techniques are resolved by combining nanotechnology with drug delivery. Therapeutic compounds are enclosed and transported using nano-sized carriers, such as liposomes, nanoparticles, and micelles. This improves the medications' solubility and durability while also making it easier for them to be released under regulated conditions, guaranteeing the right dosage and long-lasting therapeutic benefits. The capacity of nanotechnology to target particular cells or tissues minimises off-target effects and lowers systemic toxicity is one of its greatest advantages in medicine administration. The innate ability to cross biological barriers promotes better pharmacokinetics and increased bioavailability, both of which increase therapy efficacy. Additionally, because nanocarriers are flexible, medication release profiles can be tailored to meet the specific needs of various therapeutic applications. This study examines the various ways that nanotechnology affects medication administration, highlighting how it has the potential to completely transform patient outcomes. The accuracy provided by nanoscale drug carriers reduces side effects and creates new opportunities for treating difficult diseases. The future of medicine is revealing itself as we traverse this intersection of medication delivery and nanotechnology: a world where personalised and targeted medicines are redefining the parameters for patient care.

**KEYWORDS:** Nanotechnology, Nanoscale Drug Carriers, Pharmacokinetics, Bioavailability.

**ABSTRACT-16****REVIEW ON MAGNETIC MICROSPHERE.**

Jillella Vasantha\*.

Recently a number of novel drug delivery systems have emerged to minimize drug degradation and loss, to prevent harmful side-effects, to increase drug bioavailability and to achieve controlled and targeted drug delivery. Magnetic microsphere is one of the newer approach in pharmaceutical field due to their biocompatibility, easy of surface modification and magnetic properties. The magnetic properties of these particles add a new dimension where they can be manipulated upon application of an external magnetic field. This property opens up new applications where drugs that are attached to a magnetic particle to deliver the drug at a rate directed by the needs of the body during the period of treatment and target the activity entity to the site of action in the body using a magnetic field. Magnetic microsphere is prepared by various techniques and has various applications in diagnosis and treatment of various diseases. In this larger amount of freely circulating drug can be replaced by smaller amount of magnetically targeted drug. Its use is limited by toxicity and side effect. This review gives an overview of the benefits, drawbacks, limitations, preparation, characterization and biomedical applications of magnetic microsphere.

**ABSTRACT-17****EPIGENETICS AND ENVIRONMENTAL SCIENCE INTEGRATION: UNRAVELING THE INTRICACIES OF GENE-ENVIRONMENT INTERACTIONS FOR PERSONALIZED HEALTH INSIGHTS.**

Sahithi Kamepalli\*, Sohitha Mulupuri, Kanaka Durga Devi.Nelluri, KVSR Siddhartha College of Pharmaceutical Sciences, Vijayawada-520010, Andhra Pradesh, India.

This study explores the complex ways via which environmental influences impact genetic expression by examining the dynamic interplay between environmental science and epigenetics. Combining these two fields of study not only improves our comprehension of the molecular mechanisms behind gene-environment interactions, but it also has significant implications for identifying risk factors for disease and developing individualized preventative plans. Modulating gene expression is mostly dependent on epigenetics, the study of heritable changes in gene activity that do not need modifications to the underlying DNA sequence. The incorporation of environmental science into this framework broadens our understanding of the ways in which environmental influences, such as pollution and lifestyle decisions, can influence epigenetic alterations. Through close examination of these dynamic relationships, scientists are able to obtain important insights into the molecular mechanisms that connect exposure to the environment with changes in genetic expression. This multidisciplinary method offers a prism through which to examine individual disease risk, with important implications for public health. Predicting an individual's risk of getting cancer, cardiovascular disease, and neurological disorders is made easier by having a solid understanding of how environmental factors impact epigenetic alterations. An era of precision prevention is also heralded by this comprehensive perspective, which makes it possible to customize preventive measures based on a person's particular genetic and environmental profile. In summary, by linking the fields of environmental science and epigenetics, this research advances the field of personalized medicine. We can develop targeted and customized preventive interventions that could revolutionize public health outcomes by gaining a deeper understanding of illness aetiology and susceptibility through the unravelling of the intricate web of gene-environment interactions.

**KEYWORDS:** Epigenetics, Genetic Expression, Multidisciplinary method, Aetiology.

**ABSTRACT-18****INTEGRATING ROBOTIC SURGERY AND BIOINFORMATICS FOR PRECISION AND PERSONALIZED SURGICAL INTERVENTIONS.**

Somisetty Nirupa Varsha\*, Sri Ramya RVS, Kanaka Durga Devi Nelluri

KVSR Siddhartha College of Pharmaceutical Sciences, Vijayawada-520010, Andhra Pradesh, India.

The combination of bioinformatics with robotic surgery is a game-changing synergy with enormous potential to completely change modern healthcare. Robotic surgical technologies are already proving to be effective in increasing accuracy and reducing invasiveness, and bioinformatics has become an indispensable tool in the analysis of large datasets to derive valuable insights. The merging of these two domains to produce a dynamic framework for in-the-moment data processing during surgeries is explored in this abstract. Surgeons may access a multitude of patient-specific data by utilising bioinformatics in conjunction with robotic surgery, allowing for tailored and optimal interventions. Comprehensive knowledge of individual patient profiles is made possible by real-time analysis of biological data such as proteomics, genomics, and other biological data. This ultimately improves treatment outcomes by making it easier to customise surgical techniques to certain genetic and molecular traits.

promising as research and development in this multidisciplinary field advances. This will pave the way for a time when surgeries are not only precise but also specifically customised to each patient's biological details. The application of bioinformatics to robotic surgery allows for the development of intelligent systems that can modify techniques in response to continuous data analysis. This guarantees accuracy and productivity while also creating opportunities for predictive modelling, which could anticipate issues before they materialise. Patient safety is increased as a result, and recovery durations might be accelerated. In summary, a new era in surgical interventions is being ushered in by the combination of robotic surgery and bioinformatics. Combining state-of-the-art technologies promises a move towards genuinely personalised medicine as well as improved precision. The possibility of improving surgical techniques based on real-time data analysis is becoming more and more.

**KEYWORDS:** Bioinformatics, Robotic Surgery, Patient-Specific Data, Personalised Medicine.

#### ABSTRACT-19

### DESIGN, SYNTHESIS, AND CHARACTERIZATION OF TOLFENAMIC ACID PRODRUGS.

Akash Patel\*, Dr Arun Patel, Dr Naveen Shivavedi, Shailendra K. Patel, SRGI- Sri Ram Group of Institution, Jabalpur-482002. M.P, India.

**Introduction:** Prodrug synthesis is an important tool for modifying drug properties and reducing undesired effects of therapeutic moieties. Many prodrugs used clinically offer an advantage over parent drugs and improve clinical efficiency.

**Aim & Objective:** In the present study prodrug of NSAID, tolfenamic acid is synthesized with natural phenolic/alcoholic pro moieties. Physicochemical characterization and spectral analysis were done, in vitro hydrolysis studies in simulated gastric and intestinal fluids were conducted, and synthesized derivatives were molecularly docked with cyclooxygenase (COX-1 and COX-2) proteins.

**Method:** Tolfenamic acid mutual prodrugs with natural phenolic/alcoholic compounds were synthesized by the Dicyclohexylcarbodiimide coupling (DCC) method. Purified synthesized prodrugs were characterized by melting point, Fourier Transform Infra-Red Spectroscopy, Proton Nuclear Magnetic Resonance Spectroscopy, and Mass Spectroscopy. Prodrugs were also characterized by solubility studies, partition coefficient, and hydrolytic studies, and synthesized derivatives and docking with COX proteins.

**Result:** Prodrugs exhibited higher lipophilicity and stability in acidic environments as compared to parent drugs. Tolfenamic acid-menthol prodrug hydrolyzed at a higher rate, while tolfenamic acid-vanillin prodrug showed the slowest rate at both pH conditions. Synthesized derivatives docked with (COX-1 and COX-2) proteins and showed strong binding affinity towards COX-2.

**Conclusion:** The present study enhances tolfenamic acid's therapeutic effectiveness with natural antioxidants. Prodrug exhibits higher lipophilic character and stability in acidic conditions. Synthesized prodrug exhibited promising pharmacological activity and reduced GI effect after showing greater affinity towards COX-2 after molecular docking. Study shows that a mutual prodrug approach enhances the NSAID therapeutic effectiveness.

**KEYWORDS:** NSAID, Prodrug, DCC coupling method, Spectral characterization.

**ABSTRACT-20****ARTIFICIAL INTELLIGENCE: A KEY ROLE IN NOVEL PHARMACEUTICAL ERA.**

Sarovar Reddy Vantimitta\*, Annamacharya college of Pharmacy.

Artificial intelligence has been tremendously developed into a problem-solving science with good outcome conclusive applications in business, medicine, and engineering. The concept generally focus on the capacity of a computer or a robotics system that is computer-enabled to process information and create results that are comparable to how a human might think while learning, making decisions, and solving problems. The existing drug development method has to radically change in order to suit the requirements of society and doctors in the twenty-first century. The pharmaceutical industry, in particular, has a real opportunity to change the way it conducts research and development in order to work more effectively and significantly increase the success of early drug development. This opportunity is made possible by artificial intelligence and machine learning. The application of artificial intelligence in the pharmaceutical and biotech sectors has revolutionised how researchers create new medicines, treat diseases, and more during the last five years. The tools of AI are Robot pharmacy for the manufacture and monitoring of pharmaceuticals with the aim of enhancing patient safety. They claim that the system has accurately prepared 3,50,000 doses of medicine. TUG robots move around the hospital and transport large items like trash and linen as well as prescriptions, meals, specimens, and resources. AI-based drug discovery platform with a sizable patient database that is used to locate and validate the many disease-causing biomarkers, and it then chooses treatments based on the data acquired. The Public health and epidemiology is advantage of AI as it can help identify infectious epidemics of diseases including influenza, dengue fever, TB, and malaria. Zika virus and the current COVID-19 pandemic transmission patterns have both been predicted. The medical specialty applications were digital imaging in radiology, echocardiography to diagnose heart failure caused by amyloidosis in cardiology, diagnosis of a wide range of different conditions, including skin, lung, breast, and prostate cancers in pathology, differentiating specific skin lesions in dermatology, in oncology, neurology, mental health and generalized.

**KEYWORDS:** Artificial intelligence, Disease-causing biomarkers, Specific skin lesions in dermatology, Hospital and transport, Pandemic transmission.

**ABSTRACT-21****BILAYERED TABLETS.**

Likitha Mani\*, K. Divya Laxmi.

Bi-layer tablet is a new era for successful development of controlled release formulation alongwith various features to provide successful drug delivery. Bilayer layer tablets have been consistof two layers which is slow release and immediate release layer. As well as improved beneficialtechnology to overcome the shortcoming of the single layer tablets. The preparations of bilayer tablet were needs due to separate incompatible active pharmaceutical ingredient (APIs) for eachother. Bilayer tablets material involves both the compressibility and consolidation. The bilayer tablets preparing by using different techniques such as OROS® push pulls Technology, L- OROSTM Technology, EN SO TROL Technology. Various types of bilayer tablet presscurrently available in the market, various approaches used in bilayer tablet system, characterization as well as evaluation of the bilayer tablet system. Bi-layer tablet is suitable for sequential release of two drugs in combination, separate two incompatible substances and also for sustained release tablet in which one layer is immediate release as initial dose and second layer is maintenance dose.

**KEYWORDS:** Bilayer tablets, Sustained release, OROS® push pulls Technology.

**ABSTRACT-22****A CASE REPORT ON TYPE I CHIARI MALFORMATION.**

T. Mounika, Marri\*, Laxman Reddy Institute of Pharmacy.

Arnold Chiari malformation is one of the commonest cause of congenital hydrocephalus. Cause of fetal development of cerebellar tonsils remains unknown and may be diagnosed at later in life. The association of Arnold Chiari malformation with acromesomelic dwarfism is not known. We report male infant diagnosed with acromesomelic dwarfism at end of gestation period on basis of antenatal ultrasonography findings. An ultrasound scan of infant head at fifth month of birth was performed in view of increasing head circumference that revealed aqueductal stenosis with dilated posterior horn of lateral ventricles in brain. Arnold Chiari malformations were first described in pediatric autopsy specimen in 1891 by Hans Chiari, an Austrian Pathologist (1851-1916). In legacy with name of his professor Dr. Arnold and his name Hans Chiari, the hind brain disorder is named as Arnold Chiari malformation. Chiari malformations seem to be more common in women than men. Type I involves the extension of the cerebellar tonsils (the lower part of the cerebellum) into the foramen magnum, without involving the brain stem.

**KEYWORDS:** Arnold Chiari 1 malformation, Acromesomelic dwarfism, Hydrocephalus, Neural tube defects, Case report, Cerebellar tonsils.

**ABSTRACT-23****BIOACTIVITY-GUIDED ISOLATION OF TWO NEW COMPOUNDS FROM *EULOPHIA HERBACEA* WITH CYTOTOXIC POTENTIAL.**

Snehal K. Bhavsar\*, Anil Kumar, U. Tatiya Sanjay, J. Surana, R.C. Patel Institute of Pharmaceutical Education and Research Shirpur 425405.

Oral and lung cancers are a great evildoer behind mortality around the world. The currently available cancer therapeutic options are expensive and come up with hazards. *Eulophia herbacea* (EH) is a medicinal plant used for the treatment of cancers. Phenanthrene derivatives 9,10-dihydro-2,5-dimethoxy phenanthrene-1,7-diol (compound-1) and 1,5 dimethoxy phenanthrene-2,7-diol (compound-2) were isolated from the tuber of EH and their structures were detected by UV, IR, TLC, <sup>1</sup>H NMR, and <sup>13</sup>C NMR and GC-MS techniques. The lethal concentration value (LC<sub>50</sub>) and total growth inhibition (TGI) values of compound-1 and 2 were found >10 and >80 µg/ml. The median growth inhibition (GI<sub>50</sub>) concentration for compounds 1 and 2 was found <21.0 and <14.6 µg/ml against the Human oral cancer cell line (SSC-40) and lung cancer cell line (A-549). From the present research, it can be concluded that the tubers of EH contain compounds 1 and 2 possessing paramount anticancer potential against oral and lung cancers.

**KEYWORDS:** Eulophia Herbacea, SRB assay, Anticancer activity, Oropharyngeal Cancer, Oral Cell Cancer.

**ABSTRACT-24****“NAVIGATING THE FUTURE: INTEGRATING ARTIFICIAL INTELLIGENCE IN PRECISION MEDICINE”.**

R. Shivani\*, Marri Laxman Reddy Institute of Pharmacy.

In the swiftly evolving healthcare landscape, the convergence of artificial intelligence (AI) and precision medicine has become a revolutionary influence. Precision medicine, which centers on customizing medical treatments according to individual patients' distinct genetic characteristics, lifestyle, and environmental influences, offers substantial potential for enhancing patient care and results. The incorporation of AI marks a significant advancement in healthcare technology, facilitating advanced data analysis, predictive modeling, and the delivery of personalized treatments.

As we navigate the future, it is imperative to embrace collaboration, address ethical considerations, and adapt to evolving technologies, ensuring that AI in precision medicine continues to drive medical advancements and provide optimal patient care. This synergy represents a substantial leap forward in the quest for more effective and tailored healthcare solutions. Through this presentation, I would like to discuss the use of AI in clinical practice, **Potential impact on patient outcomes**, the advantages and flaws of using AI, and the future of personalized healthcare using AI.

**KEYWORDS:** Precision medicine, Artificial Intelligence, Personalized Healthcare.

#### ABSTRACT-25

### **NEW RP-HPLC METHOD DEVELOPMENT AND VALIDATION FOR THE ESTIMATION OF FLUTICASONE & VILANTEROL IN BULK AND PHARMACEUTICAL DOSAGE FORM.**

R V Valli Kumari\*, Malla Reddy Institute of Pharmaceutical Sciences.

A contrary stage top-quality execution liquid chromatographic methodology that is every quick and remarkable has been created to support fluticasone and vilanterol in their pure and pill estimation structures. A join of Methanol used to be utilized to work chromatography on an Altima C18 region with parts of 4.6 x 150mm and a molecule estimation of 5µm. A TEA The convenient stage contained acetonitrile (50:25:25) and an assistance with a pH of 4.5. The dissemination rate used to be 1.0 milliliter each second, and the distinctive verification was once performed at 225 nanometers. Fluticasone and Vilanterol had help occasions of 2.102 and 3.537±0.02 minutes, independently, when surveyed and separated. Utilizing this methodology, straight reactions are made in the fixation degree of 5-25 mg/ml for fluticasone and 12.5-62.5 mg/ml for vilanterol. The methodology that was once used to choose the learn about had a general far and wide deviation (RSD) of under two percent. The methodology is fundamental with regards to controlling the palatable of huge amounts of medication data. Underwriting, RP-HPLC, and fluticasone and vilanterol are a piece of the articulations.

#### ABSTRACT-26

### **A COMPARATIVE STUDY OF FERROUS ASCORBATE AND FERROUS FUMARATE IN TREATING IRON DEFICIENCY ANEMIA DURING PREGNANCY: EFFICACY AND SAFETY ANALYSIS.**

Mudigonda Sowjanya\*, Pharm.D, Marri Laxman Reddy Institute of Pharmacy, Dundigal.

Background: Iron deficiency anemia is most common in pregnant women. India has highest prevalence of anemia worldwide. Most commonly used oral iron supplements are ferrous ascorbate, ferrous fumarate, ferrous sulphate, ferrous gluconate. Aim and objectives: To compare the safety and efficacy of ferrous ascorbate and ferrous fumarate in iron deficiency anemia in pregnant women. Materials and methods: This was a prospective observational study carried out in Out-Patient facilities of the Department of Obstetrics and Gynecology, Arundhati Institute of Medical Sciences and Hospital, Dundigal, MedchalMakagiri - district, from July 2023 to December 2023, among 118 antenatal women with iron deficiency anemia. After getting approval from the Institutional Human Ethics Committee (IHEC), we have selected 150 patients based on inclusion and exclusion criteria were randomly divided into two groups. Group A (n=59) received ferrous ascorbate 100mg and Group B (n=59) received ferrous fumarate 100mg daily. Hemoglobin, RBC, hematocrit, MCV, MCH, MCHC, RDW were assessed before and after 60 days. Results: We observed a significant rise in mean hemoglobin from 9.74 and 10.43 to 11.49 and 11.36 in groups A and B respectively. And there was rise in the mean hematocrit, MCV, MCH, MCHC in both the groups. Conclusion: Individuals administered with ferrous ascorbate exhibited a significant increase in crucial blood parameters – Hemoglobin, RBC, hematocrit, MCV, MCH, MCHC, and fall in RDW values. Notably side effects were comparable in both the groups.

**KEYWORDS:** Ferrous ascorbate, Ferrous fumarate, Hemoglobin, RBC, Hematocrit, MCV, MCH, MCHC and RDW-CV, Iron Deficiency anemia, Antenatal women.

**ABSTRACT-27****HERBAL PRODUCT-BASED NANOFORMULATIONS FOR CANCER THERAPY.**

Kausar Sulthana\*, Dr. K. Mruthunjaya, Sri Kurpa Institute of Pharmaceutical Sciences.

In the last few years there has been an exponential growth in the field of herbal medicine and these drugs are obtaining popularity both in developing and developed countries because of their natural origin and lesser side effects. Many traditional medicines in use and they are derived from medicinal plants, minerals and some organic matter. The World Health Organization (WHO) has listed 21,000 plants, which are useful for medicinal purposes around the world. Among these 2500 species are in India, out of which 150 species are used commercially on a fairly large scale. India is the largest producer of medicinal herbs and is called as botanical garden of the world. This paper will discuss the benefits with use of herbal nanoformulation as Anti-cancerous activity. The application of nanotechnology is enhancement for the bioavailability and nanomization of herbal drugs like-nanomoringa from *Moringa oleifera*, nano asafetida from *Ferulaasafetida*, Capsicin from *Redchili*, Taxol from *Taxus* plant etc. The nanocarriers have been made of safe materials, including synthetic biodegradable polymers, lipids and polysaccharides. Nanomedicines can be developed either as drug delivery systems or biologically active drug products. It is indicated that nanotechnology is one of the fastest developing of nanoformulation, the most potential and far- reaching high and new technology in current world. Nanoformulations is to decrease the particles size and increase the surface area due to increases the bioavailability and reduces the side effect of herbal drugs and are useful for the treatment, diagnosis, monitoring and control of biological systems and have recently been referred to as nanomedicine.

**KEYWORDS:** Herbal drugs, Nanotechnology, Bioavailability, Anti-Cancer.

**ABSTRACT-28****A NOVEL STABILITY INDICATING RP-HPLC WITH DDA****APPROACH FOR ESTIMATION OF VOCLOSPORIN IN BULK AND MARKETED FORMULATION.**

Krishna phani sri Ponnekanti\*.

An easy, specific, and reliable method for determining Voclosporin has been established using the RP-HPLC approach. Chromatographic conditions included stationary phase C18 Kromasil (250mm x 4.6mm and 5 $\mu$ m), solvent system (0.1 % OPA: Acetonitrile) in a 60:40 ratio, 1 mL/min flow rate, and detection wave length of 282nm were opted to separate the Voclosporin with retention time of 2.2 min. A linearity analysis was performed between 3.95-23.7  $\mu$ g/mL, and the R<sup>2</sup> value was found to be 0.999. Precision's % RSD was determined to be between 0.4 and 0.7. The LOD and LOQ values are 0.01 $\mu$ g/mL and 0.03  $\mu$ g/mL, respectively. Using the aforesaid approach, the % assay of the marketed formulation was 99.07 %. To test the stability representing characteristics of the suggested approach, forced degradation experiments of Voclosporin were performed and % degradation was measured. Because the procedure was easy, precise, accurate, and cost-effective, it may be poted for regular analysis of quality control samples in industry.

**KEYWORDS:** Voclosporin, RP-HPLC, C18 Kromasil, Specific, Stability indicating.

**ABSTRACT-29****SUPREMACY OF ANTIBIOTICS WITH EXPLORING RESISTANCE AND FOSTERING IMMUNITY.**

Rams\*.

Antibiotics have been instrumental in treating bacterial infections, substantially improving global health outcomes. However, the rise of antibiotic resistance has become a critical threat, necessitating a shift towards strategies that enhance natural immunity and reduce dependency on these life-saving drugs. This abstract explores the dynamic interplay between antibiotics, resistance mechanisms, and the promotion of immunity, emphasising the urgency of a balanced approach in managing bacterial infections. Antibiotic resistance, fueled by factors such as over prescription, misuse, and incomplete treatment courses, has led to the emergence of resilient bacterial strains. Examples include Methicillin-resistant *Staphylococcus aureus* (MRSA), which challenges the efficacy of commonly used antibiotics, and multidrug-resistant tuberculosis (MDR- TB), presenting a formidable obstacle in tuberculosis management. Understanding the mechanisms behind resistance is crucial to developing targeted interventions and preserving the effectiveness of existing antibiotics. Simultaneously, there is a growing recognition of the importance of immunity in preventing and combating infections. Vaccination programs against bacterial diseases, such as those caused by *Streptococcus pneumoniae* and *Neisseria meningitidis*, showcase the potential of bolstering the body's defences to reduce reliance on antibiotics. Lifestyle modifications, hygiene practices, and a focus on overall health contribute to a robust immune system, offering a complementary approach to antibiotic stewardship. This abstract underscores the need for a comprehensive strategy that integrates antibiotic stewardship with efforts to enhance immunity. By acknowledging specific examples of antibiotic-resistant bacteria, we aim to underscore the urgency of addressing resistance while highlighting the potential of immunity- focused interventions to mitigate the escalating threat of bacterial infections.

**KEYWORDS:** Antibiotics, Antibiotic resistance, Antibiotic stewardship, Bacterial infections, Immunity, MRSA, MDR-TB, *Neisseria meningitidis*, Over prescription, Resistance mechanisms, *Streptococcus pneumoniae*.

**ABSTRACT-30****GREEN SYNTHESIS AND CHARACTERIZATION OF MAGNESIUM OXIDE NANOPARTICLES USING OKRA MUCILAGE.**

J. Sangeetha\*, R. Sharada, N. Ashwitha, T. Anjali, S. Jhanavi, Malla Reddy Institute of Pharmaceutical Sciences, Maisammaguda, Dhulapally, Kompally, Secunderabad – 500100.

In the current research, Magnesium Oxide nanoparticles (MgO-NPs) were biosynthesized using a simple, quick and eco manner using mucilage from *Abelmoschus esculentus* (Okra) as a stabilizer and reducing agent. The characterization of MgO-NPs were done with TGA/DTA, DRS, FTIR, UV-Vis, XRD, BET, TEM, EDX and PSA studies. The XRD analysis of MgO-NPs exhibited the monoclinic structure of crystallizes in a size of about 25nm. The optical and surface Characteristics of MgO-NPs were analysed by DRS and BET studies. The absorption spectra of NPs was revealed a peak at around 320nm. TEM images displayed their spherical shape with 20nm.

**KEYWORDS:** Green synthesis, Okra mucilage, Magnesium oxide nanoparticles.



**ABSTRACT-31****AMELIORATION OF *BAUHINIA VARIEGATA* AGAINST CYCLOPHOSPHAMIDE INDUCED IMMUNOSUPPRESSION AND OXIDATIVE STRESS IN RATS.**

Dr. B Pushpa Kumari\*

Cyclophosphamide (CYP) is a chemotherapeutic agent used to treat malignant tumors and autoimmune disorders. Despite of its potential anticancer activity, it exerts myelosuppression and immunosuppression resulting in impaired immune responsiveness. Consequently, addressing immunosuppression in individuals undergoing chemotherapy has emerged as a central focus of attention. Immunomodulatory properties of few plant-based therapeutic agents with relatively lower toxicities have drawn the attention of researchers. One among them is the plant *Bauhinia variegata* (*Fabaceae*), well known for its anticancer, antioxidant, hypolipidemic, antimicrobial, anti-inflammatory, nephroprotective, hepatoprotective, antiulcer, molluscicidal and wound healing activities. Thus the present study was aimed to investigate the immunomodulatory activity of ethanolic leaves extract of *B.variegata* (ELEBV) using cyclophosphamide induced immunosuppression in Wistar rats.

All the experimental animals were divided into five groups (n = 6 in each). Gr-I received vehicle, Gr-II (CYP, 100mg/kg, *i.p*) on 9<sup>th</sup> and 16<sup>th</sup> day of treatment, Gr-III (CYP, 100mg/kg, *i.p* + Levamisole 50mg/kg, *p.o*) Gr-IV and V (CYP, 100mg/kg, *i.p* +*B.variegata* 200mg/kg, *p.o* and 400mg/kg, *p.o*) for 45 days. Then indices of organs such as the spleen, liver, and kidneys were documented. The ELEBV on humoral antibody titer, delayed type hypersensitivity, percentage of neutrophil adhesion and phagocytic index were evaluated. ELEBV significantly increased the relative organ weights, HA titer, delayed hypersensitivity, % neutrophil adhesion and phagocytic activity response in comparison to that of CYP treated rats. The findings indicate that the ELEBV enhances immune function in rats with immunosuppression.

**KEYWORDS:** Cyclophosphamide, Immunosuppression, *B. variegata*, Immunomodulatory.

**ABSTRACT-32****FABRICATION AND *INVITRO* EVALUATION OF FLOATING TABLETS FOR TREATMENT GASTROESOPHAGEAL REFLUX DISEASE TO IMPROVE BIOAVAILABILITY.**

B. Rama\*, Malla Reddy institute of Pharmaceutical Sciences.

Cisapride's gastro retentive floating drug delivery was developed using exceptional polymers and used in. The first stage of development of the pharmaceutical particle's logical procedure is accomplished. Direct stress technology was used to create the floating drug delivery system. Sodium bicarbonate fixation, the expertise of which is required to generate gasoline, was preferable. Preparation of GRDDS of cisapride was done with different polymers and polymer concentrations. Polymers used are amla extract, ginger study, fenugreek remove, ispaggol husk. Powder mixtures have been subjected to a variety of preformulation studies, and all of the data have been deemed to be remarkable, proving that the powder mixture had excellent flow qualities. Among all the various preparations, the data on Amla as a polymer were the most effective drug release for more than 12 hours (F3=98.89%). Further kinetic release studies shows that formulation F3 follows Zero order drug release.

**ABSTRACT-33****EXPLORING THE INTERSECTION OF TELEPSYCHIATRY AND TELEMEDICINE IN PRECISION MEDICINE.**

This abstract delves into the evolving landscape of telepsychiatry and telemedicine, examining their integration within the realm of precision medicine. As technology continues to advance, mental health care and medical practices are undergoing transformative changes. This paper explores the synergies and challenges arising from the convergence of telepsychiatry, telemedicine, and precision medicine.

The integration of telepsychiatry and telemedicine offers unprecedented opportunities to tailor mental health interventions with precision. The utilization of remote platforms enables healthcare professionals to reach diverse populations, overcoming geographical barriers and improving accessibility to specialized mental health services. Through the lens of precision medicine, this abstract investigates how these technologies contribute to a more personalized and effective approach to mental health treatment. The abstract also discusses the technological tools and data-driven strategies employed in telepsychiatry and telemedicine to gather, analyze, and interpret patient information. Precision medicine principles, such as genomics, biomarkers, and advanced diagnostic tools, are explored in the context of mental health to elucidate how these approaches enhance the accuracy and efficacy of interventions. However, challenges like ethical considerations, data privacy, and disparities in access to technology must be addressed. The abstract concludes by highlighting the potential impact of integrating telepsychiatry and telemedicine into precision mental health care, emphasizing the need for a comprehensive and ethical framework to guide the evolving landscape of remote mental health interventions.

**KEYWORDS:** Telepsychiatry, Telemedicine, Precision medicine, Tools & Strategies, Genomics.

**ABSTRACT-34****“COLLABORATIVE FRONTIERS IN CUSTOMISED HEALTH CARE: PRIORITISING PATIENT CENTERED PRECISION MEDICINE.”**

G. Sharon rose \*, Marri Laxman Reddy Institute of Pharmacy Sciences.

With an emphasis on individual genetic, environmental, and lifestyle factors for customized treatments, precision medicine is a shift towards personalized healthcare that is highlighted in this webinar. In contrast to conventional "one-size-fits-all" approaches, it stresses a patient-centered approach by combining genetics, bioinformatics, pharmacology, and patient advocacy. The seminar's goals are to promote an equitable, efficient healthcare system by discussing ethical issues, technology developments, and the value of patient education and involvement. It aims to smooth the path for a future in which healthcare is not just accurate but also deeply humane and compassionate by emphasizing patient-centered treatment and addressing access gaps.

**KEYWORDS:** Inclusive healthcare, Compassionate care, Patient education and Management.

**ABSTRACT-35****DEVELOPMENT OF POTENTIAL INHIBITORS FOR ER-ALPHA TARGET OF BREAST CANCER: COMPUTATIONAL APPROACH.**

Mallick Maidul Islam\*, V. Alagarsamy, M. T. Sulthana, B. Narendhar, MNR College of Pharmacy.

The main aim of this study is to discover and identify the most effective and potential inhibitors from various herbal plants against ER $\alpha$  receptor by in silico molecular docking studies which was carried out by AutoDock Vina. MSD Studies was conducted by Desmond Module of Schrodinger and the ADME (T) studies were performed by SWISS ADME. For this study, phytoconstituents from various herbal plants were docked with ER $\alpha$  receptor and the affinity towards the receptors was calculated as binding energy (kcal/mol). Among them, ten constituents showed highest binding affinity as standard tamoxifene. MD studies showed that all four compounds possess comparatively stable ligand-protein complexes with ER $\alpha$  target compared to the tamoxifen-ER $\alpha$  complex. Based on the above results, the phytochemical constituent, elagic acid (-9.3 kcal/mol) showed similar binding affinity towards as standard tamoxifen towards the target protein ER $\alpha$ . ADMET studies for the top ten highest binding energy phytochemicals showed a better safety profile. Hence, these phytochemicals can be further studied and used as a parent core molecule to develop innovative lead molecules for breast cancer therapy.

**ABSTRACT-36****IMPACT OF ANTIOXIDANT-RICH FRACTIONS ISOLATED FROM MOSS *FISSIDENS GRANDIFLORA* ON ALCOHOL-INDUCED OXIDATIVE STRESS.**

K. Alekhya\*, N. Praveen Kumar, Bharat Institute of Technology-Pharmacy; V. Arun Reddy, Bharat School of Pharmacy.

The present study aimed to evaluate the antioxidant and hepatoprotective properties of selected ethanolic fractions of *Fissidens grandiflora* in ethanol-induced oxidative stress in rats. Initially, ethanolic extract of *F. grandiflora* was fractionated using column chromatography. The preliminary antioxidant screening of these fractions identified two main bioactive fractions (F3 and F4), which had significant radical scavenging and metal ion chelation properties compared with ascorbic acid. Based on the antioxidant profile, F3 and F4 were evaluated for hepatoprotective activity in ethanol-intoxicated rats. The Wistar rats were grouped (n= 6) and treated with F3 and F4 (100 and 200 mg/kg), ethanol (5 g/kg, 20%w/v), and silymarin (100 mg/kg) orally for 28 days. The outcomes of the study found that chronic administration of ethanol significantly (P <0.0001) altered the liver parameters and oxidative stress markers (MDA, SOD, and CAT). The co-administration of F4 prominently ameliorated the oxidative stress induced by ethanol compared to F3. Histopathological studies further supported the significant protective action of F4. The present study demonstrates that *F. grandiflora* possesses significant antioxidant properties by augmenting the magnitude of the antioxidant enzymes SOD and CAT and further reducing MDA levels.

**KEYWORDS:** Antioxidant; Ethanol-induced; Hepatoprotective; Oxidative stress; *Fissidens grandiflora*.

**ABSTRACT-37****SYNTHESIS AND VARIOUS BIOLOGICAL ACTIVITIES OF SCHIFF BASES AND ITS APPLICATIONS.**

Rahul Kumar\*, United institute of pharmacy, Prayagraj.

Schiff bases are most prevalent used compounds having the general formula  $R_2C=NR$ . they are type of imine that can be classified as secondary ketamines or secondary ketimines or secondary aldimines based on their structure. it occurs naturally in plants, it serves as ligands in coordination chemistry playing a crucial role in metal complexes. they are basically synthesised by condensation reaction between m-nitrobenzaldehyde and p-chloroaniline. they have been shown to exhibit a broad range of biological activities, including antifungal, antibacterial, antimalarial, antiproliferative, anti-inflammatory, antiviral, and antipyretic properties. Schiff base compounds and their metal complexes have been extensively investigated due to their wide range of applications including catalysts, medicine crystal engineering anticorrosion agent. Schiff bases are studied widely due to their synthetic flexibility, selectivity and sensitivity towards the central metal atom. it finds its applications in the food industry, dye industry and analytical industry. they are employed in the screening of new antimicrobial drugs with low toxicity.

**KEYWORDS:** Schiff bases, Ligands, Secondary ketimines, Antimalarial.

**ABSTRACT-38****ESTIMATION OF GLYOXYLIC ACID IN EMTRICITABINE BY A NEW VALIDATED RP-HPLC METHOD.**

Dr. Ramreddy Godela\*, GITAM School of Pharmacy, Hyderabad Campus.

The objective is to establish a Simple, sensitive and specified method for the separation and quantitative determination Glyoxylic acid in Emtricitabine by using RP-HPLC. A superior separation of Glyoxylic acid in Emtricitabine was done by using C8 column and a mobile system of (0.1% OPA and ACN: H<sub>2</sub>O) with 1ml/min flow rate in gradient mode and a wavelength of 210nm. The Glyoxylic acid was eluted at 5.37min with good efficiency and system suitability. The method has shown good linearity ranges from LOQ to 150% level of Glyoxylic acid standard solution (0.1% or 0.001mg/ml). The proposed method validated as per ICH guidelines and all the parameters were satisfied the ICH Q2 acceptance criteria. The % RSD of System, method precision and precision at LOQ were in the range of 0.46 to 1.91. The developed method was sensitive, specific and precise to estimate the trace levels of Glyoxylic acid in Emtricitabine.

**KEYWORDS:** Glyoxylic acid, Emtricitabine, Sensitive, Gradient elution, specificity.

**ABSTRACT-39****PREPARATION AND EVALUATION OF A pH-TRIGGERED HYDROGEL CONTAINING p-COUMARIC ACID AS A NOVEL APPROACH FOR CORNEAL WOUND HEALING.**

Subramanyam Polopalli, Achintya Saha, Pronobesh Chattopadhyay\*.

Currently, corneal blindness affects more than 10 million individuals worldwide, and there is a significant unmet medical need because only 1.5% of transplantation needs are met globally due to a lack of high-quality grafts. In light of this global health disaster, researchers are developing novel formulations that can prevent the corneal blindness and replace human donor tissue. Therefore the present work is designed to prepare and evaluate a pH-sensitive hydrogel containing p-Coumaric acid as a novel approach for corneal wound healing. We have performed MTT assay on SIRC cell line to determine the safe concentrations of p-Coumaric Acid. This assay revealed that there were no significant change in the viability at different test doses (40-400 µg/ml). But the morphology of the SIRC were started to change from 200 µg/ml. Hence, the maximum safe dose of p-coumaric acid on SIRC was found to be 160 µg/ml. To further confirm the safe dose (160 µg/ml) of p-coumaric acid, we have performed acute eye irritation test according to OECD TG 405. The test confirmed that there was no toxicity at the administered dose i.e. 160 µg/ml. In order to check the drug-excipients incompatibility, we have performed FTIR and DSC studies and found that they were compatible with each other. Optimization of the formulation was done using Design Expert software. The carbopol 940 (A), and HPMC K100 (B) were taken as independent factors, whereas their effects were measured on viscosity (cp), entrapment efficiency (%) and zeta potential (mV). A total of 9 runs were obtained from the software after placing the variables. All 9 runs were prepared and analyzed for viscosity, entrapment efficiency and zeta potential. The values of responses were again placed in the Design Expert to find the best-fitting model. Ophthalmic formulations still face challenges in achieving and maintaining optimal drug concentration at the targeted site within the eye, necessitating the development of novel formulations. Therefore, to address the limitations posed by traditional ophthalmic formulations, we are investigating the use of a pH-triggered *in-situ* gelling system that contains p-Coumaric Acid. It is worth noting that, as of our current knowledge, there is no existing published literature on the formulation of *in-situ* gels containing p-Coumaric Acid.

**KEYWORDS:** Hydrogels, Corneal wound healing, Flavanoids, Blindness, MTT assay.**ABSTRACT-40****ARTIFICIAL INTELLIGENCE IN CANCER RESEARCH AND PRECISION MEDICINE.**

Shweta Shrivastava\*, Santosh Kumar Singh, Manish Kumar Jeengar, School of Pharmacy, School of Health and Allied Sciences.

Over the last decade, artificial intelligence (AI) has made significant contributions to the treatment of a variety of medical issues, including cancer. Deep learning (DL), a subfield of artificial intelligence, is distinguished by its capacity to execute automated feature extraction and has significant strength in the assimilation and evaluation of vast volumes of complex data. AI, particularly deep learning, has been employed in numerous facets of oncology research and has the potential to improve cancer detection and treatment. These applications include early cancer detection, diagnosis, classification, and grading, tumor genetic characterisation, patient outcome and treatment response prediction, tailored treatment, automated radiotherapy workflows, innovative anti-cancer medication research, and clinical trials. In this, we will look at the history of AI technology and the current state of medical AI, particularly in cancer, as well as the opportunities and difficulties that AI technology presents in the medical industry.

**KEYWORDS:** Machine learning, Deep learning, Artificial intelligence, Precision medicine, Cancer.

**ABSTRACT-41****THE SUNSCREEN REVOLUTION: HOW NATURAL INGREDIENTS ARE REDEFINING SUN PROTECTION IN MODERN COSMETICS.**

Mr. Imtiyaz Ahmad\*, Akash Patel, Mr. Shailendra k. Dwivedi, Dr Pushpa Yadav, SRU- Sun Rise University, Alwar, Rajasthan -301028, India.

**Introduction:** The increasing apprehension surrounding the ecological and health repercussions associated with conventional chemical sunscreens has prompted redirection of attention towards alternatives that are not only more environmentally sustainable but also gentler on the skin. Natural sunscreen formulations combined with botanical compounds are gaining popularity due to their ability to deliver good sun protection while minimising side effects. This study delves into how natural ingredients are shaping and revolutionizing contemporary sunscreen formulations, influencing the way sun protection is redefined within the domain of cosmetics.

**Aim and Objective:** This study's main objective is to look into how the use of natural chemicals is changing how sun protection is provided in modern cosmetics. The aim of this study is to assess the effectiveness, safety, and environmental ramifications of natural sunscreen formulations in contrast to traditional chemical-based alternatives.

**Method:** A comprehensive strategy involving a thorough examination of existing literature, careful analysis of formulations, and controlled laboratory experiments was utilized. Various natural elements known for their sun-protective attributes, including zinc oxide, titanium dioxide, and diverse plant extracts, were studied to assess their efficacy in safeguarding the skin against detrimental ultraviolet (UV) rays.

**Results:** The examination unveiled that contemporary natural sunscreen formulations adeptly utilize the potency of plant-derived components to deliver comprehensive protection against a wide range of ultraviolet rays. The combination of mineral filters and organic compounds yielded favourable outcomes in preserving skin well-being and mitigating the potential hazards linked to the absorption of chemicals.

**Summary and Conclusion:** To summarize, this study underscores the significant progress achieved in enhancing sun protection by integrating natural components into contemporary cosmetic formulations.

**KEYWORDS:** Natural Sunscreens, Botanical Ingredients, Sun Protection, Modern Cosmetics, Formulation Analysis, UV Radiation, Mineral filters.

## ABSTRACT-42

**KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS TUBERCULOSIS AMONG HEALTHCARE AND NON-HEALTHCARE STUDENTS AT A PUBLIC UNIVERSITY IN SAUDI ARABIA.**

Geetha Kandasamy\*, Department of Clinical Pharmacy, College of Pharmacy, King Khalid University, Abha, Saudi Arabia.

**Background:** Tuberculosis (TB) is a bacterial infection. It mostly affects the lungs (pulmonary TB), but it can also affect other organs. This cross-sectional study evaluated knowledge, attitudes, and practices (KAP) related to TB among King Khalid University (KKU) students between October and November 2023. Objective: The objective of this study was to investigate current TB knowledge, attitudes, and practices of students at King Khalid University in Abha, Saudi Arabia.

**Methods:** A self-administered, cross-sectional, descriptive, web-based questionnaire was conducted from October to December 2023 among the students of King Khalid University. We used a 29-item questionnaire with five sections. Section 1 contained five questions about sociodemographic factors, there were 13 knowledge questions in Section 2, Section 3 contained 7 attitude questions, Section 4 contained 3 practice questions, and Section 5 contained 1 source of information question. A chi-squared test was used to assess differences in participants' knowledge, attitude, and practices in relation to their demographic variables ( $p < 0.05$ ).

**Results:** A total of 518 students completed the questionnaire. 53.66% were healthcare students and 46.33% non-healthcare students. The mean scores for healthcare and non-healthcare students, respectively, were as follows: knowledge  $11.80 \pm 4.81$ ,  $7.35 \pm 4.96$ ; attitude  $6.94 \pm 1.33$ ,  $5.05 \pm 2.09$ ; and practice  $2.26 \pm 0.85$ ,  $1.14 \pm 0.87$ . The results of this study showed good knowledge (24.82 and 5.83% for healthcare and non-healthcare students, respectively) good attitude (67.62 and 46.25%) and good practice (45.32 and 9.58%). A total of 24.32% healthcare students and 28.18% non-healthcare students reported that most effective sources for obtaining information about TB were social networks, the internet and the radio.

**Conclusion:** The current study concludes that the knowledge, attitude, and practice about TB among healthcare faculty students is better than their non-healthcare counterparts. However, there are still areas of poor knowledge, attitude and practice toward some aspects of TB among the two categories, which shows the necessity of educational intervention that aims at improving student understanding about the disease and its impact on public health.

**KEYWORDS:** Tuberculosis, Students, Knowledge, Attitude, Practice, Healthcare, Non-Healthcare.

## ABSTRACT-43

**A COMPREHENSIVE RESEARCH ON THE COMPARATIVE ANALYTICAL PROCEDURE BASED ON PROTIC SOLVENTS FOR THE EXTRACTION OF ANTIDIABETIC DRUG ALLIUM SATIVUM.**

Dr. Akkulu Naidu Menda\*, Associate Professor, Faculty of Pharmacy, Mandsaur University.

One of the most prevalent non-communicable diseases in the world, diabetes mellitus (DM) lowers quality of life in people of all ages. The illness is now a worldwide public health issue that has an impact on a person's socioeconomic standing. The most important factor in obtaining active phytoconstituents from medicinal plants is selecting the right extraction technique. Variations in extraction methods impact the biological activity and production of phytocomponents. In this research work, we observed the comparative analytical procedure based on protic solvents such as ethanol and water for the extraction of antidiabetic drugs *Allium sativum*. The extraction yields a much higher phenolic, saponin, and tannin content in addition to a much higher overall extract yield.

**KEYWORDS:** Tuberculosis, Students, Knowledge, Attitude, Practice, Healthcare, Non-Healthcare.

**ABSTRACT-44****ADR REPORTING: A COMPREHENSIVE STUDY.**

Yasmeen Shaikh\*, Sultan-UI-Uloom College of Pharmacy.

An ADR is any harmful, unintended result caused by taking any medications. ADRs are not the same as "side effects " because a side effect may be beneficial or detrimental to the individual but an ADR is always undesirable. In order to collect and analyze adverse drug reactions, ADR Reporting is done. This guideline is intended to assist healthcare professionals in the reporting of drug reactions associated with the use of all registered health care products, including medicines, old medicines and in vitro diagnostics. ADR Reporting can be done through spontaneous reporting, case reporting or stimulated reporting. It offers various advantages as it initiates risk management plans and prevents predictable side effects. It also helps to provide information about the quality and safety of pharmaceutical products. In recent times a drug safety alert was issued by the government regarding the medication " Meftal Spas" urging the people to be more cautious about the side effects. Pharmacovigilance is the science which deals with the detection, assessment, understanding and prevention of ADRs. It dates back to January 29,1848. The Pharmacovigilance Programme of India was initiated by the CDSCO and it responds to the drug safety related problems as it receives and reports to the drug adverse events and takes necessary actions. The Uppsala Monitoring Centre located in Sweden is the collaborating centre for International Drug Monitoring.

**KEYWORDS:** Adverse drug reaction, Adverse drug event, Spontaneous reporting, Case reporting, Stimulated reporting.

**ABSTRACT-45****ANTI-INFLAMMATORY AND ANTI-ASTHMATIC ACTIVITY OF ETHANOLIC EXTRACT OF SYZYGIUM CUMINI PLANT BARK.**

CH. Alekhya\*, Arya College of Pharmacy.

*Syzygiumcumini* (Family: Myrtaceae) commonly named jamun, is one of the widely distributed medicinal plant in treating many diseases like diabetes, asthma, inflammation, etc. which is native to tropical America and Australia. The ethanolic extract of *syzygiumcumini* was investigated for anti-inflammatory and anti-asthmatic activity with their phytoconstituents in animal models. The extract has an anti-inflammatory effect demonstrated by its inhibitory effect in carrageenan induced paw edema. It also produced significant decrease in Broncho constriction in histamine induced bronchoconstriction (*in-vivo*) and mast cell degradation method (*in-vitro*).

**ABSTRACT-46****ANTIBIOTIC RESISTANCE.**

M. Abhiram\*.

Abstract: Antibiotic resistance poses serious challenges to health and national security; policy changes will be required to mitigate the consequences of antibiotic resistance. Resistance can arise in disease-causing bacteria naturally, or it can be deliberately introduced to a biological weapon. Resistant bacterial infections are difficult to treat, and there are few new antibiotics in the drug development pipeline. Antibiotic resistance is also been increasing at an alarming rate in United States and globally for decades, but the problem has only recently gained broad attention at the highest levels of the US government. More and more number of patients are dying of infections that do not respond to antibiotics that are currently available. Meanwhile, the antibacterial product pipeline remains fragile in part because of a lack of commercial interest from pharmaceutical companies. The Biomedical Advanced Research and Development Authority (BARDA) Broad Spectrum Antimicrobials (BSA) program leads the US government's effort to bridge this gap by advancing new antibacterial's through late stages of clinical development.

**KEYWORDS:** Antibiotic resistance, BARDA, BSA.



**ABSTRACT-47****APPLICATIONS OF NANOTECHNOLOGY IN MEDICAL FIELD.**

M. Nimitha\*, CMR collage of pharmacy.

Nanotechnology is used to conduct sensitive medical procedures. Nanotechnology is showing successful and beneficial uses in the fields of diagnostics, disease treatment, regenerative medicine, gene therapy, dentistry, oncology, aesthetics industry, drug delivery, and therapeutics. A thorough association of and cooperation between physicians, clinicians, researchers, and technologies will bring forward a future where there is a more calculated, outlined, and technically programed field of nanomedicine. A new scientific field of science in the form of nanotechnology was created because it was observed that materials, products, and devices developed from nanoscale particles almost always exhibit properties different from those of large-scale bulk materials. Biosensors are yet another dimension of application in which nanotechnology has enabled the development of highly sensitive biosensors that can detect even low levels of biomolecules in bodily fluids such as blood and urine, facilitating early detection and disease management. Another use may involve nanopore sequencing, which is a novel technology that uses nanopores to detect the sequence of DNA or RNA molecules, allowing for rapid and accurate diagnosis of genetic disorders such as cancer and genetic diseases. Recent advances show that nanomedicine can be used in in vitro diagnostics sciences to increase the efficiency and reliability of disease apprehension.

**ABSTRACT-48****ARTIFICIAL INTELLIGENCE OF PRECISION MEDICINE.**

Vislavath Ganesh naik\*, Jyothi Basini, Seven hills college of pharmacy (Autonomous).

The integration of precision medicine with artificial intelligence (AI) holds great potential to transform the healthcare industry. Precision medicine techniques pinpoint the characteristics of patients with uncommon treatment outcomes or distinct medical requirements. Artificial intelligence (AI) uses complex calculation and inference to produce insights, gives the system the ability to reason and learn, and enhances human decision-making in clinicians. The most challenging problems facing precision medicine, according to recent research, may be solved by translational research examining this convergence, particularly when it comes to enabling personalized diagnosis and prognostication through the combination of clinical history, patient symptoms, and nongenomic and genomic determinants.

In a recent National Academy of Medicine report, the authors highlighted "unprecedented opportunities" to improve health care through artificial intelligence (AI) in the present and future. With the use of precision medicine, medical professionals can find and convey data that supports or modifies a medical choice from one based on the evidence for a typical patient to one that is based on the particulars of each individual patient. It makes it easier for medical professionals to provide individualized care to every patient. The development of precision medicine opens up opportunities that would not have happened otherwise.

The development of tailored medicines and early disease identification are two concrete benefits of precision medicine that are becoming more widespread in the medical field. Many data collecting and analytics tools enable precision medicine's ability to personalize care. Specifically, the combination of high-throughput genotyping and widespread use of EHRs provides.

**ABSTRACT-49****DEVELOPMENT AND CHARACTERIZATION OF OPTIMIZED CILNIDIPINE AND MANIDIPINE PRONIOSOMES.**

J. Ashwini\*, School of Pharmacy; Dr. Vasudha bakshi, Anurag University.

In this work, Cilnidipine and Manidipine loaded proniosomes are used in the treatment of hypertension to improve oral bioavailability. Cilnidipine and Manidipineproniosomes were prepared by film hydration followed by a rotary flask evaporator applying the concepts of Design of Experiments. The box-behnken design was applied to optimize the formulation variables. The particle sizes were in the nanometer range and spherical shaped for all prepared formulations predicting good long-term stability. Prepared proniosomes were characterized by differential scanning calorimetry (DSC) analysis and Attenuated total reflection (ATR) analysis, revealed the compatibility of the drug chosen with the ingredient added, powdered X-ray diffractometry (XRD) confirmed the amorphous phase of the prepared proniosomes, and finally, the surfactant layer was observed by scanning electron microscopy (SEM). In vitro studies of Cilnidipine and Manidipineproniosomes exhibited a controlled release profile for at least 24 h. The obtained results revealed that Cilnidipine and Manidipineproniosomes can be successfully prepared by using different carriers. Hence, these proniosomes could represent as great potential for a possible alternative to conventional oral formulation in the treatment of hypertension.

**KEYWORDS:** Proniosomes, Cilnidipine, Manidipine, Hypertension, Cholesterol, In-vitro study.

**ABSTRACT-50****ANALYTICAL METHOD DEVELOPMENT AND VALIDATION FOR SAMIDORPHAN AND OLANZAPINEIN IN BULK PHARMACEUTICAL DOSAGE FORMS BY RP-HPLC.**

Dasari Vasavi Devi\*

Samidorphan and Olanzapinein were simultaneously estimated in bulk and pharmaceutical dosage form. Chromatogram was run through Std BDS150 x 4.6 mm, 5 $\mu$ . Mobile phase containing Buffer0.01N Potassium dihydrogen phosphate: Acetonitrile taken in the ratio 80:20 %v/v was pumped through column at a flow rate of 1.0ml/min. Buffer used in this method was0.01NKh2po4 buffer. Temperature was maintained at 30°C. Optimized wavelength selected was 250nm. Retention time of Samidorphan and Olanzapine were found to be 2.125 min and 2.655 min. %RSD of the Samidorphan and Olanzapine were and found to be 0.5% and 0.6% respectively. %Recovery was obtained as 99.28% and 100.10% for Samidorphan and Olanzapine respectively. LOD, LOQ values obtained from regression equations of Samidorphan and Olanzapine were 0.10, 0.30 and 0.15, 0.46 respectively. %Assay was obtained as 99.71% and 99.58% for Samidorphan and Olanzapine respectively. Regression equation of Samidorphan is  $y = 354067x + 52990$ ,  $y = 329882x + 119384$ of Olanzapine. Retention times were decreased and that run time was decreased, so the method developed was simple and economical that can be adopted in regular Quality control test in Industries.

**KEYWORDS:** Samidorphan, Olanzapine, RP-HPLC.

**ABSTRACT-51****BLOOD BASED DIAGNOSTIC MARKERS FOR THE EARLY DIAGNOSIS OF ALZHEIMER'S DISEASE.**

Harshini Vallam\*, Jyothi Basini, Seven Hills College of Pharmacy (Autonomous).

The emergence of blood-based totally biomarkers marks a huge development in the realm of Alzheimer's sickness (AD) diagnostics, providing a capacity road for a convenient, price-effective, and less invasive screening device. The affiliation of Alzheimer's has advocated the utilization of blood-primarily based markers in specialized reminiscence clinics for people exhibiting cognitive impairment. But, it's miles critical to emphasise that the outcomes derived from these blood-based markers require validation via traditional strategies together with Cerebrospinal fluid (CSF) analysis or Positron Emission Tomography (PET). Researchers have recognized novel methodologies for AD diagnostic markers, encompassing neurofilament light polypeptide (NfL), glial fibrillary acidic protein (GFAP), and soluble triggering receptor expressed on myeloid cells 2 (sTREM2), in addition to plasma A $\beta$ 42, A $\beta$ 42/40 ratio, p-tau, and t-tau. Plasma A $\beta$ 42/A $\beta$ 40 is appreciably seemed as a promising blood-based totally biomarker for AD screening. Nonetheless, it is essential to well known the contemporary absence of evidence assisting its ability to differentiate ad from non-AD dementias. P-tau, an essential detail of neurofibrillary tangles within the AD brain, has been a focal point of new diagnostic efforts. CSF p-tau181, the maximum significantly studied soluble p-tau, has been assessed the use of numerous newly evolved sensitive assays in recent years. Additionally, CSF neurofilament mild polypeptide (CSF-NfL) serves as a neurodegenerative biomarker. Importantly, plasma NfL demonstrates a robust correlation with CSF measures, organising its efficacy as a reliable blood diagnostic biomarker. Numerous indicators recommend that neuroinflammation performs an essential role in AD, prompting the assessment of numerous neuroinflammation-related biomarkers, which include GFAP, sTREM2, YKL-40, and S100 calcium-binding protein B (S100B). These biomarkers make contributions precious insights into the inflammatory methods related to AD. In conclusion, this summary encapsulates current advancements in blood-based diagnostic markers for AD, spotting their potential while underscoring the imperative want for in addition validation and exploration in clinical settings.

**KEYWORDS:** Alzheimer's disease, diagnostic markers, plasma A $\beta$ 42 and CSF-NfL.

**ABSTRACT-52****ARTIFICIAL INTELLIGENCE: A KEY ROLE IN NOVEL PHARMACEUTICAL ERA.**

Sarovar Reddy Vantimitta\*, Professor, Department of pharmaceuticals, Annamacharya college of Pharmacy.

Artificial intelligence has been tremendously developed into a problem-solving science with good outcome conclusive applications in business, medicine, and engineering. The concept generally focus on the capacity of a computer or a robotics system that is computer-enabled to process information and create results that are comparable to how a human might think while learning, making decisions, and solving problems. The existing drug development method has to radically change in order to suit the requirements of society and doctors in the twenty-first century. The pharmaceutical industry, in particular, has a real opportunity to change the way it conducts research and development in order to work more effectively and significantly increase the success of early drug development. This opportunity is made possible by artificial intelligence and machine learning. The application of artificial intelligence in the pharmaceutical and biotech sectors has revolutionised how researchers create new medicines, treat diseases, and more during the last five years. The tools of AI are Robot pharmacy for the manufacture and monitoring of pharmaceuticals with the aim of enhancing patient safety. They claim that the system has accurately prepared 3,50,000 doses of medicine. TUG robots move around the hospital and transport large items like trash and linen as well as prescriptions, meals, specimens, and resources. AI-based drug discovery platform with a sizable patient database that is used to locate and validate the many disease-causing biomarkers, and it then chooses treatments based on the data acquired. The Public health and epidemiology is advantage of AI as it can help identify infectious epidemics of diseases including influenza, dengue fever, TB, and malaria. Zika virus and the current COVID-19 pandemic transmission patterns have both been predicted. The medical specialty applications were digital imaging in radiology, echocardiography to diagnose heart failure caused by amyloidosis in cardiology, diagnosis of a wide range of different conditions, including skin, lung, breast, and prostate cancers in pathology, differentiating specific skin lesions in dermatology, in oncology, neurology, mental health and generalized.

**KEYWORDS:** Artificial Intelligence, Disease-causing biomarkers, Specific skin lesions in dermatology, Hospital and transport, Pandemic transmission.

**ABSTRACT-53****NEUTRACEUTICALS.**

Kasula Chandrika Manasa\*, CMR College of Pharmacy.

Nutraceuticals are products, which other than nutrition are also used as medicine. A nutraceutical product may be defined as a substance, which has physiological benefit or provides protection against chronic disease. Nutraceuticals may be used to improve health, delay the aging process, prevent chronic diseases, increase life expectancy, or support the structure or function of the body. Nowadays, nutraceuticals have received considerable interest due to potential nutritional, safety and therapeutic effects. Recent studies have shown promising results for these compounds in various complications. In the present review much effort has been devoted to present new concepts about nutraceuticals based on their diseases modifying indications. Emphasis has been made to present herbal nutraceuticals effective on hard curative disorders related to oxidative stress including allergy, alzheimer, cardiovascular, cancer, diabetes, eye, immune, inflammatory and Parkinson's diseases as well as obesity. The recently published papers about different aspects of nutraceuticals as alternative for pharmaceuticals were searched using scientific sites such as Medline, PubMed, and Google Scholar. The used terms included nutraceutical and allergy, alzheimer, cardiovascular, cancer, diabetes, eye, immune, inflammatory or Parkinson.

**ABSTRACT-54****EXPLORING THE INTERSECTION OF TELEPSYCHIATRY AND TELEMEDICINE IN PRECISION MEDICINE.**

Kathrotiya Prince\*, CMR College of Pharmacy, Hyderabad.

This abstract delves into the evolving landscape of telepsychiatry and telemedicine, examining their integration within the realm of precision medicine. As technology continues to advance, mental health care and medical practices are undergoing transformative changes. This paper explores the synergies and challenges arising from the convergence of telepsychiatry, telemedicine, and precision medicine.

The integration of telepsychiatry and telemedicine offers unprecedented opportunities to tailor mental health interventions with precision. The utilization of remote platforms enables healthcare professionals to reach diverse populations, overcoming geographical barriers and improving accessibility to specialized mental health services. Through the lens of precision medicine, this abstract investigates how these technologies contribute to a more personalized and effective approach to mental health treatment. The abstract also discusses the technological tools and data-driven strategies employed in telepsychiatry and telemedicine to gather, analyze, and interpret patient information. Precision medicine principles, such as genomics, biomarkers, and advanced diagnostic tools, are explored in the context of mental health to elucidate how these approaches enhance the accuracy and efficacy of interventions. However, challenges like ethical considerations, data privacy, and disparities in access to technology must be addressed. The abstract concludes by highlighting the potential impact of integrating telepsychiatry and telemedicine into precision mental health care, emphasizing the need for a comprehensive and ethical framework to guide the evolving landscape of remote mental health interventions.

**KEYWORDS:** Telepsychiatry, Telemedicine, Precision medicine Tools & Strategies Genomics.

**ABSTRACT-55****DISSOCIATIVE IDENTITY DISORDER (DID).**

Jasti Sindhu\*, CMR College of Pharmacy.

Dissociative identity disorder is today understood as chronic dissociative psychopathology that most often develops in response to severe abuse in childhood the dissociative component is manifestation of defense mechanism out of control. It is formerly known as multiple personality disorder which involves switching to other identities you may feel as if you have two bore more people talking or living inside your head each identity disorder may have unique name personal history and features for exam Awe movie.

The most famous case of DID is Sybil - 1970 A young woman who had been abused by her mother as a child and as a result had mental breakdown and created multiple personalities caused sensation. Currently there is no cure to DID but psychotherapy is most effective treatment others like talk therapy and medication- selective serotonin re uptake (SSRIs).

**ABSTRACT-56****"GUILLAIN BARRE SYNDROME".**

Talla Akhila\*, CMR College of Pharmacy.

Guillain Barre syndrome is a rare disorder in which body's immune system attacks nerves and causes damage to the peripheral nerves. The nerve injury often causes muscle weakness, causes paralysis and sensitivity problems, including pain, tingling and numbness. This syndrome destroys the protective covering of the peripheral nerves preventing the nerves from transmitting signals to the brain. Hyporeflexia and weakness progress may result in quadriplegia. The complications include blood clots, heart problems, slow bowel movement. There are 3 phases of GBS lasting from days to months. Most common type of GBS is Acute Inflammatory Demyelinating polyneuropathy (AIDP). The diagnosis includes Spinal tap. Severe cases of this syndrome are rare but can result in near total paralysis and problems of breathing. Guillain Barre syndrome is potentially life threatening. People with this syndrome should be treated and monitored quickly as soon as possible. Treatment includes supportive care and some immunological therapies.

**ABSTRACT-57****IMPLANTS FOR DIAGNOSIS.**

T. Amarender \*, CMR College of Pharmacy.

Implants for diagnosis represent an innovative approach in healthcare, providing real-time monitoring and precise data collection. These devices, seamlessly integrated into the body, offer continuous insights into various physiological parameters. From glucose levels to cardiac activity, these implants enhance diagnostic capabilities, allowing for early detection and personalized treatment strategies. Utilizing advanced sensors and wireless communication, these implants transmit data to external devices, enabling healthcare professionals to monitor patients remotely. The integration of such diagnostic implants holds promise for chronic disease management and preventive healthcare. This abstract highlights the transformative potential of implantable diagnostic devices in revolutionizing how we monitor and diagnose medical conditions.

**ABSTRACT-58****STEM CELL RESEARCH FOR REGENERATION MEDICINE IN PARKINSON'S DISEASE.**

B. Aparna\*, Dr. V. Sireesha, Assistant Professor, CMR College of Pharmacy.

Parkinson's disease (PD) manifests with a typical movement disorder, due to the loss of dopaminergic neurons of the substantia nigra. There are no disease-modifying treatments, and current management is centered on symptom control using predominantly dopaminergic drugs. While effective at improving the motor symptoms of PD, these treatments result in significant adverse effects, due to non-targeted and non-physiological delivery of dopamine to the brain. For many years, there has been interest in cell grafting as a potential means of restoring dopamine to the striatum in a physiological manner, which would theoretically treat the symptoms of PD that are due to dopamine deficiency, without the motor and neuropsychiatric adverse effects that are seen with dopaminergic medications. A number of cell sources have been trialed in PD patients, but lack of efficacy, ethical and logistical barriers have meant that most of these do not offer useful treatment options. Stem cell-based treatments are emerging as the most promising approach for the development of a useful regenerative treatment that could be used in a large number of patients. Although progress in this field has been slow, a number of exciting clinical trials are now on the horizon, and there is genuine hope that stem cells will enter the clinic in the short- to medium-term future.

**ABSTRACT-59****LEUCOCYTE ADHESION DEFICIENCY.**

Uttoori Akshitha\*, CMR College of Pharmacy.

Leucocyte adhesion deficiency (LAD) is a rare, innate autosomal recessive immunodeficiency with three subtypes. Twenty-nine patients with LADs were diagnosed and treated in Israeli Medical Centers and in the Palestinian Authority. Common features were severe infections of variable aetiology, excessive leukocytosis and delayed umbilical cord detachment. In LAD-I, the integrin CD18 expression varied from negligible to normal. However, CD11a expression was negligible in all tested patients, suggesting both CD11a and CD18 should be used to assess this sub type LAD-II patients showed distinctive facial features, physical malformations, short stature and developmental delay. These patients show defective expression of SLeX (CD15a) on cell surface glycoproteins and lack of H antigen only thyroid cell surfaces resulting in Bombay blood group (hh). LAD-III showed intact but inactive  $\beta 2$  integer in associated with severe infections and significant bleeding disorders caused by defective platelet aggregation and thrombocytopenia. LAD- I patients harboring the c.119\_128 deletion in IL7B2 seemed to have better outcomes as compared to other LAD-I patients.

**ABSTRACT-60****REPRODUCTIVE HEALTH CARE - SAVES LIVES.**

Jhansi Mekala\*, CMR College of Pharmacy.

Reproductive health has been a great concern for every woman. It is a crucial part of general health and a central feature of human development. In the past few years, the issues of Reproductive Health/Rights (RH/RR) have been increasingly perceived as social problems; they have emerged as a matter of increasing concern throughout the developed and developing countries. There is a growing awareness of the burden and implications of reproductive ill health as contributed by unsafe motherhood (during pregnancy, childbirth, abortion), reproductive tract infection (RTIs) and cancer, sexually transmitted infections (STIs) including the human immunodeficiency virus (HIV), poorly regulated fertility, infertility, unwanted pregnancy and adolescent/teenage sexuality and pregnancy. Sexual health further entails a state of well-being in expression of sexuality, prevention of unwanted pregnancies, prevention of STIs and AIDS and freedom from sexual abuse and violence. Reproductive health education should be universal, especially for adolescents, and its impact assessed against appropriate monitoring criteria such as reproductive morbidity, STI prevalence and abortion complications. Reproductive and Child Health (RCH) is extended maternal child health of family welfare or safe motherhood or child survival and safe motherhood program.

**KEYWORDS:** RCH, Unsafe Motherhood, Sexual Abuse, PCOS, Unwanted Pregnancy, RTIs.

**ABSTRACT-61****HYPERTENSION IN YOUTH.**

Qamer Mohammadi\*, Sultan Ul Uloom College of Pharmacy.

High blood pressure, also called hypertension, is blood pressure that is higher than normal. Your blood pressure changes throughout the day based on your activities. Having blood pressure measures consistently above normal may result in a diagnosis of high blood pressure (or hypertension), High blood pressure usually does not cause symptoms. It is, however, a major risk factor for stroke, coronary artery disease, heart failure, atrial fibrillation, peripheral arterial disease, vision loss, chronic kidney disease, and dementia. Hypertension is a major cause of premature death worldwide, High blood pressure is classified as primary (essential) hypertension or secondary hypertension. Hypertension among young people is common, affecting 1 in 8 adults aged between 20 and 40 years.

Shocking statistics from the Indian National Health Portal show that 30 percent of adult Indians have elevated blood pressure levels. Hypertension prevalence is alarmingly high among Indian adolescents aged 10-12 years at 35 per cent in those above 13 years of age. Several factors contribute to hypertension among Indian youth, including a sedentary lifestyle, an unhealthy diet, and stress. Additionally, genetic factors, obesity and other underlying medical conditions can also contribute to elevated blood pressure levels. In the current study, it was observed that 199 (36.9%) out of 539 participants had undiagnosed hypertension. Among them 102 (51.3%) were females and 97 (48.7%) were males. Prevention is always better than cure, and this is especially true for hypertension. Adopting a healthy lifestyle is the key to preventing hypertension among Indian youth.

#### ABSTRACT-62

### NANO FORMULATIONS OF HERBAL EXTRACTS FOR NEURO DEGENERATIVE DISORDERS.

Bopani Kalyan Teja\*, CMR College of Pharmacy.

Nanotechnology is a promising technique to increase the bioavailability of herbal medicines. This paper presents the nanosuspension approach for increasing the aqueous solubility and thereby bioactivity of important herbal extracts. Nanosuspensions of the seeds of three plants extract (*Silybum marianum*, *Elettaria cardamomum* and *Coriandrum sativum*) were prepared by using polyvinyl alcohol (1.5% w/v) as a stabiliser. Prepared nanoparticles were characterised by scanning electron microscope. Activity of nanosuspension formulation was assessed by using four in vitro antioxidant assays. *S. marianum*, *E. cardamomum* and *C. sativum* particle size was observed to fall in range of  $446.1 \pm 112.6$ ,  $456.63 \pm 339.2$  and  $432.1 \pm 172.8$  nm, respectively, most of the particles were having spherical shape and smooth topology. These synthesised nanoparticles were found to be more effective against quenching free radical than their crude extracts and standards [butylated hydroxyl toluene and ascorbic acid]. *C. sativum* nanosuspension showed most free radical scavenging potential against 2,2-diphenyl-1-picrylhydrazyl (DPPH) and superoxide free radical scavenging assays ( $IC_{50} 0.59 \pm 0.01$  and  $0.81 \pm 0.11$  mg/ml). *S. marianum* nanosuspension was found to be most effective against DPPH radicals scavenging ( $IC_{50} 0.34 \pm 0.02$  mg/ml). It was concluded that nanosuspension of herbal medicines potentiates the antioxidant potential.

**KEYWORDS:** Nanosuspension, Antioxidant potential, Herbal extract, Radical scavenger.

#### ABSTRACT-63

### MULTIPLE ENDOCRINE NEOPLASIA.

Kummari Naveena\*, CMR College of Pharmacy.

The multiple endocrine neoplasia (MEN) syndromes are familial forms of cancer that affect several endocrine tissues or cell types. MEN include two unrelated syndromes, MEN type 1 and MEN type 2, which are associated with distinct and characteristic combinations of tumors affecting specific endocrine tissues. Both MEN 1 and MEN 2 are inherited as autosomal. The multiple endocrine neoplasia (MEN) syndromes are familial forms of cancer that affect several endocrine tissues or cell types. MEN type 1 dominant diseases, but they arise by very different genetic mechanisms. The MEN syndrome is inherited disorder associated with hyperplasia or neoplasms of several endocrine organs. GI manifestations are caused by the products of endocrine proliferations. Each of these syndromes is associated with a mutant gene locus-MEN I with the MEN1 gene locus, and MEN IIa and IIb with the RET gene locus. MEN I is associated with pancreatic endocrine tumors (often gastrinomas) and the Zollinger-Ellison syndrome, the latter of which is associated with gastric and duodenal disease. MEN IIb may be associated with, hyperplasia, and hypertrophy of the plexuses of Meissner and Auerbach in the GI tract. Chronic constipation, diarrhea, or both may be associated with MEN IIb.



**ABSTRACT-64****NONINVASIVE TESTS (NITS) IN THE MANAGEMENT OF NONALCOHOLIC STEATOHEPATITIS (NASH).**

Golipally Deekshitha\*, CMR College of Pharmacy.

Nonalcoholic steatohepatitis (NASH) is a progressive liver disease characterized by hepatic steatosis, inflammation, and varying degrees of fibrosis, often leading to cirrhosis and hepatocellular carcinoma. The increasing prevalence of NASH globally underscores the urgent need for effective diagnostic and management strategies. Noninvasive tests (NITs) have emerged as promising tools in the assessment and monitoring of NASH, offering advantages over invasive liver biopsies in terms of safety, cost-effectiveness, and patient acceptability. This comprehensive review examines the current landscape of NITs in the management of NASH, focusing on their diagnostic accuracy, prognostic value, and utility in guiding treatment decisions. Various NITs encompassing clinical, biochemical, imaging, and serum-based biomarkers are discussed, including transient elastography, magnetic resonance imaging (MRI), magnetic resonance elastography (MRE), and serum biomarker panels such as the NAFLD fibrosis score, FibroTest, and Enhanced Liver Fibrosis (ELF) test. Recent advancements in imaging modalities, particularly MRI and MRE, have significantly enhanced the noninvasive assessment of liver fibrosis and steatosis in patients with NASH. These techniques offer superior sensitivity and specificity compared to conventional imaging methods, facilitating early detection and risk stratification in NASH patients. Moreover, serum biomarker panels combining multiple noninvasive markers have shown promising results in predicting disease severity and progression, aiding in the identification of high-risk patients who may benefit from early intervention. Integration of NITs into routine clinical practice holds great promise for optimizing the management of NASH by enabling timely diagnosis, risk stratification, and monitoring of disease progression. Ongoing research efforts are focused on identifying novel NITs and refining existing algorithms to improve diagnostic accuracy and prognostic assessment in NASH.

**KEYWORDS:** NASH- Nonalcoholic steatohepatitis, NITs – Noninvasive tests.

**ABSTRACT-65****NOVEL THERAPEUTIC TARGETS FOR PSORIATIC DISEASE.**

Yerasi Jahnavi\*, Jyothi Basini, Seven Hills College of Pharmacy (Autonomous).

The exploration of novel therapeutic targets for psoriatic disease has emerged as a focal point in contemporary medical research. Psoriatic disease, encompassing psoriasis and psoriatic arthritis, presents a complex and multifaceted challenge, necessitating innovative approaches to address its underlying pathophysiology. This abstract delves into recent advancements in identifying and elucidating novel therapeutic targets that hold promise for more effective management of psoriatic disease. Researchers have focused on unraveling the intricate immunological mechanisms implicated in psoriasis and psoriatic arthritis, leading to the identification of novel targets that transcend traditional treatment modalities. These targets span various pathways, including immune dysregulation, inflammatory responses, and aberrant cellular proliferation. Noteworthy candidates include cytokines such as interleukin (IL)-17, IL-23, and tumor necrosis factor-alpha (TNF- $\alpha$ ), as well as specific cell types and signaling pathways implicated in the disease's pathogenesis. In addition to immune-related targets, there is a growing emphasis on understanding the role of the skin microbiome, genetic factors, and environmental triggers in psoriatic disease. This broader perspective offers new avenues for therapeutic intervention, aiming to modulate the disease at its roots. This abstract encapsulates the contemporary landscape of research on novel therapeutic targets for psoriatic disease, providing a glimpse into the potential breakthroughs that may reshape the treatment paradigm. The identification and validation of these targets not only offer hope for enhanced therapeutic efficacy but also pave the way for personalized and targeted interventions tailored to the specific intricacies of psoriatic disease.

**ABSTRACT-66****DEVELOPMENT OF NOVEL CARRIER SYSTEMS FOR TARGETED DRUG DELIVERY IN THE TREATMENT OF ARTHRITIS.**

Mr. CH. Srinivas Reddy\* Ph. D Research scholar (Part-Time), Dr. Suvendu Kumar Sahoo, Associate Professor, GITAM School of Pharmacy, Vizag, Andhra Pradesh, India-530045.

Arthritis, a prevalent cause of disability and morbidity, especially in the elderly, presents with symptoms like pain, stiffness, and joint movement limitations. Nonsteroidal anti-inflammatory drugs (NSAIDs) are the cornerstone of arthritis treatment, but their systemic administration often requires high and frequent dosages to maintain effective concentrations at inflamed sites, increasing the risk of adverse effects in non-target tissues. This research introduces a novel transdermal drug delivery system for localized and prolonged action of NSAIDs, minimizing systemic side effects. The study focuses on developing liposomal and transferosomal gel formulations for NSAIDs, utilizing rotary vacuum evaporation and probe sonication to create stable, nanometric drug carriers with optimal physicochemical properties. 1,2-Distearoyl-sn-glycero-3-phosphoethanolamine and Span 60 emerged as effective components for liposome and transferosome preparation, respectively. The ex-vivo permeation studies through rat skin demonstrated superior drug delivery and retention for the transferosomal gel compared to liposomal gel and marketed formulations. Pharmacokinetic studies revealed enhanced bioavailability of aceclofenac in both liposomal and transferosomal gels. Anti-inflammatory and analgesic efficacies were significantly higher in these formulations than in conventional gels, as confirmed by rat paw edema tests and radioactive labeling experiments. Notably, indomethacin, another NSAID, also showed improved efficacy in transferosomal gel form. The gels' rheological properties indicated good stability under stress, while their pH and lack of toxic solvents ensured skin compatibility. Spreadability, gel strength, and extrudability were satisfactory, enhancing user convenience. Stability testing validated the formulations' efficacy up to six months. In conclusion, this novel transdermal delivery system, leveraging liposomal and transferosomal carriers in gel form, offers a promising approach for arthritis treatment. It ensures localized, sustained drug release, potentially enhancing patient comfort and compliance while reducing the gastrointestinal side effects associated with oral NSAID administration.

**KEYWORDS:** Arthritis treatment, Transdermal drug delivery, Liposomes, Transferosomes, Localized drug action.

**ABSTRACT-67****PRECISION MEDICINES IN ALZHEIMER'S DISEASE.**

K. Ramya\*, Dr.V. Sireesha, Assistant Professor, CMR College of Pharmacy.

Alzheimer disease (AD) is the most common cause of a decline in cognitive ability. It is a neurodegenerative disorder that usually affects people over the age of 65 with the involvement of language, memory, comprehension, attention, judgment and reasoning. The global prevalence of dementia is reported to be as high as 24 million and is predicted to increase 4 times by the year 2050. The disorder has no cure, and its rate of progression is variable. Further, the diagnosis of Alzheimer's disease in the early phase is difficult, and there are no specific laboratory or imaging tests to confirm the diagnosis. These individuals often wander, fall, have significant behavior problems and loss of memory. Symptoms of the disease typically develop slowly and worsen over time, eventually impairing a person's ability to carry out daily activities. There is no cure for Alzheimer's, but medications and other therapies can help manage symptoms and improve quality of life. Precision medicine approach considers two genes that can be commercially sequenced for polymorphisms associated with AD, apolipoprotein E (APOE), and methylenetetrahydrofolate reductase (MTHFR). Comparing these two distinct approaches provides support for a clinical precision medicine prevention strategy, which may ultimately lead to more favorable patient outcomes as the interventions are targeted to address individualized risks.

**ABSTRACT-68****TRANSDERMAL DRUG DELIVERY SYSTEM AND ITS RECENT ADVANCEMENTS.**

Damerla Sai Teja\*, CMR College of Pharmacy.

Various non-invasive administrations have recently emerged as an alternative to conventional needle injections. A transdermal drug delivery system (TDDS) represents the most attractive method among these because of its low rejection rate, excellent ease of administration, and superb convenience and persistence among patients. TDDS could be applicable in not only pharmaceuticals but also in the skin care industry, including cosmetics. Because this method mainly involves local administration, it can prevent local buildup in drug concentration and nonspecific delivery to tissues not targeted by the drug. Current status of the transdermal drug delivery field and describes numerous pharmaceutical developments which have been employed to overcome limitations associated with skin delivery systems. In this we describe the different types of available TDDS methods, along with a critical discussion of the specific advantages and disadvantages, characterization methods, and potential of each method. Progress in research on these alternative methods has established the high efficiency inherent to TDDS, which is expected to find applications in a wide range of fields. Using second- and third-generation enhancement strategies, transdermal delivery is poised to significantly increase its impact on medicine.

**ABSTRACT-69****OPTIMIZING INHALER THERAPY: THE ACCUHALER.**

Y. Shravya\*, CMR College of Pharmacy.

The accuhaler is a dry powder inhaler used to administer medications for respiratory conditions such as chronic obstructive pulmonary disease [COPD], asthma, cystic fibrosis. This abstract explores its design, mechanism of action, benefits and features in delivery precise doses of medication and improve patients adherence and respiratory health usage instructions, safety and precautions, patients testimonials and additionally discussing role of accuhaler in ensuring the quality patients of life for individuals with these disorder. The accuhaler is user friendly features make it a valuable tool in the treatment of respiratory disease, contributing to improved inhalation technique and better disease management and improving patient adherence to medication regimens the accuhaler remains a pivotal tool unempowering patients to take control of their respiratory well-being.

**KEYWORDS:** Inhaler, Respiratory Medication, Dose Delivery System, Bronchodilators.

**ABSTRACT-70****PRECISION MEDICINE IN OVARIAN CANCER.**

R.Vasavi Sai Saraswati\*, Dr.V. Sireesha, Assistant professor, CMR College of Pharmacy.

Ovarian cancer is the primary cause of gynecologic cancer death in women worldwide and it is generally diagnosed at an advanced stage. It is the 5th leading cause of mortality in women. It is also labeled as the most prevalent and lethal gynecologic cancer. Although the current standard treatment based on extensive cytoreductive surgery and systemic chemotherapy results in a high complete remission rate, recurrences are extremely frequent and exhibit progressive chemotherapy resistance, thus posing a difficult clinical challenge. In the era of precision medicine, the increasing knowledge of cancer genomics, proteomics, and immune milieu facilitated the development of new targeted therapies (e.g. antiangiogenic drugs, PARP inhibitors, immunotherapy, folate receptor inhibitors, growth factor signalling inhibitors), that could improve ovarian cancer paradigm of care. Precision cancer medicine uses targeted drugs and immunotherapies engineered to directly attack ovarian cancer cells with specific genetic abnormalities, leaving normal cells largely unharmed and can often be used instead of chemotherapy.

**ABSTRACT-71****HUMAN PAPILLOMAVIRUS VACCINE AGAINST CERVICAL CANCER.**

Sneha Y\*, Dr. V. Sireesha, Assistant Professor, CMR College of Pharmacy.

Cervical cancer is one of the most common cancers threatening women's health, and the persistent infection of high-risk human papillomavirus (HPV) is closely related to the pathogenesis of cervical cancer and many other cancers. The carcinogenesis is a complex process from precancerous lesion to cancer, which provides an excellent window for clinical prevention, diagnosis, and treatment. However, despite the various preventions and treatments such as HPV screening, prophylactic HPV vaccines, surgery, radiotherapy, and chemotherapy, the disease burden remains heavy worldwide. Currently, three types of prophylactic vaccines, quadrivalent HPV vaccine, bivalent HPV vaccine, and a new nonvalent HPV vaccine, are commercially available. Although these vaccines are effective in protecting against 90% of HPV infection, they provide limited benefits to eliminate pre-existing infections. Therefore, new progress has been made in the development of therapeutic vaccines. Therapeutic vaccines differ from prophylactic vaccines in that they aim to stimulate cell-mediated immunity and kill the infected cells rather than neutralizing antibodies. This review aims at systematically covering the progress, current status and future prospects of various vaccines in development for the prevention and treatment of HPV-associated lesions and cancers and laying foundations for the development of the new original vaccine.

**KEYWORDS:** Human papillomavirus, Cervical cancer, Prophylactic vaccine, Therapeutic vaccine

**ABSTRACT-72****A QUESTIONNAIRE-BASED STUDY TO MEASURE CKD PATIENTS AWARENESS OF THE DISEASE IN A TERTIARY CARE HOSPITAL.**

Jyothi Basini\*, Srijia Sadanala, Srinivasa Yadav Poolugari, Susmitha Karakambadi, Teja Apthiri and Ram R.

**Background:** Chronic Kidney Disease (CKD) is growing as one of the foremost public health problems worldwide. It is a chronic condition reduced by the lifestyle and behavior of the people CKD is usually asymptomatic until the end stages and lacks accurate data of its prevalence. All stages of CKD are associated with an increased risk of cardiovascular disease, premature death, and poor quality of life. Population-based screening studies are being conducted in developed countries, but few have been reported, especially in developing countries such as India, where the true incidence and frequency of CKD are still unknown. Public awareness is an important factor in overcoming the burden of CKD and prevention. Early recognition of CKD people requires awareness of the various causes, symptoms, and signs of CKD. This study was designed to examine people's knowledge and awareness.

**Methods:** The hospital-based prospective study design was conducted at SVIMS, Tirupati among adults ( $\geq 18$  years) with a confirmed diagnosis of CKD. Informed written consent was obtained from each participant and data was collected by interview using a questionnaire form to assess awareness about the disease condition. Multivariate logistic regression was used to identify independent predictors of CKD and a P-value  $< 0.05$  was considered statistically significant.

**Results:** The mean (SD) of the males was 57.95 ( $\pm 12.56$ ) and for females was 55.89 ( $\pm 13.62$ ) and the overall mean (SD) average age of patients was 57.38 ( $\pm 13.62$ ). Multiple linear regressions were performed to predict the CKD Knowledge score based on Age, Education and Occupation. The multi-variant analysis found a higher knowledge score associated with a higher level of education  $p=0.0352$ , CI = 1.36017 (0.839 to 3.56). And 11% of the members were having less knowledge and 46% with mild and 43% were having moderate knowledge and none of the patients was having complete awareness of CKD.

**Conclusion:** From our study found that, a low level of patient awareness and a high prevalence of CKD. The predictors of CKD were HTN, DM and poor knowledge about CKD. Lack of knowledge about CKD leads to the progression of the disease and increases mortality. The public knowledge of CKD was relatively poor. Improving public knowledge may assist in increasing the early detection and subsequent management of CKD.

**KEYWORDS:** Chronic Kidney Disease (CKD), Knowledge, Awareness, and Prevalence.

### ABSTRACT-73

#### WEGOVY.

Bokka Vidya \*, K.Mary Swarnalatha, CMR college of pharmacy.

Wegovy, also known as Semaglutide, is a medication approved by regulatory authorities for the treatment of obesity. It belongs to a class of drugs called GLP-1 receptor agonists, which work by regulating appetite and reducing food cravings. Unlike previous weight-management medications, Wegovy has shown exceptional effectiveness in clinical trials, leading to significant weight loss in participants. The launch of Wegovy in India in 2026 is undoubtedly exciting. It represents a significant milestone in the fight against obesity and the pursuit of healthier communities. The drug is administered via subcutaneous injection on a weekly basis, making it convenient for patients to incorporate into their routine. WEGOVY® (semaglutide) injection 2.4 mg is an injectable prescription medicine that may help adults and children aged >12 years with obesity (BMI ≥30 for adults, BMI > 95th percentile for age and sex for children), or some adults with excess weight (BMI >27) (overweight) who also have weight-related medical problems to help them lose weight and keep it off. Wegovy® should be used with a reduced calorie meal plan and increased physical activity. Wegovy® contains semaglutide and should not be used with other semaglutide containing products or other GLP-1 receptor agonist medicines.

### ABSTRACT-74

#### OPHTHALMIC DRUG DELIVERY SYSTEM – OCUSERTS.

Peddi Varshitha\*, N. Madhavi, CMR College of Pharmacy, Kandlakoya, Hyderabad -501401, Telangana, INDIA.

Ocuserts or ophthalmic inserts are sterile preparations that administer drugs at programmed rates for prescribed periods of time to provide continuous control of drug therapy. It is of solid or semisolid consistency. Ocuserts are designed to be placed in the inferior cul-de-sac between the sclera and the eyelid to release the drug at constant rate. First marketed by Alza Corporation, California, the pilocarpine. Ocuserts improved noncompliance problems and potential systemic side effects of pilocarpine. Ocuserts increase contact time, prolongs duration of action, improves bioavailability, reduces the frequency of administration. It provides more patient convenience and improves compliance, as the dose needs to be administered only once a week although patients must check periodically to ensure that the unit is still in place. Types of ocuserts are Insoluble ocular inserts, Soluble ocular inserts, and Bio erodible inserts (SODI). Generally, all types of ocuserts consist of 3 components. They are (a) Central drug reservoir (b) Rate controlling membrane (c) Outer annular ring meant for easy handling.

**KEYWORDS:** Ocuserts, Soluble ocular drug insert, Controlled drug therapy, Pilocarpine, Cul-de-sac.

**ABSTRACT-75****DEVELOPMENT AND CHARACTERIZATION OF ILOPERIDONE SOLID LIPID NANOPARTICLES.**

Vasudeva Reddy Matta\*, Rada Santosh Kumar.

Iloperidone (IL) is an anti-psychotic drug used to treat schizophrenia. It is a BCS class II drug with low oral bioavailability due to limited aqueous solubility and firstpass metabolism. The objective of the current investigation was to increase the oral bioavailability of IL using solid lipid nanoparticles (SLNs; IL-SLNs) as an alternative delivery system. IL-SLNs were prepared by hot homogenization followed by probe sonication method. The lead IL-SLN formulation was identified based on particle size, Poly dispersity index (PDI), zeta potential (ZP), entrapment efficiency (EE) and drug content. The lead IL-SLN formulation further evaluated for *in vitro* drug release, stability and computability. The lead IL-SLN formulation (F4) showed particle size, PDI, ZP, EE and drug content of  $249\pm 0.40\text{nm}$ ,  $0.294\pm 0.001$ ,  $-25.0\pm 0.15\text{ mV}$ ,  $95.2\pm 0.05\%$  and  $98.4\pm 0.20\%$  respectively. The F4 formulation showed sustained drug release up to 48 hours compared with IL solution control formulation from *in vitro* release studies. The IL-SLN formulation (F4) is stable for 90 days at 2-8°C room temperature and no interactions between drug, lipid and other excipients was confirmed through DSC analysis. Taken together, SLN formulation could be considered as an alternative oral delivery system for the IL in schizophrenia treatment.

**KEYWORDS:** Iloperidone, oral delivery, solid lipid nanoparticles, *in vitro* release, DSC, Stability.

**ABSTRACT-76****NANO INNOVATIONS IN CARDIOVASCULAR CARE: PROBING THE DYNAMIC INTERPLAY OF NANOPARTICLES AND POLYMERS ON HEART HEALTH.**

Munigonda Anuraga Aravindha\*, Geethanjali College of Pharmacy.

Cardiovascular diseases (CVD) continue to cast a significant shadow on global health, necessitating innovative approaches beyond traditional interventions. Nanoparticles and polymers have emerged as promising players in the biomedical arena, offering diverse applications in diagnostics and therapeutics. These minuscule entities exhibit a nuanced relationship with the cardiovascular system, influencing cardiac physiology through intricate mechanisms. Some nanoparticles alter ion channels, while others modulate ions directly or indirectly, mitigating cellular demise by reducing oxidative stress. Incorporating nanoparticles into therapeutic strategies holds potential for enhancing cardiovascular well-being, but it comes with a caveat – a fine balance must be maintained, as excessive use may induce cardiotoxicity through heightened reactive oxidative species. This comprehensive review delves into the diverse landscape of nanoparticles, exploring their varied effects and deciphering optimal dosages for impactful outcomes. By unraveling the intricate dance between nanoparticles and cardiac health, this exploration seeks to establish a robust foundation for interpreting and contextualizing current research findings. In navigating this Nano frontier, we aspire to shed light on the potential benefits and risks associated with leveraging these tiny agents for the betterment of cardiac well-being.

**KEYWORDS:** Cardiovascular diseases, Nanoparticles, Polymers, Cardiac physiology, Therapeutics, Ion channels, Oxidative stress, Dosages, Research findings, Nano medicine.

**ABSTRACT-77****PREPARATION, CHARACTERIZATION AND EVALUATION OF BIOCOMPATIBLE 2-HYDROXY PROPYL- $\beta$ -CYCLODEXTRIN INCLUSION COMPLEX LIPOSOMES LOADED WITH ANTITUMOR DRUG AS DELIVERY SYSTEM.**

Farsiya Fatima\*, Dr. M. Komala, VELS Institute of Science.

Rubitecan is an oral topoisomerase inhibitor, having oral absorption of about 25-30% leading to low bioavailability of the drug due to low permeability and poor water solubility. The aim of the present study is to improve the solubility and dissolution rate and in turn the sufficient activity against pancreatic cancer of the drug, by formulating its inclusion complex with beta ( $\beta$ )-cyclodextrin, using different methods. The phase solubility analysis indicates the formation of 1:1 molar inclusion complex of the drug with beta cyclodextrin. Phase solubility analysis of Rubitecan-HP $\beta$ CD mixture provided K1:1 value of 1188 M<sup>-1</sup>. The prepared complexes were characterized using differential scanning calorimetry, scanning electron microscopy, and x-ray diffractometry. The results suggest that using "drug-in- $\beta$ -CD inclusion complex in liposome" approach is a feasible strategy to formulate. These prepared liposomes by double-loading technique seem to be a suitable targeted drug delivery system because they have a fast onset action with prolonged drug release process and the significantly enhanced drug-loading capacity.

**KEYWORDS:** Rubitecan, 2-Hydroxy Propyl- $\beta$ -Cyclodextrin, inclusion complex.

**ABSTRACT-78****PRECISION MEDICINE: A NEW PARADIGM IN THERAPEUTICS.**

S. Lahari \*, CMR College of Pharmacy.

Precision Medicine is defined by the National Institutes of Health as, "an emerging approach for disease treatment and prevention that takes into account individual variability in genes, environment, and lifestyle for each person." Health care is centered on working out generalized solutions that can treat the largest number of patients with similar symptoms. At the launch of President Obama's Precision Medicine Initiative, precision medicine (PM) was described as "providing the right treatment at the right time to the right person and taking into account patients' health history, genes, environments, and lifestyles. Personalized medicine is an older term that is often used interchangeably with PM. It seeks to utilize treatment or prevention strategies that are tailored to an individual's disease process or symptoms. In this era with cheap genome sequencing, advanced biotechnology, health sensors that patients use at home and collection of information about patients' journeys in health care categorized under digital health, the health care becomes increasingly bespoke which is called "precision medicine. "Efforts such as clinical path initiatives are paving way for collaborations with the pharmaceutical industry to address the challenges and accelerate progress in PM.

**KEYWORDS:** Precision medicine, preventive medicine, therapeutics.

**ABSTRACT-79****ROLE OF 3D PRINTING IN DRUG DELIVERY.**

Valikala Viswanath\*, Annamacharya College of Pharmacy.

The absence of in vitro models that accurately depict the intricate cellular diseases has led to a translational gap between in vitro and in vivo outcomes, which have stymied the development of new therapies. The throughput and validation requirements have not been adequately included into many 3D models over the last ten years which impeded the translation of 3D models in drug discovery. 3D printing is a layer by layer prototyping and formerly familiar with additive manufacturing or rapid prototyping. It is an emerging technology in computer aided drug designing (CADD) with enhanced potentiality in fabricating 3d articles, accomplishing the time management, and furnishing exceptional assembling eventualities for pharmaceutical dosage forms. The 3D printing includes multiple strategems such as digital light processing (DLP), solid state extrusion (SSE), hot melt extrusion (HME), stereo lithography apparatus (SLA), selective laser sintering (SLS), fused deposition modeling (FDM), vat polymerization, and binder jetting. The 3D printing is popularized as additive manufacturing (AM) which is a rapid prototyping technique and also familiar as solid free form fabrication (SFF). From the technical perspective, the digital data offered by the exclusive software's such as computer aided drug design (CADD) or computed tomography (CT) in digital mode is translated and controlled by the 3D printer that play a potent role in drug discovery. The first milestone in pharmaceutical 3D printing was achieved with Spritam® which paved the way for commercial manufacturing on large scale. The technical explorations in 3D printing with respect to pharmaceutical sector has broadly classifies as power based, liquid based, lamination sheet based, and extrusion-based systems. The substantial theoretical knowledge on pharmaceutical 3D printing has emerged it as versatile technique to generate a dosage form with customized physiochemical characteristics. The tailored critical attributes such as size, dose, appearance etc. has emerged the 3D printing as centric design in patient care and overcomes the drawbacks in conventional drug delivery such as optimization of critical drug concentration, tediousness, time taking and cost effectiveness.

**ABSTRACT-80****NIPAH VIRUS: DIAGNOSIS AND THERAPY.**

Mendu Sri Suchitra Bhargavi\*, T.Anoosha, Geethanjali College of Pharmacy.

Nipah virus (NiV) is an emerging zoonotic pathogen with a significant public health impact, causing severe respiratory and neurological diseases in both animals and humans. An overview of the current state of knowledge on the diagnosis and treatment of Nipah virus infection is presented in this abstract.

**Diagnosis:** For the detection of the Nipah virus in clinical samples, various diagnostic methods have been used, including molecular techniques such as reverse transcription chain reaction qPCR and real-time PCR, serological assays, and viral isolation. Advances in point-of-care testing and the development of rapid diagnostic kits have enhanced the speed and accessibility of diagnosis in resource-limited settings.

**Treatment:** There is currently no specific antiviral therapy for Nipah virus infection, and treatment mainly entails supportive care. With promising candidates showing efficacy in preclinical studies, research efforts are ongoing to identify potential antiviral agents. As a potential treatment, immunotherapeutic approaches such as monoclonal antibodies and convalescent plasma therapy are being investigated.



In addition to diagnostic methods, ongoing research explores preventative measures and potential therapeutic interventions. Vaccine development for the Nipah virus is a key focus, with promising candidates in the preclinical stages. The importance of public health measures, including surveillance and control of the virus in both animal and human populations, remains crucial. Collaborative efforts between researchers, healthcare professionals, and policymakers are essential to address the challenges posed by the Nipah virus and mitigate its impact on global health.

**KEYWORDS:** Nipah Virus, Respiratory disease, Molecular Testing, Antivirals, Antibodies.

#### ABSTRACT-S1

### DEVELOPMENT AND OPTIMIZATION OF EFINACONAZOLE NANOSPONGE FOR TARGETED TREATMENT OF ONYCHOMYCOSIS THROUGH TRANS UNGUAL ROUTE.

Addanki Anusha\*, Dr. Annamma Devi G.S, GITAM School of Pharmacy, GITAM.

A nanosponge is a contemporary type of material composed of minuscule particles that possess a small cavity of only a few nanometers in size. Onychomycosis is a highly persistent and widespread nail disorder, primarily caused by fungus, including dermatophytes like *Trichophyton rubrum* and non-dermatophyte molds such as *Candida albicans*. It is more typically found in toenails than in fingernails. Efinaconazole is a new type of antifungal medication called a triazole. It works by blocking the activity of a specific enzyme called fungal cytochrome P450, which leads to the disruption of the fungal membrane and inhibits its growth. The nanosponge (NS) was synthesized utilizing the emulsion diffusion technique, employing various ratios of excipients such as ethyl cellulose (EC), polyvinyl alcohol (PVA), and Tween-80. EFZ-NSG was chosen and optimized for incorporation into carbopol gel based on factors such as particle size, drug loading, and other parameters. The cumulative percentage of drug release was determined to be  $75.38\% \pm 0.2\%$ ,  $65.34\% \pm 0.1\%$ , and  $75.38\% \pm 0.29\%$  in EFZ-NS, EFZ-NSG, and the commercially available formulation, respectively, at a pH of 5.5. The examination of the kinetics release model study revealed that EFZ-NS formulations exhibit a first-order release profile.

**KEYWORDS:** Efinaconazole, Nanosponge, Onychomycosis, Trans Ungual Route.

#### ABSTRACT-S2

### ANALYSIS OF COVID-19 VACCINE SIDE EFFECTS LEADING TO BLOOD CLOTS IN PATIENTS WHO ARE NOT TAKING PROPER ANTI-COAGULANT.

Nirogi Srividya\*, Sumalatha Chepyala, Geethanjali College of Pharmacy.

**Introduction:** COVID-19 vaccines have been administered worldwide, with the primary objective of preventing severe illness and death caused by the virus. Two vaccines, Covishield (AstraZeneca) and Covaxin (Bharat Biotech), have been associated with a rare risk of blood clotting issues, particularly thrombosis. This analysis aims to explore the incidence of these adverse events and the potential reasons for such side effects.

**Methods:** A comprehensive review of available literature and reports from regulatory agencies was conducted to gather information on the safety of COVID-19 vaccines. The focus was on understanding the mechanisms by which the vaccines might trigger blood clotting issues and the reasons behind these rare instances.

**Results:** Vaccine-induced Immune Thrombotic Thrombocytopenia (VITT) was identified as the primary mechanism through which Covishield (AstraZeneca) might cause blood clots. This condition involves the formation of antibodies against platelet factor 4 (PF4), resulting in the aggregation of platelets and blood clotting. While Covaxin (Bharat Biotech) has also been associated with a minimal risk of thrombosis, the exact mechanism and reasons behind potential clotting issues are not as extensively studied or documented.

**Conclusion:** The risk of blood clotting issues associated with COVID-19 vaccines is extremely low, and the benefits of vaccination in preventing severe illness from the virus generally outweigh the risks. However, it is crucial for individuals with a history of blood clotting disorders or those taking anticoagulants to engage in a conversation with their healthcare provider for personalized advice on vaccination. Continued surveillance and monitoring by regulatory agencies ensure the safety of vaccines, and recommendations may evolve based on new evidence.

**KEYWORDS:** COVID-19 vaccines, Anti-coagulant drugs, AstraZeneca, Bharat Biotech, Immune Thrombotic Thrombocytopenia, Regulatory agencies.

### ABSTRACT-S3

## AN EMERGING VIRUS FROM ARCTIC DUE TO GLOBAL WARMING AND ITS IMPACT IN THE 21ST CENTURY.

Nirogi Srividya\*, Sumalatha Chepyala, Geethanjali College of Pharmacy.

New viruses are often emerging – and re-emerging – and are often considered to be a serious public health threat. Unusual viruses that have been kept for more than 45,800 years at extremely low temperatures have been analysed in recent articles. These are a diverse group of viruses with different morphology, protein structure, and nucleic acid composition. They were retrieved from thawing permafrost from places adjacent to the north pole. The size of these viruses was unusually large, ranging from 500 to 1500 nm, thus becoming the largest viruses ever found on the Earth. Since these viruses are larger than some bacteria, they can be visualized under a normal light microscope. These viruses were associated with infections of amoeba (*Acanthamoeba*) and other protists. Predominantly, these were eukaryotic viruses, isolated from higher living beings. These viruses are called “zombie viruses”. Several of these viruses were identified and grouped under several families and genera. They are Pandoravirus, Pithovirus sibericum, Pacmanvirus lupus, Megavirus mammoth, Cedratvirus, Pithoviridae, Orpheoviridae, Megaviricetes, Pokkesviricetes and Nucleocytoviricota.

Climate change plays a crucial role in bringing out these Paleolithic viruses to the modern 21st century. Global warming is rendering those desertic regions more accessible to human activity, in particular the northern Arctic Ocean coastline of Siberia, due to the rich mineral resources and oil reserves of the arctic regions which are under increasing pressure. The worst exposure scenario is the gathering of a large number of workers around an open pit mining operation, from which permafrost excavated hundreds of meters deep would release very ancient and unknown human-infecting viruses. How long ancient viruses eventually released from permafrost could remain infectious once exposed to outdoor conditions (UV light, oxygen, heat), and how likely they will be to encounter and infect a suitable host in the interval, is yet impossible to estimate. But it is already clear that the risk associated with the “zombie viruses’ scenario” is bound to increase in the context of global warming as permafrost thawing keeps accelerating, and as more people populate the Arctic in the wake of industrial ventures.

As unfortunately well demonstrated by the most recent pandemics (for example, COVID and AIDS), each new virus, even related to previously known families, requires the development of highly specific medical responses, such as new antivirals and vaccines. There is no equivalent to "broad spectrum antibiotics" against viruses because they do not share metabolic processes that are universally conserved. It is therefore legitimate to focus on the risk posed by viral particles released from the thawing of thousands of years of permafrost layers. This article brings the current update on zombie viruses and emphasizes on the urgent need for prevention or treatment studies to combat them.

#### ABSTRACT-84

### **THERAPEUTIC STRATEGIES FOR DIABETES MELLITUS USING NATURAL BIOACTIVE COMPOUNDS: A COMPREHENSIVE RESEARCH.**

Shankaraiah Pulipaka\*, Geethanjali College of Pharmacy.

Diabetics have high blood glucose levels. The worldwide prevalence of diabetes is expected to increase to over 600 million by 2045. Modern antidiabetics minimise hyperglycemia and the effects. Ongoing research into plant extracts and bioactive compounds with antidiabetic properties is exciting, since these medicines often have negative side effects. Natural therapies do better than traditional anti-diabetic medicines due to their safety, affordability, and less side effects. This study examines several biological macromolecules, including liposomes, niosomes, polymeric nanoparticles, solid lipid nanoparticles, nanoemulsions, and metallic nanoparticles. Plant-based antidiabetic medicines have become more effective due to addressing current pharmacological constraints. Determining the loading capacity and stability of plant-based nanocarriers is a major challenge. We discuss hydrophilic, hydrophobic, and amphiphilic pharmaceuticals, as well as the amphipathic properties of liposomes, phospholipids, and lipid nanocarriers. We highlight the advantages and hazards of metallic nanoparticles to demonstrate their effectiveness in treating hyperglycemia. Researchers exploring nanoparticles including plant extracts as antidiabetic treatments may benefit from this study.

#### ABSTRACT-85

### **NEUROINFORMATICS AND COGNITIVE COMPUTING: DECIPHERING NEURAL COMPLEXITY FOR PERSONALIZED INTERVENTIONS.**

Tatavarthi Naga Lakshmi Prathyusha\*, Yerruboina Supriya, Kakani. Anil Kumar, Kanaka Durga Devi Nelluri, KVSR Siddhartha College of Pharmaceutical Sciences, Vijayawada-520010, Andhra Pradesh, India.

When combined with cognitive computing, neuroinformatics offers a novel way to decipher complex brain activity patterns, greatly expanding our understanding of neurological illnesses. This study examines the complementary integration of these two fields, showing how they might work together to solve some of the brain's riddles and open the door to highly individualised treatments for diseases like Parkinson's and Alzheimer's. Large-scale neurobiological data collection, archiving, retrieval, and analysis are central to the field of neuroinformatics. When combined with the cognitive computing prowess, it becomes an extremely potent instrument that can interpret intricate brain patterns and distinguish minute connections among complex neural networks. Deeper knowledge of the neurological underpinnings of various illnesses is made possible by the deployment of cognitive computing algorithms, which facilitate the detection of patterns that may defy traditional analytical methods. This comprehensive strategy has great potential when used to neurodegenerative disorders such as parkinson's disease and alzheimer's disease.

researchers and physicians can examine the subtleties of individual brain activity, finding early signs of disease development and customising therapies based on a patient's unique neural profile, by utilizing neuroinformatics and cognitive computing. this represents a change from the conventional one-size-fits-all methods to highly customised and focused interventions, which has the potential to completely transform the field of neurological medicine. the promise to enable tailored interventions for neurological illnesses becomes more real as we traverse the nexus between neuroinformatics and cognitive computing. this research explains how this integration has had a revolutionary effect, highlighting how it has improved our understanding of the brain and will influence precision treatment in the future for people with complicated neurological diseases.

**KEYWORDS:** Neuroinformatics, Parkinson's, Alzheimer's, Cognitive Computing.

#### ABSTRACT-86

### DESIGN, OPTIMIZATION AND CHARACTERIZATION OF COMBINED ETHOSOMAL TRANSDERMAL PATCH OF GLIMEPIRIDE AND DULOXETINE DRUG REGIMEN FOR DIABETES AND ASSOCIATED NEUROPATHIC PAIN MANAGEMENT.

Eswar Kumar Aouta\*, University college of Pharmaceutical Sciences, Palamuru University

**Background:** Diabetic neuropathic pain is the most prevalent type of neuropathic pain and a major consequence of diabetes. A wide range of medications, whether administered alone or in combination, have been found to dramatically decrease neuropathic pain.

**Objective:** The objective of this study was to develop the Glimepiride (GLM) and Duloxetine (DUL) ethosomal transdermal drug delivery patches for prolong and improve discharge of drug regimen to treat diabetics as well as neuropathic pain associated to diabetes.

**Methods:** Using the solvent casting method, DUL and GLM ethosomal dispersions were formulated using 3<sup>2</sup> factorial design, total nine formulations were developed considering ethanol(X1)and phospholipid(X2) independent factor, the formulation was optimized based on entrapment efficiency (Y1)and particle size(Y2), and size, surface charge and % entrapment efficiency were characterizing. The ethosomal formulations converted into patches were characterized for thickness, folding endurance, *in vitro* penetrability and *ex-vivo* skin permeability.

**Results:** The results of thickness, % moisture content, % moisture uptake and folding endurance were in an acceptable range for all formulations. Based on the *in vitro* penetrability and *ex-vivo* skin permeability profile, formulation F9was considered to be the optimized, extending the cumulative drug release of more than 60 % up to 24hrs, and skin permeability of more than 200 µg/cm<sup>2</sup>.

**Conclusion:** The investigation showed that the medication in-cement transdermal fix of GLM and DUL was promising path for the therapeutic management diabetes and diabetic neuropathic pain.

**KEYWORDS:** Duloxetine, Ethosomes, glimepiride, transdermal delivery, phospholipid 3<sup>2</sup>factorial design, *ex-vivo* permeability.

**ABSTRACT-87****PRETERM BIRTH: CAUSES AND COMPLICATIONS OBSERVED IN TERTIARY CARE HOSPITALS.**

P. Aishwarya Lakshmi \*

The main aim of the study was to identify factors associated with preterm birth. The study was conducted for a period of 6 months from September 2019 to February 2020 in 1607 women at SVS Medical College and Hospital, and Sushrutha Hospital, Mahabubnagar and it eventually selected 80 pregnant women for the final experiment. Those pregnant women who had pre-eclampsia, intrahepatic cholestasis during pregnancy, placenta previa or chorioamnionitis were more likely to experience preterm birth. A patient interview was conducted in a detailed manner and all the necessary information regarding the mother and the infant were collected to carry out the study. Among 80 patients, collected the highest number of 39 cases i.e. 49% in between the age group of 17-23 years and the least number of cases therefore 19 i.e. 24% in between the age group of 35-45 years. We studied that maternal variable such as social status and educational status also impacts deliveries. Alcoholics had the highest number of very pre-term deliveries i.e., 36.25% And among undergraduates, moderate preterm deliveries were a predominant number, i.e. 38.75%. Among the cases collected, 22.5% of women who have previous abortions had the highest number of preterm births with 31 cases and 5% of women with thyroid had the least number of pre-term births. 41% of preemie births were observed in the gestational gap of < 18 months, while 24% were recorded in > 30 months. In between two types of deliveries, 69% of preemie births were observed in the cesarean section and normal delivery includes 31%. The results of our study reveal that there is a need to assess the causes and complications among pregnant women who are at risk of delivering a premature baby. We have concluded that counseling the patients about their risk factors is necessary, and the patients should be told that harmful social habits will have a huge impact on their baby, before or after the delivery.

**ABSTRACT-88****ROBOTIC PROSTHESIS CONTROL.**

R. Anvesh\*

Robotic prosthesis control refers to a technique for operating a prosthesis such that a person who has lost a limb can walk again in a manner that is physiologically correct. Control, in general, emphasizes the interaction between people and robotics. first applied to the lower limbs using several techniques, including model-independent quadratic programming, myoelectric control, impedance control, and speed adaptation mechanisms. Myokinetic control was applied to the upper limbs. The majority of modern robotic prostheses function by recording electrical impulses from muscles that remain intact after an amputation, as well as surface skin data. Certain amputees can control the prosthetic limb by tensing the muscle. This particular branch is in charge of regulating how people and robots interact. Typical alterations following prosthesis use are alterations in the circulatory system, contact dermatitis, tissue proliferation, and tissue degradation. bursa development, eczematous alterations, circulatory changes, and recurrent folliculitis.

**KEY WORDS:** speed adaptability, electrohydraulics, prostheses.

**ABSTRACT-89****IMMUNOMODULATORY ACTIVITY OF AQUEOUS EXTRACT OF PISONIA ALBA ROOT WITH PARTICULAR REFERENCE TO SPLENOCYTES PROLIFERATION AND CYTOKINES INDUCTION.**

Brungi Divya \*

The goal of this study was to look into the immunomodulatory activity of aqueous extract of *Pisonia alba* root (PARE) with a focus on splenocyte proliferation and cytokine production. After immunisation with *Salmonella* antigen, antibody titers were determined by tube agglutination and indirect ELISA assay in four groups of mice: control, antigen alone, and PARE-treated (400 and 800 mg/kg for 21 days), while cellular immunity was studied in three groups of rats (control and PARE-treated - 400 and 800 mg/kg for 21 days). Concanavalin-A (Con-A) was used to stimulate splenocytes from untreated and PARE-treated rats, and the optical density (OD) and stimulation index were measured. To test the effect on splenocyte proliferation, control rats' splenocytes were treated in vitro with PARE (50–1600 g/ml) and Con-A. ELISA kits were used to measure interleukin-2 (IL-2) and IL-6 levels in splenocyte supernatants from control and PARE-treated rats, as well as after in vitro treatment of splenocytes with PARE (50–1600 g/ml). Both approaches revealed a considerable rise in antibody titer in PARE-treated mice and a significant increase in skin thickness in rats after DNCB challenge, indicating that PARE has humoral and cell-mediated immunostimulant potential. After ex vivo and in vitro exposure of splenocytes to PARE and sensitization with Con-A, large increases in OD and stimulation index were found, as well as significant elevations in IL-2 and IL-6 levels in splenocytes supernatant. PARE's humoral and cell-mediated immunostimulant effect appears to be mediated by splenocyte proliferation and enhanced cytokine production, particularly IL-2 and IL-6.

**KEYWORDS:** Antibody titer, cell-mediated cytokines, interleukin-2, interleukin-6, *Pisonia alba* roots, splenocytes proliferation.

**ABSTRACT-90****METHOD DEVELOPMENT AND VALIDATION FOR THE SIMULTANEOUS DETERMINATION OF DOLUTEGRAVIR AND LAMIVUDINE IN API FORM AND MARKETED PHARMACEUTICAL TABLET DOSAGE FORM BY USING RP-HPLC.**

G. Bhavani\*, K. Srivani

Analytical method development and validation for dolutegravir and lamivudine in bulk and combine dosage form by RP-HPLC, new method was established for simultaneous estimation of dolutegravir and lamivudine by RP-HPLC method. The chromatographic conditions were successfully developed for the separation of dolutegravir and lamivudine by using symmetry c18 5 $\mu$ m (4.6 x 150mm), flow rate was 1.0 ml/min, mobile phase ratio was phosphate buffer (0.02M) pH-3.8: methanol: acetonitrile (60:20:20%v/v), detection wavelength was 260nm. The retention times of dolutegravir and lamivudine were found to be 2.324mins and 4.314mins respectively. The % purity of dolutegravir and lamivudine was found to be 99.865% and 99.658% respectively. The analytical method was validated according to ICH guidelines (ICH, Q2 (R1)). The linearity study of dolutegravir and lamivudine was found in concentration range of 0 $\mu$ g-36 $\mu$ g and 0 $\mu$ g-39 $\mu$ g and correlation coefficient ( $r^2$ ) was found to be 0.9995 and 0.9998, % recovery was found to be 100.280, %RSD for repeatability was 0.174 and 0.709, % RSD for intermediate precision was 0.093 and 0.937 respectively. The precision study was precise, robust, and repeatable. LOD value was 1.377 and 1.079, and LOQ value was 4.174 and 3.272 respectively. Hence the suggested RP-HPLC method can be used for routine analysis of dolutegravir and lamivudine in API and pharmaceutical dosage form.

**KEYWORDS:** Dolutegravir, Lamivudine, Method Development, Validation, Accuracy.

**ABSTRACT-91****HEPATO PROTECTIVE ACTIVITY OSBECKIA CHINENSIS.**

Rangam Chariitha\*

*Osbeckia chinensis* leaves (Family Melastomataceae) commonly known as Melastoma a vigorously growing in India. In the present study a pharmacognostic evaluation of the leaves was undertaken. In addition to the evaluation of physicochemical characteristics; preliminary phytochemical parameters and pharmacological activities of Ethanolic extracts has been carried out. The aim of the present study was carried out with the objective of phytochemical screening and to evaluate the hepatoprotective activity of Ethanolic extract of *Osbeckia chinensis*. Liver is the largest organ in the body. Any damage to the liver or impairment of its functions leads to injurious effects. Hence the present study is planned to find out the hepatoprotective activity of *Osbeckia chinensis* drug induced hepatotoxicity methods. The rats were divided into five groups with three rats in each for three models. Group I (Control) served as normal and received the vehicle alone (Sterile distilled water, 10 ml/kg, p.o.) for 21 days. Group II (control and 40% ethanol) animals on the 21 day. Group III Received 40% ethanol v/v (2.0ml/100g body wt, p.o.) for 21 days and standard drug silymarin (25 mg/kg, p.o.) for 21 days once daily and IV were treated with 40% ethanol and Ethanolic extract of *Osbeckia chinensis* (400 mg/kg) 21 days once daily. Group V was treated with Received 40% ethanol and Ethanolic extract of *Osbeckia chinensis* (200 mg/kg) 21 days once daily the animals were sacrificed 48 h after the last injection of hepatotoxic drugs under mild ether anesthesia. The blood was collected and allowed to stand for 30 min at 37°C and then centrifuged to separate the serum to estimate various biochemical parameters. In hepatoprotective studies, the toxicity elevated levels of serum marker enzymes Total Bilirubin ALT, AST, ALP, SGOP and SGPT levels. Ethanol induced hepatotoxicity was significantly prevented by pretreatment ethanolic extract of leaves. Decrease in wet liver weight, reduction in elevated biochemical parameter levels like serum SGPT, SGOT, and total bilirubin, after treatment with Ethanolic extract of *Osbeckia chinensis* leaves confirmed the hepatoprotective effect of extract under study. In liver injury models in rats restoration of hepatic cells with minor fatty changes and absence of necrosis after treatment with extract was observed, indicating satisfactory hepatoprotection. The data obtained from animal experiments are expressed as mean  $\pm$  SEM (standard error of mean). For statistical analysis data were subjected to analysis of variance (ANOVA) followed by Student's t-test. Values are considered statistically significant at  $p < 0.01$  for ANOVA and  $P < 0.05$  for t-test.

**KEYWORDS:** *Osbeckia chinensis*, Hepatoprotective activity, Alkaline Phosphate, Aspartate amino transferase, Alanine aminotransferase.

**ABSTRACT-92****E TATTOOS FOR HEAR DIAGNOSIS.**

D. Swapna\*

Heart disease is a leading cause of death, killing approximately 610,000 people yearly. The electrocardiography machine (EKG) is a current method for monitoring the heart and has been the standard for decades. New wearable technology made from stretchy, lightweight material developed by NSF-funded engineers at the University of Texas at Austin could monitor heart health easier and more accurate than existing EKG machines. The e- tattoo is a graphene-based wearable device smaller than a credit card and thinner than a human hair. It is so lightweight and stretchable that it can comfortably be placed over the heart for extended periods. Various body responses, from electrical to biomechanical signals, can be measured by placing the e-tatto device on the skin. This device measures cardiac health in two ways, simultaneously taking electrocardiograph and seismocardiograph readings. This device allows for continuous,uninterrupted heart monitoring for days. The monitored data can be stored by connecting the device to the computer. Researchers are working to make the system wireless and integrated witha smartphone.

**KEYWORDS:** Heart disease, Electrocardiography, Wearable technology, E-tattoos.

**ABSTRACT-93****EFFECT OF 3 WEEKLY VERSUS WEEKLY PACLITAXEL CHEMO SCHEDULE ON THE QUALITY OF LIFE IN CANCER PATIENTS ACROSS SOLID MALIGNANCIES.**

Peddabai Gopal\*

A cross-sectional study was conducted to investigate the impact of paclitaxel chemotherapy, administered either three times per week or once per week, on the quality of life of cancer patients with solid malignancies. The study included a sample of 60 individuals. Our study found that individuals between the ages of 40 and 50 had a higher likelihood of developing cancer. When it comes to the prevalence of solid malignancies, women tend to have higher rates than men. Age, family history, and genetics are widely recognized as the primary risk factors for cancer. During a 6-month period, a total of 60 patients were divided into two groups. One group received weekly paclitaxel at a dosage of 130 mg for 90 minutes, while the other group received three weekly chemo schedules with a dose of 220 mg over 3 hours of paclitaxel. It has been observed that weekly paclitaxel is more effective than three weekly paclitaxel.

**KEYWORDS:** Paclitaxel, solid malignancies, Quality of Life, cancer.



**ABSTRACT-94****NOVEL THERAPEUTICS FOR HAEMOPHILIA & BLEEDING DISORDERS.**

Gouthami\*

Bleeding disorders are group of condition in which there is a problem with body's clotting process. These disorders can lead to heavy and prolonged bleeding after an injury. Von Wille Brand disease is the most common hereditary blood clotting disorder in humans due to deficiency in the quality or quantity of Von Wille Brand factor required for platelet adhesion. Hemophilia is disorder in which doesn't clot normally because of deficiency of clotting factor. Hemophilia A is caused due to deficiency of VIII and B due to the deficiency of factor IX

**ABSTRACT-95****PRESCRIBING PATTERNS OF DENGUE.**

Kattambai Hareesh\*

Dengue is a vector born disease and caused by one of four related virus Flaviviridae DENV1, DENV 2, DENV 3 & DENV4 and spread to people through the bite of Aedes species (Ae aegyptior or Ae albopictus) mosquito. Clinical manifestations of dengue vary from asymptomatic mild flue like symptoms to severe dengue shock syndrome (DSS) and dengue hemorrhagic fever (DHF). DHF or DSS cases are associated with a secondary type dengue antibody response, which makes the second dengue infection worse than the first due to anti-body dependent enhancement of infection. The Dengue virus circulates as 4 serotypes (DENV 1-4), each categorized based on their antigenic differences. Further, these serotypes are sub-categorized into various genotypes which differ by 3 and 6% at the amino acid and nucleotide levels respectively. It was reported that epidemics were caused by multiple serotypes in present days and leading to co-infections and DENV-2 infections were high. There is no specific treatment for dengue. The incidence of dengue has grown worldwide and in each year up to 400 million people is affected with dengue virus. 1 About 100 million people get sick from infection, and 40,000 die from severe dengue. The incidence of dengue was increased this year compared to last year and over 2972 cases were reported only in Telangana state, India 2. Dengue fever causes a high fever (104°F), headache, muscle, bone or joint pain, nausea, vomiting, pain behind the eyes, swollen glands and rash. Most people recover within a week or so but in some cases symptoms worsen and can become life threatening. This is called severe dengue which happens when blood vessels become damaged and leaky. The number of clot forming cells (platelets) decreases and leads bleeding gums or nose, blood in urine, stools or vomit. Severe stomach pain, persistent vomiting, difficult or rapid breathing, fatigue, irritability or restless ness bleeding under skin which might look like bruising was also observed 3. The high endemic outbreaks of dengue every year, and associated coinfections, lack of specific treatment give rise a knock on public health and economy.

**KEYWORDS:** Dengue, DSS, DHF, DENV(1-4), DENV-2.

**ABSTRACT-96****CLINICAL LYCANTHROPY – PSYCHIATRY.**

Kummari Anusha\*

Lycanthropy is a rare variant of a delusional misidentification syndrome specifically reverse inter- metamorphosis where patients believe that they are experiencing transformation or have transformed into an animal. DMS is seen associated with several neuropsychiatric conditions including primary psychotic and affective conditions, drug intoxication or withdrawal, cerebrovascular disease, traumatic brain injury, dementia, delirium and seizures. lycanthropy does not form a distinct syndrome but is a symptom of different psychiatry illnesses. It is largely influenced by the socio-cultural environment of the patient. A 21 year male old who experienced delusions that lasted up to several hours admitted to the psychiatric examination. He had presented to the psychiatric emergency service with his parents, complaining of anxiety, restlessness and episodes of howling since 2 months, with a recurrence of once a week. He did not have any psychiatry or physical complaints before. He didn't have any history of alcohol or substance abuse. Blood biochemistry, brain imaging, and urine toxicology results did not show any abnormalities. He was claimed to have been in a street fight at the same day morning and soon after he developed intense fear and severe anxiety. After succeeding 2 hours, patient began making intermittent bouts of growling sounds that were not under his control and insisted that he was transforming to a wolf. On attempting to question the belief, patient was not appeared agreeable for discussion. He was designating the visual perceptions of hair extension or other bodily differences such as sharpening of teeth and lengthening of nails, expanding and growing of chest, increased hair growth on arms and hardening of the jaw and facial muscles. Patient was given 15 mg/day of aripiprazole and 1 mg/day lorazepam with a diagnosis of psychotic disorder not otherwise specified or reactive psychosis. After 4 weeks, he admitted as an op and he was considered to be euthymic and free of any delusions.

**KEYWORDS:** Lycanthropy, Delusion, Neuropsychiatry, Intoxication, Delirium, Seizures, Lorazepam, Aripiprazole.

**ABSTRACT-97****MUCORMYCOSIS (BLACK FUNGUS) A EPIDEMIC WITH IN THE PANDEMIC (COVID 19).**

K. Tejashwini \*

Mucormycosis, is known as black fungus, is a rare fungal infection, which is mention as "mucor fungi" by the medical community. Contact with fungal spores in the environment causes Mucormycosis. It commonly affects the lungs, sinus, eye and skin. The cases of black fungus in India were reported during the first and second waves of COVID19, among the COVID patients with less immunity. People with breathing difficulties who had recovered from COVID19, developed Mucormycosis 10–14 days following treatment for COVID-19. Also, the spread of theDelta variant exaberate the cases of black fungus. About 47,000 cases were reported in three months in India. Eye pain, headache, jaw pain, toothache, eyeballs coming out and discolouration of mouth are some of the common symptoms of black fungus seen in COVID patients. It is a fast-progressing fatal disease and the mortality rate of the fungus is 50%. Endoscopy, CT scan and MRI scans are the diagnosis for the fungus. Further, by biopsy and culture, the moulds can be confirmed. Prevention from COVID, automatically prevents the infection from this disease. Combination medical therapy, which includes using antifungal medication like posaconazole, Amphotericin.B and Isavuconazole in addition to controlling bloodsugar and the immediate removal of any dead tissue are treatment options for black fungus. For prevention of black fungus using mask and vaccination.

**KEYWORDS:** Mucromycosis, Blackfungus, endoscopy, Amphotericin.B.

**ABSTRACT-98****PREVALENCE OF ANXIETY DISORDER.**

Lubaba Fathima\*, T. Sowmya

Purpose: Generalized anxiety disorder (GAD) is a common mental health issue that can be treated with various medications, including selective serotonin and norepinephrine reuptake inhibitors (SSRIs and SNRIs), benzodiazepines, azapirones, anti-adrenergic medications, melatonin analogs, second-generation antipsychotics, kava, and lavender oil. However, the effectiveness of these treatments depends on age, co-morbidity, and prior treatment.

**Recent Findings :-** The age of onset for anxiety disorders differs among the disorders. Separation anxiety disorder and specific phobia start during childhood, with a median age of onset of 7 years, followed by SAD (13 years), agoraphobia without panic attacks (20 years), and panic disorder (24 years).<sup>8</sup> GAD may start even later in life. Anxiety disorders tend to run a chronic course, with symptoms fluctuating in severity between periods of relapse and remission in GAD and PDA<sup>9</sup> and a more chronic course in SAD. After the age of 50, a marked decrease in the prevalence of anxiety disorders has been observed in epidemiological studies.<sup>8,10-12</sup> GAD is the only anxiety disorder that is still common in people aged 50 years or more.

**Biography: -** Lubaba Fathima is a student from Mahabubnagar, Telangana pursuing Pharm.D (Doctor of Pharmacy) from Smt. Sarojini Ramulamma College of Pharmacy, Mahbubnagar (Batch of 2019 -2025 ). She has a keen interest in the pharmacokinetics & pharmacodynamics of Drugs. She aims to provide better medication adherence to patients and focus on designing optimal therapeutic regimens free from clinically significant Drug interactions and ADRs for enhanced patient care.

**ABSTRACT-99****ANTIBIOTIC-RESISTANT.**

Bayya Neha bhavani\*

Antibiotics are medicines used to prevent and treat bacterial infections. Antibiotic resistance occurs when bacteria change in response to the use of these medicines. Bacteria, not humans or animals, become antibiotic-resistant. These bacteria may infect humans and animals, and the infections they cause are harder to treat than those caused by non-resistant bacteria. Antibiotic resistance leads to higher medical costs, prolonged hospital stays, and increased mortality. The world urgently needs to change the way it prescribes and uses antibiotics. Even if new medicines are developed, without behavior change, antibiotic resistance will remain a major threat. Behavior changes must also include actions to reduce the spread of infections through vaccination, hand washing, practicing safer sex, and good food hygiene. Antibiotic resistance is accelerated by the misuse and overuse of antibiotics, as well as poor infection prevention and control. Steps can be taken at all levels of society to reduce the impact and limit the spread of resistance. Antibiotic resistance leads to higher medical costs, prolonged hospital stays, and increased mortality.

**Biography:** Bayya Neha bhavani: Completed my intermediate in Telangana Social welfare Residential Educational institution & Junior, College. Dindi, Nalgonda. Now I'm pursuing pharm D 5<sup>th</sup> year in Smt Sarojini ramulamma college of pharmacy, Mahabubnagar, Telangana.

**ABSTRACT-100****COMPARATIVE STUDY ON THE EFFICACY OF STATIN THERAPY IN LOWERING CHOLESTEROL AND ASSESSING THE RISK OF METABOLIC SYNDROME IN PATIENTS UNDER STATINS THERAPY.**

P. Soumya\*

A study to compare and evaluate the efficacy of atorvastatin (group – A) versus rosuvastatin (group – B) on baseline parameters like lipid profile tests and to assess the risk of metabolic syndrome using a Mets calculator was done in SVS medical college and hospital aMBNR. A total of 100 patients were enclosed in the present study who met the inclusion criteria. They were divided into two groups based on their treatment plan Group A includes 24 males and 26 females while Group B includes 23 males and 27 females. The mean differences before treatment for group A and group B are as follows, HDL ( $31.52 \pm 0.35$  and  $28.34 \pm 0.480$ ), LDL ( $161.4 \pm 1.09$  and  $163.16 \pm 0.94$ ), Total cholesterol ( $252.82 \pm 1.09$  and  $255.56 \pm 1.26$ ) and Triglycerides ( $214.2 \pm 0.86$  and  $215.98 \pm 0.62$ ), VLDL ( $35.98 \pm 0.56$  and  $36.12 \pm 0.43$ ). The mean differences after treatment for group A and group B are as follows HDL ( $39.92 \pm 0.46$  and  $42.04 \pm 0.30$ ), LDL ( $144.96 \pm 0.68$  and  $138.34 \pm 0.73$ ), Total cholesterol ( $181.48 \pm 1.98$  vs  $174.32 \pm 2.08$ ), Triglycerides ( $185.94 \pm 1.22$  vs  $181.74 \pm 1.77$ ), VLDL ( $27.14 \pm 0.21$  and  $24.72 \pm 0.27$ ). Group B ( $P=0.001$ ) exhibited a significantly greater reduction in cholesterol levels as compared to Group A ( $P = 0.002$ ). The reductions in LDL, VLDL, Total Cholesterol, and Triglycerides along with increased HDL levels were found to be significantly more in the Rosuvastatin group. In this study, we observed that patients on Rosuvastatin exhibited better control over lipid profile when compared to patients who are on Atorvastatin. Since, this study was conducted on a smaller number of patients, to make consecutive remarks about the superiority of either of the treatment regimen; further analysis of clinical trials is required for appropriate selection of the best statin therapy.

**KEYWORDS:** Mucromycosis, Blackfungus, endoscopy, Amphotericin.B.**ABSTRACT-101****ANALYTICAL METHOD DEVELOPMENT AND VALIDATION OF SECNIDAZOL IN ITS PURE AND PHARMACEUTICAL DOSAGE FORM BY USING UV-VISIBLE SPECTROPHOTOMETER.**

Priyanka.K\*

UV-spectrophotometry refers to absorption spectroscopy or reflectance spectroscopy in the ultraviolet-visible spectral region. This method of analysis is gaining importance as it is rapid, simple, precise, less time consuming and accurate. The objective of this method is to develop simple, sensitive. The present investigation was to develop an accurate, rapid and robust method for determination of Secnidazole in pharmaceutical preparations by using UV spectrophotometric method. Secnidazole shows maximum absorbance at a wavelength of 305nm, which is used for this study. The method provides a linear response from a quantitation range of 06 µg/ml to 14 µg/ml in ethanol with regression equation  $y = 0.032x - 0.002$  and  $r^2 0.999$  Interday precision and accuracy was found to be below 0.2 and above 99.00% respectively for the developed method. Thus, the developed method may be suitably applied for regular quality control of Secnidazole in pure and pharmaceutical preparations.

**KEYWORDS:** UV Spectrophotometer, Secnidazole, Ethanol.

**ABSTRACT-102****CELLULAR SENESCENCE AND SENOLYTICS.**

M.Rohini\*

The term aging is defined as a gradual and progressive decline in the physiological functioning accompanied by a steady increase in the mortality. Fundamentally aging process is interlinked with many disorders and disease. One of such processes is called 'the cellular senescence', which calls for a state of cell cycle arrest in response to injuring and impairing stimuli. These senescent cells can arise all around the lifespan and, if persistent, these cells can have disadvantageous effects on tissue function due to the several proteins they secrete. Interventions targeting those senescent cells which are persistent and cause tissue damage, have shown to delay, prevent multiple disorders in preclinical models. Alongside this, the uncovering of small-molecule senolytic drugs that selectively clear senescent cells has led to promising strategies for averting or treating multiple diseases and age-related conditions in humans. In this Review, I would like to discuss the most promising strategies by outlining the rationale for senescent cells as a therapeutic target for disorders across the lifespan; including recent, newer, and ongoing clinical trials - for translating small-molecule senolytics and other senescence-targeting interventions into clinical use.

**KEYWORDS:** Aging, Mortality, Senescent, Disorders, Senolytics.

**ABSTRACT-103****I STENT**

Samreen Fathima\*, Smt. Sarojini Ramulamma College of Pharmacy.

I-Stent is the world's smallest medical implant that is implanted in the human body i.e into the eye. It measures 0.36 mm long and it is made of titanium. It is mainly designed to reduce intraocular pressure safely in patients who are diagnosed with primary open-angle glaucoma or pigmentary glaucoma.

I-Stent is designed to –

- It improves the eye's natural fluid outflow to lower intraocular pressure.
- I-stent provides a direct pathway for aqueous outflow from the anterior chamber to Schlemmer's canal in a patient with open-angle glaucoma. Glaucoma is characterized by increased intraocular pressure. There are various options related to the treatment of the eye but they are not an idea or suitable for them. Also using eye drops on regular basis can be difficult for almost everyone, so there came an innovative treatment referred to as i-stent. This device can help treat or maintain intraocular pressure. This i-stent can be used with or without cataract surgery. It is inserted into the eye with a surgical procedure by making an incision into the cornea. This helps in managing your mild-to-moderate open-angle glaucoma. In a study, 68% of glaucoma patients who received i-stent remained medication-free at 12 months while sustaining a target IOP of  $\leq 21$  mm Hg vs. only 50% of patients who underwent cataract surgery alone. An I-stents mechanism is nothing but similar to the mechanism of the stents we used to prevent heart attacks. As when blood vessels get clogged, i-stent creates an access to vessel flow. While a highly innovative technology, how i-stent works are elegantly simple.

**Biography:** Samreen Fathima, Completed my Intermediate in Prathibha junior college, Mahabubangar. Now I am Pursuing Pharm. D IV year in Smt. Sarojini Ramulamma College of Pharmacy, Mahabubnagar, Telangana.

**ABSTRACT-104****ADVANCED SCREENING TECHNIQUE AND TREATMENT OF CERVICAL CANCER.**

Shazia begum\*, Smt. Sarojini Ramulamma College of Pharmacy.

**Purpose:** Cervical cancer is a leading cause of cancer deaths in developing countries, and new technologies have been developed to improve screening and treatment. HPV, cervical dysplasia, and cervical cancer have a significant global impact, and research and innovations are crucial in reducing their burden. Screening for HPV and CD can significantly decrease the risk of dying from cervical cancer, and new, rapid, low-cost HPV testing can help detect cervical cancer in approximately 1.5 billion women who have never been screened. Recent findings: Substantial evidence suggests HPV infection is a causal factor in cervical dysplasia and cancer development. However, transient infection is not sufficient, and oncogenesis may require persistent infection and unexplored cofactors. HPV detection and typing are currently being investigated.

**Biography:** Shazia begum is a student from Mahabubnagar, Telangana pursuing Pharm.D (Doctor of Pharmacy) from Smt. Sarojini Ramulamma College of Pharmacy, Mahbubnagar (Batch of 2019-2025). She has a keen interest in the pharmacokinetics & pharmacodynamics of Drugs. She aims to provide better medication adherence to patients and focus on designing optimal therapeutic regimens free from clinically significant Drug interactions and ADRs for enhanced patient care.

**ABSTRACT-105****“A SYSTEMATIC REVIEW TO ASSESS THE RISK FACTORS, COMPLICATIONS AND TREATMENT PATTERNS OF PREGNANCY INDUCED HYPERTENSION”.**

Pregnancy-induced hypertension is the most common medical disorder of pregnancy that complicates 6 –10% of pregnancies all around the world. Pregnancy induced hypertension is the development of hypertension after 20 weeks of gestation with or without the presence of proteins in urine.

**OBJECTIVES:** Our main objective of the study is to assess the Risk factors, Complications, and Effective Treatment patterns in pregnancy induced Hypertension.

**METHODS:** This is an open-labeled, Ambispective, observational study conducted at SVS medical college and hospital and Amma hospital in Mahbubnagar. Cases were collected from patients who were diagnosed with PIH Disorders. All these women would undergo clinical assessments at baseline and at 6 months.

**RESULTS:** The Study revealed that obesity followed by family history are the main risk factors in PIH patients. Oligohydramnios, intrauterine growth restriction, eclampsia, prematurity, low birth weight are the main complications. Labetalol is the safer choice of antihypertensive drug in PIH disorders.

**KEYWORDS:** PIH, Antihypertensives, Oligohydramnios.

**ABSTRACT-106****FORMULATION AND DEVELOPMENT OF FLUCONAZOLE MEDICATED LOLLIPOPS FOR ORAL THRUSH.**

T.Sowmya\*

Lollipops are palatable unit dosage form administered in the oral cavity, which is the most common route and easiest way of administering a drug and have a bright future as novel method of delivering drugs for local and systemic effect. However, pediatric, geriatric patients show less compliance in swallowing tablets and capsules due to difficulties in swallowing and bitter taste of many drugs when formulated as liquid dosage form. The benefit of the medicated lollipops is they increase the retention time of the dosage form in the oral cavity which increases bioavailability and reduces first pass metabolism. The present review covers all aspects associated with lollipops like its advantages and disadvantages, its types and their preparation methods, criteria for selecting flavoring agents and quality control of lollipops. Oral thrush is a disorder caused by infection of the mouth due to fungus (yeast) *Candida albicans*. In babies it may be a severe infection sometimes causing epidemics in schools by cross infection. *Candida albicans* is a normal inhabitant of the oral cavity found in 30% to 40% of the population. Typically, oral candidacies take the form of an adherent white, curd like, circumscribed plaque anywhere within the oral cavity. The "lollipops are flavored medicated dosage forms intended to be sucked and hold in the mouth/pharynx. These preparations are commonly used for the purpose of local effect or systemic effect". Advantages of the lollipops as dosage forms include increase in bioavailability, reduction in gastric irritation, bypass of first pass metabolism and increase in onset of action. New drug design to this area always benefit for the patient, physician and drug industry. In the present investigation an attempt has been made to prepare and evaluate medicated lollipops of Fluconazole. The lollipops were prepared by heating and congealing method in a candy-based industry with sucrose base. All the formulations prepared were subjected to various physico-chemical parameters like Thickness, hardness, friability, weight variation, drug content, disintegration, dissolution etc. The prepared formulations have a hardness of 11-12 Kg/cm<sup>2</sup>, with good taste. Selected formulations were tested for drug content showed 0.07gm and invitro studies shows 81.12±0.21% in F3 Formulation. The Fluconazole lollipop can provide an attractive alternative formulation in the treatment of oral thrush in pediatric patients.

**KEYWORDS:** Fluconazole, Lollipops, Oral thrush.**ABSTRACT-107****“ANALYTICAL METHOD DEVELOPMENT AND VALIDATION OF EMTRICITABINE BY USING UV- VISIBLE SPECTROPHOTOMETRIC METHOD”.**

Md.Yakub Pasha\*

The Analytical method was developed by studying different Parameters. The analytical method was validated according to ICH guidelines (ICH, Q2 (R1)). First of all, Maximum absorbance was found to be at 226 nm and peak was excellent. The UV spectrum of EMTRICITABINE was obtained by using 0.1N NaOH as a solvent and then validated. Concentration was selected to be 10 ml which gave a good peak. The linearity study for Emtricitabine was found in concentration range of 10ng – 50ng and correlation coefficient (r) was found to be 0.999 and Regression coefficient (r<sup>2</sup>) 0.999%. Recovery studies were carried out and the percentage recovery was found to be in the range of 98% - 99.4%. RSD OF absorbance for Intraday, Interday precision was 1.906 and 0.21 RSD for Ruggedness was found to be less than 2. Hence, the suggested UV Spectrophotometric method can be used for routine analysis of EMTRICITABINE IN API and Pharmaceutical dosage form.

**KEYWORDS:** Emtricitabine, UV- Spectrometer, ICH Validations.

**ABSTRACT-108****FORMULATION AND EVALUATION OF APIXABAN LIQUISOLID COMPACT USING NOVEL CARRIERS.**

B. Lakshmikanth\*, Santhiram College of Pharmacy.

The aim of the present research work is to formulate and evaluate liquisolid compact as novel solid oral dosage form. Apixaban is an anticoagulant drug used to prevent systemic embolism and stroke in patients suffering from atrial fibrillation and pulmonary embolism in patients undergoing hip/knee replacement therapy. But the drug suffers with low solubility long half life of 14 hours and has limited bioavailability (50%) that leads to erratic absorption from GIT. In the present study Apixaban Liquisolid compact powder formulations were prepared using novel excipients Neusilin, Fujicallin and MCC as carriers, mesoporous silica as a coating material and PEG 400 as a solvent. The obtained powder formulation were subjected for liquid load and retention potential characteristics. Best compact powdered formulations are prepared as tablets using SSG as superdisintegrant. Results shown that all the formulations had good flow and compressible properties whereas formulations with neusilin and fujicalin formulations had shown excellent flow properties without compromising compressibility values. Disintegration and solubility Parameters had shown multiple increments compared to pure drug. The results of invitro dissolution studies had proved that liquisolid compact provide better dissolution profiles compared to tablets containing pure drug. This may be due to amorphous state of drug or being molecularly dispersed in the internal matrix of compact compared to the pure drug.

Hence it is concluded that mesoporous silica and novel excipients of suitable amount in the liquisolid compact formulation could significantly enhanced the solubility and dissolution of poorly soluble apixaban drug.

**KEYWORDS:** Apixaban, Fujicalin, Neusilin and mesoporous silica Liquisolid compact tablets.

**ABSTRACT-109****FORMULATION AND EVALUATION OF CLOFARABIN NANOEMULSION COATED WITH CHITOSAN.**

Ms. Annapurna Anusha Kotwala\*, Dr. Komala. M, School of Pharmaceutical Sciences.

Clofarabine is a second-generation purine nucleoside analogue with antineoplastic activity. The objective of this study was to prepare Chitosan nano particles loaded with Clofarabine as potential antitumor drug delivery system. The limitations associated with the conventional treatment of cancer have necessitated the design and development of novel drug delivery systems based mainly on nanotechnology. Among the various kinds of novel drug delivery systems, chitosan- based nanoparticles have attracted the attention of researchers to treat cancer. Chitosan is a polycationic polymer generated from chitin with various characteristics such as biocompatibility, biodegradability, non-toxicity making it an ideal polymer to fabricate drug delivery systems.

Furthermore, owing to the presence of reactive amino groups, chitosan can be chemically modified to improve its physiochemical properties. Chitosan and its modified derivatives can be employed to fabricate nanoparticles, which are used most frequently in the pharmaceutical sector due to their possession of various characteristics such as nano size, appropriate pharmacokinetic and pharmacodynamic properties, non-immunogenicity, improved stability, and improved drug loading capacity.

Nano-emulsion of CLOFARABINE was prepared and coated with Chitosan. In the present study, chitosan-decorated multiple nanoemulsion (MNE) was formulated using a two-step emulsification process.



The formulated multiple nanoemulsion was evaluated physiochemically for its size and zeta potential, surface morphology, viscosity and pH. Four MNE sample formulas were prepared and evaluated. The prepared formulations were characterized by parameters such as average diameter of Nanoparticles in emulsion form, poly- dispersity index, zeta-potential and entrapment efficiency (EE) and in-vitro drug release studies. The formulated nanoemulsions showed uniform droplet size and zeta potential. The pH and viscosity of the formulated emulsion were in the range. The formulated MNE showed controlled release of chitosan. This was attributed to the chitosan decoration for formulating multiple emulsions. Furthermore, the cytotoxicity and cellular uptake of conjugated nanoparticles in to cancer cell linings were investigated.

**KEYWORDS:** Nanoparticles, Clofarabine, Chitosan, Multiple Nano emulsions, encapsulation efficiency.

#### ABSTRACT-110

### TOYS AND THEIR LONG TERM HEALTH HAZARDS IN KIDS.

N. Soumya\*, Dr. K. Hemamalini, Dr. L. Matsyagiri, A. Sushmitha, Swami Vivekananda Institute of Pharmaceutical Sciences.

Toys are essential for childhood. They support motor and intellectual growth of children. But, when made from toxic elements, they pose a threat to their health. In Ayurveda, it is considered as *Dushivisha* or cumulative poison. The properties of ideal toys as well as the deleterious effect of *Dushivisha* has been vividly described in classical texts. With time, the toy market has seen a drastic change and even rules have been formulated for ideal toys. But in order to make cheap toys, manufacturers use harmful chemicals such as lead, cadmium, arsenic, phthalates, etc. This article deals with the need to create awareness regarding toxicity posed by attractive toys so that health of children may be secured.

**KEYWORDS:** Toys, Dushivisha, Toxic elements.

#### ABSTRACT-111

### MEDICINAL APPLICATION OF SPIRITUAL PLANTS – AN ALTERNATE TO SYNTHETIC DRUGS.

K. Umamaheswari\*, Dr. K. Hemamalini Dr. L. Matsyagiri, P. Swetha, Swami Vivekananda Institute of Pharmaceutical Sciences.

Spiritual Medicinal plants includes various types of plants used in herbalism. Spiritual plant has played significant historical as well as current medicinal roles in human life over many centuries. Medicinal application of spiritual plants carries healthier and harmless alternate to synthetic system of drugs. Present review focus on summarizing and discussing essential details, spiritual value and potential of spiritual plants for medicinal application towards economic development.

**KEYWORDS:** Spiritual healing, Immunomodulation, Astringent, Cardiotonic, Itching.

**ABSTRACT-112****BEAUTY COSMETIC PRODUCTS- POTENTIAL ADVERSE IMPACT OF USE ON WOMEN'S HEALTH.**

E. Swathi\*, Dr. K. Hemamalini, Dr. L. Matsyagiri, CH. Jyothi, Swami Vivekananda Institute of Pharmaceutical Sciences.

Cosmetics are applied to the body to clean, enhance, make more appealing, or alter appearance. They might contain a wide range of active substances that are extremely dangerous, especially when used over an extended period of time, like steroids, hydroquinone, and mercury. If we consider the frequency of application, the duration of practice, and the area of the body applied, many of these components are unhealthy and pose health hazards. Cosmetics are causing alarming adverse events to its users. There are a number of potential adverse effects of cosmetic use on women's health. These include skin irritations, allergic reactions, and potentially harmful chemicals being absorbed through the skin. Cosmetics can also harbor bacteria and fungi, which can lead to infections. In some cases, cosmetics may also interfere with the body's natural hormone production. Several strategies exist to lessen the possibility of negative cosmetic impacts. These include using products that are hypoallergenic and non-comedogenic, avoiding products that contain known irritants or allergens, and using products that are water-based rather than oil-based. It is also important to properly cleanse the skin before and after using cosmetics, and to avoid sharing products with others.

**KEYWORDS:** Cosmetics, Health, Beautification.

**ABSTRACT-113****A REVIEW ON: DRUG INDUCED SYNDROMES – A HEALTH MEDICAL KNOWLEDGE.**

P. Teja\*, Dr. K. Hemamalini, Dr. L. Matsyagiri, M. Samyuktha, Swami Vivekananda Institute of Pharmaceutical Sciences.

Over the past few years, a great number of drugs come into the market which may give rise to poly pharmacy and many drug related problems. Such incidence is called drug induced syndrome. In recent years these incidences increased a lot. This overview article is used to bring awareness of certain drug induced syndromes which include its causative agents, clinical manifestations and treatment.

**KEYWORDS:** Drug induced syndrome, causes, clinical manifestations, treatment.

**ABSTRACT-114****ROLE OF ARTIFICIAL INTELLIGENCE (AI) IN PHARMACY.**

Rishali Chavan\*, Dr. K. Hemamalini, Dr. L. Matsyagiri, CH. Raghunath, Swami Vivekananda Institute of Pharmaceutical Sciences.

The role of Artificial Intelligence (AI) in pharmacy has significant growth and has transformed various aspects of pharmacy careers. AI applies the previously identified patterns it has learned to indicate some potentially helped in the new cases. AI is increasingly being used to automate, optimize and personalize various aspects of the pharmacy industry. AI algorithms are also employed in pharmacovigilance to monitor adverse drug reactions and enhance patient safety. AI supports pharmacists in accessing up-to-date drug information, making informed decisions, managing inventory, and providing patient counseling and education. However, it is essential to acknowledge that AI should be viewed as a tool to augment human expertise rather than replace it. We will also discuss the *difference in the progress of the AI from the ancient and future aspects and uses of AI*. The paper will argue that AI has the potential to revolutionize the pharmacy industry by enabling faster drug discovery. The major benefits of integrating AI into specific applications within the pharmacy field is improved accuracy and efficiency in patient care.

**KEYWORDS:** Artificial intelligence, pharmacy, pharmacist.

**ABSTRACT-115****A NOVEL APPROACHES FOR TASTE MASKING OF DRUGS.**

Nilesh Balaji\*, Dr. K. Hemamalini, Dr. L. Matsyagiri, E. Balaraju, Swami Vivekananda Institute of Pharmaceutical Sciences.

One of the most common ways to give medications is through oral administration. Many medications taken by mouth have a bitter taste. The likelihood that the recipients will consume the medications depends heavily on how tasty they are. Patients' inability or unwillingness to ingest dosage forms like pills is a persistent issue during treatment. Syrups, particularly for old people and children. These dose forms enable the active medicinal ingredient to be detectably exposed to the taste receptor. As a result, a key component in the formulation of these medications is hiding the disagreeable taste qualities of the drug. It used to be believed that the worse the medication tasted, the better the outcome of the treatment.

**KEYWORDS:** Taste bud, Evaluation of taste masking, Anatomy of the tongue, Taste masking techniques, Taste masking.

**ABSTRACT-116****STUDY THE EFFECT OF HYDROPHILIC POLYMERS ON CONTROLLED RELEASE TABLETS OF ATENOLOL.**

Humera Amreen\*, Dr. L. Matsyagiri, Dr. K. Hemamalini, Swami Vivekananda Institute of Pharmaceutical Sciences.

In the present work, an attempt has been made to develop controlled release tablets of Atenolol by selecting of HPMCK4M, HPMCK15M and HPMCK100M as retarding polymers. All the formulations were prepared by direct compression method. The blend of all the formulations showed good flow properties such as angle of repose, bulk density, tapped density. The prepared tablets were shown good post compression parameters and they passed all the quality control evaluation parameters as per I.P limits. Among all the formulations F10 formulation showed maximum % drug release i.e., 98.84 % in 12 hours hence it is considered as optimized formulation F10 which contains HPMCK100M (20 mg). The formulations with HPMCK4M were unable to produce the desired drug release pattern. From the above graphs it was evident that the formulation F10 was followed Zero order release mechanism.

**KEYWORDS:** Atenolol, Controlled release, HPMC, Zero order release.

**ABSTRACT-117****STEM CELLS AND ITS APPLICATION IN THERAPEUTICS.**

MD. Ashwathulla\*, Dr. K. Hemamalini, Dr. L. Matsyagiri, Humera Amreen, Swami Vivekananda Institute of Pharmaceutical Sciences.

This review is detailed overview that deals with the stem cells and its application in therapeutics. As stem cells research has laid the foundation for cell based therapies of disease which cannot be cured by the conventional method & drugs. The review covers most contemporary development in transplantation and tissue engineering technologies of ESC's, MSC's, NSC's & DSC's in regenerative medicine. In the coming future, the stem cells therapies will bring considerable perk to the patients suffering from wide range of injuries, defects and disease. There is high optimism for use of ESCs, MSCs, NSC's & DSC's for treatment of various diseases to overcome the contradictions & confutation related with ESCs.

**KEYWORDS:** Stem cells, in-vitro fertilization, Chondrocytes.

**ABSTRACT-118****3D PRINTING: A POTENTIAL TOOL FOR PERSONALIZED MEDICINE.**

Kundurthi Surendra\*, N. Kanaka Durga Devi, Swami Vivekananda Institute of Pharmaceutical Sciences.

With its focus on physiology, drug reaction, and genetic profile, personalised medicine aims to customise medication for each patient, with the potential to completely transform the healthcare industry. Three-dimensional (3D) printing is one of the key technologies that is driving this paradigm shift away from traditional "one size fits all" care and towards personalised medicine. Using different computer programmes, a three-dimensional item is created layer by layer during the 3D printing process. Numerous pharmacological dosage forms with different shapes, release profiles, and medication combinations can be created by 3D printing. The main 3D printing technology platforms being studied by the pharmaceutical industry are stereolithography, pressure-assisted microsyringe, fused filament fabrication, selective laser sintering, binder jetting, and inkjet printing. In the future, this technology might be used in a clinical setting to deliver medications according to each patient's unique needs. This publication outlines the many 3D printing methods, their advantages and disadvantages, and their potential uses in pharmaceutical product fabrication research. It also shows promise for personalised treatment by allowing for the customisation of release profiles, dosage, and the combination of several medications into a single polypill. It also offers insight into how it affects different groups. It also highlights a method for using it in a clinical environment. Additionally, a number of difficulties are highlighted that need to be resolved in order for this technology to succeed in personalised medicine.

**KEYWORDS:** Personalized medicine, 3D printing, Clinical practice, Dosage.

**ABSTRACT-119****ARTIFICIAL INTELLIGENCE IN PATIENT- CARE AND DECISION MAKING OF PRE-ECLAMPSIA.**

Ibtesam Sayeed\*, Mohammed Abdul Farhan, Assistant Professor, Sultan-ul-uloom College of pharmacy.

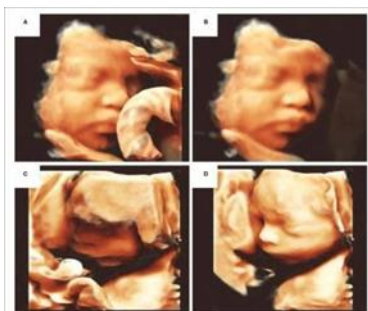
Artificial intelligence (AI) has demonstrated enormous promise for pre-eclampsia decision- making and patient care. Pre-eclampsia is a condition that primarily affects women who are 20 weeks or more pregnant. It is characterized by elevated blood pressure and damage to the organs, most commonly the liver and kidney. It is dangerous for both the mother and the fetus, thus prompt medical attention is essential. AI systems are capable of rapidly and reliably analyzing patient data, including medical history, vital signs, and test findings. These algorithms were trained on large datasets of pre-eclampsia cases. AI systems are able to offer evidence-based suggestions for the treatment of pre-eclampsia. Artificial Intelligence (AI) can support informed decision-making that optimizes outcomes for both mother and fetus by taking into account multiple criteria, including the severity of the ailment, gestational age, and maternal well-being. AI has the potential to improve pre-eclampsia diagnosis, monitoring, and treatment options in terms of accuracy and efficiency. In India, the prevalence of pre-eclampsia ranges from 5% to 15%. With the use of this data, medical professionals can customize their care, providing more focused interventions and attentive monitoring to the most susceptible patients, thereby lowering the condition's incidence and its extent.

**KEYWORDS:** Artificial intelligence, Pre-eclampsia, Management, Decision making.

**ABSTRACT-120****ARTIFICIAL INTELLIGENCE IN OBSTETRIC ULTRASOUND: AN UPDATE AND FUTURE APPLICATION.**

Jyothi Pradhan\*, CMR College of Pharmacy.

Artificial intelligence (AI) can support clinical decisions and provide quality assurance for images. Although ultrasonography is commonly used in the field of obstetrics and gynecology, the use of AI is still in a stage of infancy. Nevertheless, in repetitive ultrasound examinations, such as those involving automatic positioning and identification of fetal structures, prediction of gestational age (GA), and real-time image quality assurance, AI has great potential. To realize its application, it is necessary to promote interdisciplinary communication between AI developers and sonographers. In this review, we outlined the benefits of AI technology in obstetric ultrasound diagnosis by optimizing image acquisition, quantification, segmentation, and location identification, which can be helpful for obstetric ultrasound diagnosis in different periods of pregnancy.



**KEYWORDS:** Artificial Intelligence, Obstetric Ultrasound, Automatic Measurement, Segmentation, Classification Ultrasound telecom.

**ABSTRACT-121****BIOAVAILABILITY AND BIOEQUIVALENCE STUDIES.**

Bobba Neha\*, CMR College of Pharmacy.

Bioequivalence is a term in pharmacokinetics used to assess the expected in vivo biological equivalence of two proprietary preparations of drug. And bioavailability is referred to as the extent and rate to which the active drug product is absorbed and becomes available at the site of action. The relative bioavailability in terms of the rate and extent of drug absorption is considered predictive of clinical outcomes. In 1984, the United State Food and Drug Administration (FDA) was authorized to approve generic drug products under the Drug Price Competition and Patent Term Restoration Act based on evidence of average bioequivalence in the drug absorption through the conduct of bioavailability and bioequivalence studies. These studies include the drug trial protocols which means it refers to the guidelines and procedures followed during the clinical trials to ensure the safety and effectiveness of the drug. These are combinations of commonly-prescribed medications, which can be selected and prescribed quickly as if they were a single entity. When a protocol is selected, each drug within the protocol is prescribed automatically and added to the patient's Current Rx tab, ready for printing.

In determining bioequivalence between two drugs such as reference drug (brand) and potential to be test drug (marketed generic drug) pharmacokinetic studies are conducted whereby each of the drug are administered in a cross over study to the healthy individuals. Testing should be conducted at different doses, especially when the drug displays non-linear pharmacokinetics.

**ABSTRACT-122****NANONEEDLES: A TREND IN MODERNIZED DRUG DELIVERY SYSTEM.**

P.Pranavi\*, R.Laxmi Priya, B.Pharmacy, CMR College of Pharmacy.

Drug distribution by transdermal method is easy, painless, and has a regulated rate release pattern. Many medicinally active medications, however, are unable to successfully pass through the stratum corneum. Polar medications, like epinephrine, are unable to have the same effect as lipophilic pharmaceuticals, such as nifedipine, which readily penetrate the outer skin barrier. These factors have led to advances in drug administration that enable the direct systemic circulation delivery of a wide range of medications, particularly macromolecules, avoiding hepatic metabolism and GIT degradation, by using the transdermal route. Therefore, sophisticated drug delivery technologies such as transdermal microneedles and nanoneedles are required. Additionally, these minuscule needles will function as steady, safe, and non-toxic drug delivery devices.

**KEYWORDS:** Transdermal, Stratum Comeum, Microneedles, Nanoneedles.

**ABSTRACT-123****ROLE OF EZH2 INHIBITOR.**

Kota Sanihitha, Kandanooru Nikhila, Mary Swarnalatha\*, CMR College of Pharmacy.

**EZH2**-Enhancer of zeste homolog2. Inhibition of enhancer of zeste homolog 2 (EZH2) is a method to provide targeted epigenetic regulation. It is enzymatic subunit of polycomb repressive complex 2 (PRC2). EZH2 is involved in global transcription repression, mainly targeting tumor suppressor genes.

“**TAZEMETOSTAT**” is a first class of drug used to follicular lymphoma in adults that has returned or did not respond to treatment when no other treatment option are available. Tazemetostat is in a class of medication called EZH2 Inhibitor. It helps to stop the spread of cancer cells. Recently an orally active inhibitor of EZH2. Tazemetostat, has received regulatory approval for patients with mutated EZH2 relapsed systemic therapies. FDA approved for adults and pediatric patients 16 yrs and older with metastatic or locally advanced ES not eligible for complete resection. These Indications are approved based on accelerated approval and are contingent on clinical benefits for confirmatory trials.

**BRAND NAME:** “**TAZVERIK**”.

**ABSTRACT-124****TAZEMETOSTAT: ANTI- CANCER & DIABETES TREATMENT.**

Sarvagyna Ramadugu\*, Deshapathi Koushik, CMR College of Pharmacy.

Tazemetostat is a promising drug with dual potential in both anti-cancer and anti-diabetic treatment. In cancer therapy, it functions as an EZH2 inhibitor, targeting epigenetic modifications that promote tumor growth. By blocking EZH2, tazemetostat impedes the proliferation of cancer cells, offering a targeted approach to cancer treatment.

Additionally, emerging research suggests potential benefits in anti-diabetic applications. Tazemetostat may impact cellular processes related to insulin resistance, presenting opportunities for managing diabetes. Its dual action showcases the versatility of this drug, making it a compelling candidate for therapeutic interventions in both cancer and diabetes.

## ABSTRACT-125

**ISOLATION OF ANTICANCER COMPONENTS FROM *SANSEVIERIA CYLINDRICA*- AN *IN-SILICO* APPROACH.**

A V S Ksheera Bhavani\*, Research scholar, Gitam School of Pharmacy, Visakhapatnam

The primary objective of this study was to investigate the chemical profile of *Sansevieria cylindrica*, identify bioactive compounds, and evaluate the effectiveness of these compounds against cancer-related targets through computer simulation. To carry out a phytochemical study, a hydroalcoholic extract was generated by soaking the plant material and then analyzed using advanced analytical techniques, such as Gas Chromatography-Mass Spectrometry (GC-MS) and Liquid Chromatography-Mass Spectrometry (LC-MS). After column chromatography was used to separate the compounds, mass spectrometry, Fourier transform infrared spectroscopy (FTIR), proton nuclear magnetic resonance ( $^1\text{H}$  NMR), and carbon-13 nuclear magnetic resonance ( $^{13}\text{C}$  NMR) spectroscopy were employed to determine the structures of the identified compounds. Subsequently, the bioactivity of the isolated compounds was assessed against cancer targets using AutoDock Vina software. The phytochemical analysis revealed the presence of diverse secondary metabolites including hydrocarbons, esters, flavonoids, carboxylic acids, nitrogenous compounds, steroids, saponins, and terpenoids. Two compounds, were isolated, purified, and found to exhibit significant efficacy against the evaluated cancer proteins *in silico*, indicating their potential as anticancer agents. The results indicated that Diosgenin and Lanceolatin B were highly effective against the evaluated cancer targets, suggesting their potential utility in anticancer drug development. This comprehensive approach contributes to our understanding of the plant's phytochemical diversity and reinforces its therapeutic potential.

**KEYWORDS:** *Sansevieria cylindrica*, GCMS, LCMS, *In-silico*, Column chromatography.



SAVE ME I WILL SAVE YOU