
International Conference
on
Traditional and Modern Medicine
Dr. A. Srinivasa Rao
Prof. G. Bhavani
Dr.P.Rajesh Kumar
Dr. B. Prem Kumar

# International Conference on Traditional and Modern Medicine

Editors

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# CONTENTS

| | | |
|---|---|---|
| 16. | Mrs. C Nagamani | REMEDIAL THERAPY FOR GREEN BLOOD |
| **17.** | Mrs.Sabita Sahoo | FITTING PLASTIC PLUG |
| **18.** | Ms. Tayyaba Mahtab | MEATS MADE BY MEN |
| 19. | Mrs. N. Rajitha | The lymphatic system and the illnesses that influence it. |
| **20.** | Ms. Ayesha Afreen | PHARMACEUTICAL MARKETING CONCEPTS AND METHODS |
| 21. | Dr. Srinivas P | Levofloxacin and ambroxol hydrochloride were simultaneously estimated in bulk and pharmaceutical dosage form using the RP-HPLC method, which was created and verified. |
| **22.** | Mr. Ram Reddy G | Zolmitriptan Oral Dissolving Tablets: Design and Assessment Using Cutting-Edge Super Disintegrants |
| **23.** | Mrs. M. Shiroja | Insulin plant aid in the treatment of diabetes |
| 24. | Mr. P Kranthi Kumar | The development of the modified release solid oral dose form for Entacapone |
| **25.** | Dr. G. Susmitha | Cord Blood Utilization as a Pharmaceutical Source |

**Manufacturer-related flaws in the tablets**

Dr. A. Srinivasa Rao

*Professor, Bhaskar Pharmacy College*

**ABSTRACT:**

Tablet issues could arise from defects in the tablet press or from any upstream unit operation. Due to heavy fines from using inferior or non-compliant raw materials, there may be several problems. A defect in the formulation may arise if the material does not compress well or if the processing step specified in the formulation does not produce a powder with good flow, compressibility, and ejection qualities. Flaws frequently stem from the granulation and processing of powders. A tablet press will react differently to even the same product run on a different day. Batch-to-batch changes in the properties of the excipients and active components are frequently the cause of the variance. The goal is, of course, to minimize these modifications. Operators of tablet presses, however, are powerless over granulation and formulation. The list of potential flaws in tablets is extensive and includes, but is not limited to, changeable weight, sticking, picking, capping, lamination, and varying hardness. These variants are the main topic of this essay. It identifies the potential reasons of these flaws and provides guidance on stopping and resolving the issue at its root. Key words: punches, grains, capping, mixing, compression, and cracking. However, operators of tablet presses have little control over formulation and granulation. There is a long number of possible defects in tablets, such as variable weight, sticking, picking, capping, lamination, and different levels of hardness. This essay's primary focus is on these variations. It pinpoints the possible causes of these defects and offers suggestions for halting and fixing the problem from the ground up. Key words: mixing, capping, cracking, punches, and grains.

# Types of apparatuses and dissolutions that are offered

Prof. G. Bhavani

*Professor, Bhaskar Pharmacy College*

## ABSTRACT

In the pharmaceutical industry, the dissolving research is one of the most crucial investigations to establish the right dosage form for a medication. The dissolving test is the most important method available for evaluating the drug release profile of solid dosage forms in pharmaceutical manufacture. Dissolve studies can be used to obtain information regarding the dosage form's efficacy. Dissolution tests are a crucial part of many types of research, including drug degradation profiles, stability and shelf life studies, chemical stability, and so forth. The dissolving test can be easily conducted using the right approaches on a small or large scale. It is also employed in the process of comparing the graph profiles of similar and comparable dose forms. Therefore, it can be said to be the most practical and excellent test for assessing the solid dose form of medications.

**The illness referred to as diabetic mellitus**

Dr.P.Rajesh Kumar

*Professor, Bhaskar Pharmacy College.*

**ABSTRACT:**

Chronic and multifactorial, diabetes mellitus is a metabolic disease with a convoluted pathophysiology. One trait that sets this illness apart is elevated blood glucose, also referred to as hyperglycemia. Deviations from normal insulin action or synthesis, or possibly both, are the cause of this disorder. Hyperglycemia manifests itself in many ways and can take on a multitude of forms in addition to producing metabolic dysfunctions pertaining to proteins, lipids, and carbs. Prolonged hyperglycemia can lead to a number of microvascular and macrovascular problems associated with diabetes. The majority of the morbidity and mortality associated with diabetes can be attributed to these issues. Furthermore, the primary biomarker utilized in the diagnosis of diabetes diseases is hyperglycemia. We will be focusing on the pathophysiology of diabetes, which encompasses its various manifestations, and how diabetes is classified during this examination. The Pathophysiology of Diabetes, Insulin, and

# THE PREPATELARS' BURSITIS

Dr. B. Prem Kumar

*Professor, Bhaskar Pharmacy College*

## ABSTRACT

The swelling or inflammation of a bursa, a sac-like structure lined with synovium, is one of the signs and symptoms of bursitis. They can be found in the interstitial spaces between muscles, tendons, ligaments, and bony prominences throughout the body. Because of how these structures work, there is less friction between them. A patient may seek medical assistance from a healthcare professional if they have inflammation of the bursa surrounding large joints, such as the elbow, knee, hip, or shoulder. A total of four main bursae are connected to the knee joint. The prepatellar, pes anserine, suprapatellar, and infrapatellar bursae are these bursae. This essay will mostly focus on discussing the prepatellar bursa and, more specifically, prepatellar bursitis. A bursa is situated in the gap that separates the patella from the subcutaneous tissue above it. It is the bursa that is most frequently affected in the knee, after the olecranon bursa, which is the bursa that is affected the most frequently. In terms of bursas impacted overall, it is also the second most frequently. Because of its location, which makes it a target during frequent kneeling and has led to its gaining these names, it has been colloquially referred to as carpenters knee, housemaids knee, and carpet layers knee.

# The electrophoresis procedure

Dr. B Durga Prasad

*Professor, Bhaskar Pharmacy College*

## Abstract

It is possible to separate and analyze charged molecules in an electric field using a technique called electrophoresis. The most common applications of gel electrophoresis are in the separation and purification of nucleic acids and proteins with different conformations, sizes, or charges. Either agarose or polyacrylamide make up the gel. Agarose is a good technique for separating DNA fragments ranging in size from a few hundred base pairs to about 20 kilobytes. The preferred material for proteins and small DNA fragments is polyacrylamide. DNA does not vary in mobility when the electrophoretic conditions are precisely set. These conditions are thought to be identified by electrical parameters like current and voltage as well as other factors including temperature, agarose concentration, and buffer composition.

# Salmonella Typhi

Dr. Narottam Pal

*Professor, Bhaskar Pharmacy College*

**ABSTRACT:**

Typhoid fever is a potentially fatal sickness that affects both the gastrointestinal tract and the central nervous system. It is caused by the exceedingly pathogenic bacterium Salmonella typhi. It is unique to humans and is frequently spread from one person to another through the ingestion of food or beverages tainted with excrement. Although it typically lasts seven to fourteen days, the incubation period can extend as long as two months. In certain cases, a rash may develop in addition to other symptoms like fatigue, headaches, nausea, stomach pain, constipation, diarrhea, or a persistently high temperature. If the illness is severe, there could be serious repercussions or even death. Every year, typhoid fever causes between 11 and 21 million infections and between 128,000 and 161,000 deaths in a number of low- and middle-income nations. In many countries, typhoid fever is a serious public health hazard. Sub-Saharan Africa, South Asia, and Southeast Asia are the regions that account for most of the reported cases. It is yet unknown how widespread the typhoid fever pandemic is in the World Health Organization's Eastern Mediterranean Region. Typhoid fever, a disease resistant to numerous medications, has been spreading throughout Pakistan in recent decades.

**Under the Gaschromatography Acronym: Mass Spectroscopy**

Dr. Sayyad Mustak

*Professor, Bhaskar Pharmacy College,*

## ABSTRACT

This integrated composite analytical equipment includes both mass spectroscopy (MS) and gas chromatography (GC), which are suitable for identifying and revealing the structure of separated components. These two analytical methods are combined by this apparatus. This specific piece of analytical equipment is called a Gas Chromatography–Mass Spectroscopy (GC–MS) instrument.

One method of separating volatile organic compounds is by the use of gas chromatography technology. Separation results from the solutes and the stationary phase coming to a clear equilibrium with one another. Before separation can take place, this balance must be reached. The solutes are moved through the column by means of an inert carrier gas dedicated to this purpose. An organic molecule's molecular formula and the molecular weight of the component under study can be found using the mass spectrometry approach. The accomplishment of this assignment was made possible by the application of a technique called mass spectrometry.

**The investigation of green chemistry**

Mr. V Lokeswara Babu

*Assistant Professor, Bhaskar Pharmacy College,*

## ABSTRACT

While meeting the requirements of the current generation is of utmost importance, it is equally important to do so without impairing the ability of future generations to meet their own demands. This is due to the fact that considering the demands of the present generation is equally important. The notions that make up the principles are wide and varied. These ideas involve using solvents and other naturally occurring resources in procedures that are designed to increase the amount of input material that is eventually absorbed into the product, among other ideas that are similar to these. The creation of processes that are efficient in terms of the overall quantity of energy they utilize is one of the current areas of study. This plan must be followed in order to guarantee that no waste is produced in the first place, which is the most efficient way to get rid of trash. It has been demonstrated that this tactic works best.

**Parkinson's disease is a progressive disorder affecting the nervous system and tissues regulated by nerves.**

Dr. M Srirama Chandra

*Professor, Bhaskar Pharmacy College,*

## ABSTRACT

James Sparkinson first recognized this illness in public in 1987. He was the first to openly acknowledge that he had the condition.

There are three subcategories of Parkinson syndrome: idiopathic Parkinson syndrome, primary Parkinson syndrome, and Parkinson syndrome. Parkinson syndrome is another possibility. Parkinson syndrome is also a possibility for some individuals. Parkinson's disease is a neurological disorder that carries a substantial financial burden, a high rate of morbidity, and an elevated death rate. Parkinson's disease is a condition that has a substantial financial cost associated with it and that mostly shows symptoms over a lengthy period of time. The group of primary motor symptoms includes non-motor symptoms, main motor symptoms, and secondary motor symptoms. A wide range of symptoms are included in primary motor symptoms. All of these different kinds of symptoms are grouped together as "primary motor symptoms". Pathogenesis involves various components, such as genetic elements, programmed cell death, free radicals, and deflects in emergency situations. Pathogenesis is a multifaceted process with many different components..

# Amyotrophic Lateral Sclerosis: A Thorough Examination (ALS)

Dr. P Sobitha Rani

*Professor, Bhaskar Pharmacy College*

## Abstract:

The disease known as amyotrophic lateral sclerosis (ALS) causes the person who has it to lose motor neurons in their brain and spinal cord. An adult who is otherwise healthy could receive an ALS diagnosis. Although there is a wide variety of neurodegenerative diseases, this particular ailment is one of the worst of all of them. The inability to breathe and paralysis are two symptoms that patients experience as a result of the illness. Regardless of the severity of the ailment, it takes a little time to manifest itself and always ends in death. Those who have this illness not only become paralyzed but also lose their ability to breathe. Another common symptom that individuals experience is breathing difficulties. Breathing problems are common among patients. There is currently no medication or therapy that may effectively treat the illness, even though the majority of instances have no recognized etiology. Regretfully, it is the situation. Despite the fact that most of the events have not been linked to a particular cause, it is true that this particular situation has occurred.

# Pantoprazole Dosage Form and Pure Form Determination Using Reverse Phase High Performance Liquid Chromatography

Dr. A.V.Kishore Babu
Professor, Bhaskar Pharmacy College.

## ABSTRACT

To verify pantoprazole in tablet dose form as well as pure form, a rapid and precise reverse phase high performance liquid chromatographic method has been devised. The purpose of this technique was to validate pantoprazole. A Phenomenex Gemini C18 column with a diameter of 4.6×250mm and a refraction factor of 5µ was used for the chromatographic analysis. A TEA is created when methanol is present. At a wavelength of 280 nm, a buffer with a pH of 4.0 and a volume-to-volume ratio of 70:30 was employed in the detection procedure. There was one milliliter flowing every minute With a standard deviation of 0.02 minutes, the Pantoprazole was found to have a retention time of 2.302 minutes. Results from the approach are linear for pantoprazole concentrations between 10 and 50 mg/ml. This is the range where the outcomes of the procedure are obtained.The relative standard deviation (RSD) of the assay-determining procedure was less than 2.0%. When it comes to the massive production of pharmaceutical formulations, the procedure is highly beneficial for quality control.

Keywords: Pantoprazole, RP-HPLC, validation

**Creating and testing a fluoxetine hydrochloride gel naturally in situ for the nasopharynx**

Mr. Satyabrata Jena

*Assistant Professor, Bhaskar Pharmacy College*

**Abstract:**

This work used in-situ gelling polymers to design and test an in-situ gel formulation of fluoxetine hydrochloride for nasal administration.Polyoxymer was used as a copolymer in formulations for sodium alginate and carbopol.Oral delivery immediately gelled the formulations before administration.The medication, polymer, and their physical combination were analyzed using FT-IR. These studies demonstrated that, in contrast to the pure drug, the medicinal bands have not changed. Drug polymer interactions are so undeniably present in formulations.A Brookfield viscometer was used to measure the viscosity of the mixtures in order to analyze their rheology. According to this study, viscosity decreased with increasing rpm due to shear thinning. Viscosity rose with increasing polymer content, demonstrating that it obeys the Newtonian system.The effects of factors on drug release from dosage form were investigated using an in vitro release of fluoxetine from formulations. In order to simulate the nasal cavity for in-vitro diffusion tests, this study used nasal fluid.

According to release kinetic experiments, via-situ gels released chemicals via a zero-order process. The formulation's non-fickian diffusion-regulated release mechanism was demonstrated by the Korsmeyer-Peppas 'n' value of 0.96.

Keywords: fluoxetine hydrochloride, nasal medication delivery, and insitu gel systems.

# The RP-HPLC Method for Agomeletin Estimation in Tablet and Bulk Doses

Mrs. K.Sumalatha

*Assistant Professor, Bhaskar Pharmacy College*

## ABSTRACT

The amount of agomelatine in tablet dosage form and in bulk must be determined using a method that is precise, uncomplicated, fast, and accurate. RP-HPLC, or reverse phase high performance liquid chromatography, is the method utilized in this process. The estimation process was conducted using the PHENOMENEX Luna C18 column, which has a diameter of 250 x 4.6mm and a particle size of 5µm. The ortho phosphoric acid and acetonitrile mixture was used as the mobile phase, with a 55:45 ratio. One milliliter per minute was maintained as the flow rate. At 230 nm, an ultraviolet (UV) detector was employed for the detection. The agomelatine retention time was exactly two minutes, while the total run time was less than ten minutes. The methodology underwent validation with respect to precision, accuracy, linearity, ruggedness, specificity, and sensitivity to meet the International Council for Harmonization (ICH) standards for analytical method validation.

KEYWORDS: Validation, RP-HPLC, Agomelatine, Method development.

# An analysis of 1,2,4-triazolyl-benzoxazole derivatives' production and development as potential new COX-2 inhibitors

Dr. Y.Sirisha

*Professor, Bhaskar Pharmacy College*

## ABSTRACT

We were able to effectively synthesise a series of 2-(dialkylamino)-N-(5-(5-aryl-4-ureido-4H-1,2,4-triazol-3-yl)benzoxazol-2-yl) acetamides (Xa1-16) over the course of the many research that are now being conducted.In order to characterise the newly synthesised derivatives, several techniques such as nuclear magnetic resonance (NMR), infrared spectroscopy, and mass spectral analysis were used. In order to ascertain whether or not the compounds that were synthesised and characterised had any in vitro COX-2 inhibitory activity, a second screening was carried out with the purpose of determining whether or not the targeted compounds had any inhibitory activity. Compounds Xa 13, 14, 15, and 16 were shown to be more potent COX-2 inhibitors when compared to the IC50 values of conventional refecoxib. This was demonstrated by the fact that the IC50 values of these compounds were higher. It was discovered that the other substances had a COX-2 inhibitory activity that ranged from modest to moderate. Consequently, this family of compounds has the potential to be good candidates for selective COX-2 inhibition research. This is in addition to the fact that the synthesis of these compounds is very straightforward and that they produce a higher yield.

KEYWORDS: Novel benzoxazoles, COX-2 inhibitory activity, 1H NMR, Mass.

# The purpose of this study is to assess the antibacterial activity of Jasminum Officinales flowers.

Mrs. P. Udaya Chandrika

*Assistant Professor, Bhaskar Pharmacy College*

**ABSTRACT:**

The plant Jasminum officinale, which belongs to the Oleaceae family, has been the subject of extensive research. This can be attributed to the plant's possible pharmacological benefits. The results of the investigation indicate that Jasminum officinale may be utilized to cure a variety of illnesses, such as mental depression, erectile dysfunction, anxiety, menstrual problems, and other ailments. Jasminum officinale has also been demonstrated to possess a variety of therapeutic qualities, including the ability to lessen pain, lessen spasms, and encourage the creation of galactogogues. This investigation is focused on the blossoms of Jasminum officinale, with the aim of determining whether or not they possess antibacterial qualities. The Agar Cup Plate method was employed to examine the antifungal agent's efficacy against Aspergillus niger and Candida albicans. Furthermore, the antibacterial activity against a range of bacteria, such as but not limited to E. coli, Pseudomonas aeruginosa, Staphylococcus aureus, Klebsiella pneumoniae, Bacillus pumilis, and P. vulgaris, was assessed using the Cup Plate method. An examination into the effectiveness of n-butanol and chloroform extracts revealed that they were particularly effective in treating bacterial and fungal infections.

Key words: n-butanol extract from Jasminum officinale, n-hexane, and chloroform extract. extract, antifungal, and antibacterial properties

# REMEDIAL THERAPY FOR GREEN BLOOD

Mrs. C Nagamani

*Assistant Professor,Bhaskar Pharmacy College*

## Abstract

The juice derived from wheat grass, scientifically known as Triticum aestivum L., a member of the Poaceae family, is referred to as "green blood". This juice is extracted using a process called "green blood." Herbal therapy and the use of a certain type of grass known as wheatgrass are comparable. This is because of its dual therapeutic and nutritional qualities, which initially contributed to its success. A person's health could potentially improve as a result of receiving green blood treatment. This study's goal is to offer a succinct assessment of the possible advantages

# FITTING PLASTIC PLUG

Mrs.Sabita Sahoo

*Assistant Professor, Bhaskar Pharmacy College*

## Abstract

Plastic pollution is not only bad for the environment, our health, and our food supply—it also poses an increasing threat to the world's oceans. The reason for this is that it poses a risk to the environment. Plastic pollution is a major contributing component to the problem of environmental degradation. Our world's geological record now bears the scars of the plastic pollution that has spread to every corner of the planet. The plastic waste that we now live with is a global problem. A growing number of marine creatures are becoming aware of the potential harm that plastic rubbish may do to them as the quantity of plastic entering our oceans keeps rising. This is an effect that follows from the fact that plastics are becoming increasingly common.

# MEATS MADE BY MEN

Ms. Tayyaba Mahtab

*Assistant Professor, Bhaskar Pharmacy College*

## Abstract

By contrast, cultured beef is made from the cells of animals that have been raised in a lab throughout the production process rather than from animals who have been killed. This is thought to be a more humane way of raising cattle. This is a major divergence from the traditional method of producing meat, which involves gathering the flesh from animals that have been killed right away. It is always possible that this discovery will result in a significant shift in the meat industry, and it is also likely that it will; nevertheless, no one can predict with certainty that this will happen. The ecosystem and the health of the local population would both be severely impacted if something similar happened, in addition to having a significant impact on the wellbeing of the animals involved.

**The lymphatic system and the illnesses that influence it.**

Mrs. N. Rajitha

*Assistant Professor, Bhaskar Pharmacy College*

## ABSTRACT:

System Lymphatic

The lymphatic system, an organ of the immune system that performs a multitude of tasks, is employed in numerous processes. Your body performs a number of functions, including as defending itself against infections that cause illness, regulating bodily fluid levels, absorbing lipids from the digestive tract, and eliminating waste from cells. These are but a few of the functions your body performs. It is possible that infections, diseases, or blockages are causing lymphatic system dysfunction. These things most likely caused the issue.

The lymphatic system in the body is an intricate web of veins, tissues, and organs working together to accomplish the task of returning lymph to the bloodstream. It is this system that is in charge of the transit of lymph. Your immune system, which also consists of many other components, includes the lymphatic system as one of its constituents.

# PHARMACEUTICAL MARKETING CONCEPTS AND METHODS

Ms. Ayesha Afreen

*Assistant Professor, Bhaskar Pharmacy College*

## ABSTRACT

The main goal of ethical standards for the promotion of medicinal therapies is to offer support and encouragement in order to aid and promote the advancement of health care via the responsible use of pharmaceuticals. The World Health Organization (WHO) now encompasses people from all walks of life: governments; the pharmaceutical industry, which includes producers and distributors; the promotion industry, which includes advertising agencies, market research organizations, and other organizations of a similar nature; health professionals involved in the prescription, dispensing, supply, and distribution of drugs; universities and other educational institutions; professional associations; patients and consumer groups; and the general and professional media, which includes editors and publishers of medical journals and publications about the drug itself. The World Health Organization (WHO) advises that advertising for pharmaceutical products be impartial, truthful, and unbiased. Furthermore, these resources must to be presented in a way that adheres to strict ethical guidelines as well as legal requirements.

**Levofloxacin and ambroxol hydrochloride were simultaneously estimated in bulk and pharmaceutical dosage form using the RP-HPLC method, which was created and verified.**

Dr. Srinivas P

*Professor, Bhaskar Pharmacy College*

**ABSTRACT:**

For the purpose of simultaneously estimating levofloxacin and ambroxol HCl in pharmaceutical dosage forms, a novel, exact, quick, and accurate RP-HPLC technique was devised. After optimization, isocratic mode with mixed phosphate buffer produced an acceptable chromatographic separation: ACN Methanol (40:40:20 v/v%) Inertsil ODS C18-250X4.6mm, pH4.5 mobile phase, 5µ stationary phase, 1 mL/min flow rate, and 223 nm detection wavelength should all be used.Levofloxacin and Ambroxol HCl had retention times of 2.737 and 4.793 minutes, respectively. For Levofloxacin, this method was linear in the concentration range of 60-140 µg/mL and for Ambroxol HCl, it was linear in the range of 9-21 µg/mL. Ambroxol HCl has an R2 of 0.995 and levofloxacin of 0.997. Levofloxacin had a LOD of 2.66 mcg µg/mL and a LOQ of 15.69 µg/mL, respectively. For Ambroxol HCl, the LOD and LOQ were 8.05 µg/mL and 47.55 µg/mL, respectively. Levofloxacin and Ambroxol HCl were recovered with 101.28 and 99.32 percent of this method, respectively.

The method that is recommended is accurate. Because there is a significant correlation between the standard and sample retention lengths, the method accurately detects the analyte in the sample without interference from tablet excipients.

In accordance with ICH guidelines, the method's linearity, range, accuracy, precision, specificity, and robustness were confirmed.

Keywords: high performance liquid chromatography, levofloxacin and ambroxol HCl, UV spectrophotometer.

# Zolmitriptan Oral Dissolving Tablets: Design and Assessment Using Cutting-Edge Super Disintegrants

Mr. Ram Reddy G

*Assistant Professor, Bhaskar Pharmacy College*

## ABSTRACT

The research that is currently being conducted on Zolmitriptan was successfully finished. Several concentrations of super disintegrants were used in the production of mouth dissolving tablets. Among these super disintegrants were Explotab, polyplasdone XL, and croscarmellose sodium. Following that, the medicinal ingredient was dissolved using these pills. Throughout the course of this study, nine distinct formulations were developed and assessed for a variety of pre and post compression properties. Among the metrics taken into consideration were the angle of repose, bulk density, tapped density, carr's index, hausner's ratio, weight fluctuation, hardness, friability, thickness, wetting time, and water absorption ratio. The researchers discovered that the enhanced Zolmitriptan formulation (F4) had a disintegration duration of seven seconds. During the first ten minutes of administration, the medication was being released at a rate of 97.54%. It was established that the medication and the excipients were compatible with one another using FTIR analysis.

Keywords: Explotab, polyplasdone XL, croscarmellose sodium, and zolmitriptan

# Insulin plant aid in the treatment of diabetes

Mrs. M. Shiroja

*Assistant Professor, Bhaskar Pharmacy College.*

## ABSTRACT

The Costaceae family includes the plant known as insulin plant, or Costus igneus, in India. It is believed that consuming the leaves of this plant decreases blood sugar, and those with diabetes who did so reported seeing a drop in their blood sugar levels. Objectives: The present study set out to evaluate the impact of Costus igeus leaves on male Wistar rats' hyperglycemia brought on by dexamethasone. Four groups of six male Wistar rats were given subcutaneous injections of dexamethasone at a daily dose of 10 mg/kg for a period of 20 days. Several groups received oral Glibenclamide 500 µg/kg or 100, 250, or 500 mg/kg/day of powdered Costus igeus leaves in distilled water between day 11 and day 20. On the twentieth day following an overnight fast, blood samples were obtained by retro-orbital puncture in order to determine the blood glucose level during the fast. To measure the blood glucose levels after the glucose load, the opposite eye was subjected to an oral glucose load of 2.5 g/kg one hour later. The dexamethasone-administered group had higher blood sugar levels during and after a glucose load as compared to normal controls ($P < 0.001$). The hyperglycemia caused by dexamethasone was lessened ($P < 0.01$) by 250 and Glibenclamide 500 µg/kg and Costus igeus 500 mg/kg powdered leaf. The leaves of Costus igeus brought the blood sugar levels of rats that had been subjected to dexamethasone-induced hyperglycemia down to normal levels throughout fasting and after meals.

Key words: insulin plant, hyperglycemia, and Costus igeus

# The development of the modified release solid oral dose form for Entacapone

Mr. P Kranthi Kumar.

*Assistant Professor, Bhaskar Pharmacy College*

## ABSTRACT

The main focus of this research project is on designing and developing a modified Release solid oral dosage form.After taking into account a number of factors, including the drug kinetics and the in vitro dissolving profile, it was concluded that hf14 was the best formulation for entacapone. The results of the FT-IR and DSC investigations demonstrated that there was no interaction between the medication and the polymers used in the formulations. The drug release from hf14 was shown to be concentration-independent, zero-order, and best fitted to the Higuchie model, confirming that it was a process helped by diffusion. The ideal dosage form adhesive was demonstrated to be effective in the gastrointestinal tract for over twelve hours based on the mucoadhesive experiment. The product that was sold had a concentration-dependent release that was governed by first-order kinetics. In vivo bioavailability tests were performed on both the commercial product and the optimized entacapone trilayer tablets. The results of these studies showed that whilst the commercial product showed rapid release, the optimized entacapone formulation showed sustained release patterns.

**Keywords**: trilayer, modified drug release, and entacapone

# Cord Blood Utilization as a Pharmaceutical Source

Dr. G. Susmitha

*Professor, Bhaskar Pharmacy College*

**ABSTRACT:**

Cord blood is a sample of blood taken from a newborn's umbilical chord. It is rich in hematopoietic stem cells, which are the precursors of all body cells. Umbilical cord blood may include a large number of special blood cells called stem cells. These cells are the building blocks of the body that make up blood, organs, tissue, and the immune system. Each newborn has a unique set of genetic characteristics. They have therefore been applied to the management of certain immune system and hematologic conditions. The second largest category consists of inherited diseases (of the immune system, red blood cells, and specific metabolic abnormalities). Furthermore, cord blood transplants have been advantageous for individuals suffering from severe aplastic anemia, myelodysplasia, and cancer. After birth, the umbilical chord is clamped and broken, just like in a typical delivery, but before the placenta is delivered. Before drawing cord blood, your healthcare provider will ensure a sterile collection by properly cleaning the chord. Keeping them maintained "stops the clock" and protects the cells from aging, common illnesses, and environmental factors that could impair their functionality. Currently, cord blood stem cells are used to treat about 80 disorders, such as various cancers, inherited illnesses, and blood issues. Similar to a "self-repair kit," your baby's cord blood is a special biological resource that you can save for your child and any future family members.

**KEYWORDS**: Hematopoietic stem cell transplantation; bone marrow; cord blood

peripheral blood, mesenchymal stem cells, human leukocyte antigen, and others.

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