

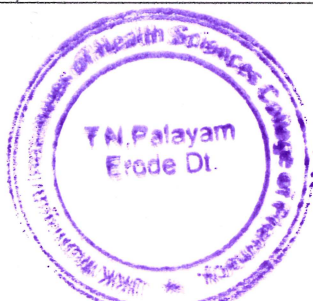


JKK MUNIRAJAH INSTITUTE OF HEALTH SCIENCES COLLEGE OF PHARMACY

(Approved by Tamil Nadu Govt. & Pharmacy Council of India - New Delhi, Affiliated to The Tamil Nadu Dr. M.G.R Medical University, Chennai)
Thookanaickenpalayam, Gobichettipalayam (TK), Erode (DT) - 638506, Tamil Nadu.

ACADEMIC YEAR 2022-2023

S. No	Title of Paper	Name of Authors	Name of Journals	Is it listed in UGC Care list
1.	Clopidogrel Bisulphate Loaded Ethyl Cellulose Microspheres	DR. S. Selvaraj Mr. K. Gobinath Mrs. D. Vasumathi	World Journal of Pharmacy and Pharmaceutical sciences	Yes
2.	Formulation and Evaluation of Anti-ulcer Syrup on Leaves of Punica Granatum (L)	Ms. M. Revathi	World Journal of Pharmaceutical Research	Yes
3.	Evaluation of Neuroprotective Effect of Diosgenin on Rotenone Induced Parkinson in Mice Model; An Adjuvant Therapy for Parkinsons Disease	Mr. C. Govindaraj DR. K.K. Senthil Kumar Dr. S. Yogakrishnan Dr. S. Navaneethakrishnan	World Journal of Pharmaceutical Research	Yes
4.	Screening of anti-ulcer phytochemicals from leaves of punica granatum(l) decoction	Ms. M. Revathi	International Journal of Science and Research Methodology	Yes
5.	Phytochemical Screening and in-vitro Anti-cataract Activity on the leaves of Ipomoea batatas (L) LAM Ethanolic Extract	Ms. M. Revathi	International Journal of Pharmaceutical Sciences Review and Research	Yes




Principal

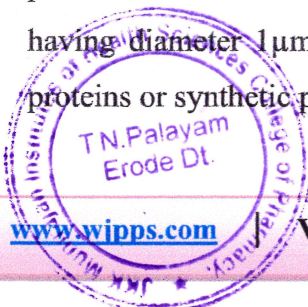
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**CLOPIDOGREL BISULPHATE LOADED ETHYL CELLULOSE
MICROSPHERES****Selvaraj S.*, Gobinath K. and Vasumathi D.**Department of Pharmaceutics, JKK Munirajah Institute of Health Sciences, College of
Pharmacy, T.N. Palayam, Gobichettipalayam, Tamilnadu, India- 638506.Article Received on
13 April 2023,
Revised on 04 May 2023,
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DOI: 10.20959/wjpps20236-24657***Corresponding Author****Dr. Selvaraj S.**Department of
Pharmaceutics, JKK
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Health Sciences, College of
Pharmacy, T.N.Palayam,
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Tamilnadu, India- 638506.**ABSTRACT**

The present study reported that the development of clopidogrel bisulphate loaded ethyl cellulose microspheres were prepared by solvent evaporation method. About 5 formulations were prepared using different concentrations of polymer. The micromeritic properties, mean particle size, morphological characteristics, percentage yield, encapsulation efficiency and loading capacity of the microspheres appeared to depend on the concentration of ethyl cellulose polymer. The *in-vitro* drug release profile of clopidogrel bisulphate loaded ethyl cellulose microspheres has shown a slow controlled release following zero order kinetic models with Non-Fickian diffusion mechanism. The results demonstrated that the effective use of clopidogrel bisulphate loaded ethyl cellulose microspheres as a sustained release preparation for the treatment of coronary artery diseases.

KEYWORDS: Microspheres, Clopidogrel bisulphate, Ethyl Cellulose, *in -vitro* drug release.**INTRODUCTION**

Drug delivery system target the specific body site which having enormous impact on the health care system. The ideal drug delivery system delivers the drug at rate decided by need of body throughout the period of treatment therefore carrier technology find out the intelligent approach for drug delivery by coupling the drug to carrier particles example, microspheres, nanoparticles and liposomes. Oral route of drug administration is most preferable route for taking medication. Microspheres are small spherical particles which having diameter 1µm to 100 µm. They are free flowing particles which are consisting of proteins or synthetic polymers are biodegradable in nature.^[1,2]



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**FORMULATION AND EVALUATION OF ANTI ULCER SYRUP ON
LEAVES OF *Punica granatum* (L)**

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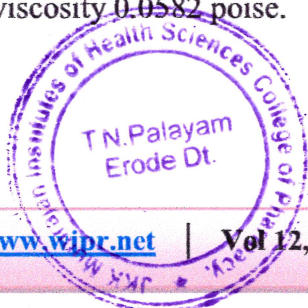
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ABSTRACT

Peptic ulcer is a lesion of the gastric or duodenal mucosa occurs at a site where the mucosal epithelium is exposed to acid and pepsin.^[1]

Peptic ulcer is a chronic disease of multifactorial etiology. It is the most prevalent disease among the gastrointestinal tract diseases in most part of the world. Several plants and herbs are advocated for the treatment of gastrointestinal disorders including gastric ulcers. Many chemical compounds have been isolated from medicinal plants with antiulcer activity. Leaves of *Punica granatum* (L) have been reported to possess antiulcer property. The aim of the present research was to formulate and evaluate the antiulcer herbal syrup. The leaves of *Punica granatum* (L) powder was extracted by decoction method. The *in-vitro* anti-ulcer activity of decoction of leaves on *Punica granatum* (L) was evaluated by acid neutralizing capacity. From this study we conclude that decoction of leaves on *Punica granatum* (L) was significant

reduction of ulcer at the dose of 500 mg/ml to be neutralize acid more significantly as compared to standard and acid neutralizing capacity was showed significant ANC₅₀ ulcer at the dose of 75mg/ml. To prepare the leaves of *Punica granatum* (L) anti-ulcer syrup. Evaluated physicochemical parameters help to assess the quality of the formulation. Physicochemical parameters of *Punica granatum* (L) herbal syrup like orange colour, aromatic odour, sweet taste, pH 5.8, density 1.07gm, specific gravity 0.5289kg/m³ and viscosity 0.0582 poise.



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**EVALUATION OF NEUROPROTECTIVE EFFECT OF DIOSGENIN
ON ROTENONE INDUCED PARKINSON IN MICE MODEL; AN
ADJUVANT THERAPY FOR PARKINSONS DISEASE**

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ABSTRACT

This study aims to evaluate the neuroprotective effect of diosgenin on rotenone induced Parkinson animal model by analyzing behavioral changes, estimation of catecholamine levels, various endogenous antioxidant enzymes levels and histopathological evaluation. In recent years there has been growing interest in alternative therapies, among that one of the leading choice is adjuvant therapy. Before administration of rotenone, group IV and V is diosgenin was administration to orally for a period of 7 days (200mg/kg). After administration of rotenone in mice for a period of 7 days (3mg/kg ip), the Parkinson's diseases was confirmed by various behavioral studies.

To find out its neuroprotective effect of various behavioral studies,

biochemical estimations, neurotransmitter evaluations and histopathological studies have been performed. The results were promising like the behavioral studies the rota rod the diosgenin and diosgenin with standard treated group the muscle grip strength (96 ± 1.155 , 110.7 ± 1.764) was significantly increased compared to rotenone induced group (35 ± 1.528). Treatment with diosgenin and diosgenin with standard results in regains the levels of endogenous antioxidant levels to normal values. Especially neuroprotective effect of diosgenin and diosgenin with standard was confirmed by histopathology. So this study concludes the neuroprotective effect of diosgenin.

KEYWORDS: diosgenin, neuroprotective, rotenone, grip strength, antioxidant and adjuvant therapy.




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Screening of Anti-Ulcer Phytochemicals from Leaves of *Punica granatum* (L) Decoction



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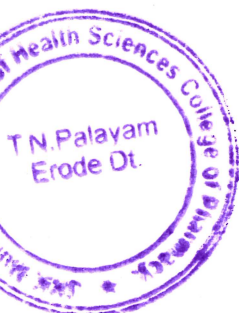
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Keywords: *Punica granatum* (L), Tannins, Flavonoids, Saponins, Peptic ulcer.

ABSTRACT

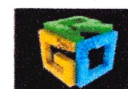
World is rich in medical lore. Plants are the basis of life on earth and are central to people's livelihoods. The use of plants in religious ceremonies as well as for magic and medicinal purposes is very common place and widespread. Plants and phytoconstituents are better choice to treat diseases than the allopathic drugs. The nature has provided us various medicinal plants which became the store house of remedies to cure all ailments of mankind. In modern era many plant-derived compounds have been used as drugs, either in their original or semi-synthetic form. The aim of the present research was to Screening of anti-ulcer phytochemicals from leaves of *Punica granatum* (L) decoction. From this study we conclude that this plant revealed the presence of various components like carbohydrate, glycoside, flavonoid, alkaloid, tannin, saponins and steroids. The leaves of pomegranate significantly containing medicinally important phytoconstituents such as tannins flavonoids and saponins to posses antioxidant activity of decoction of leaves on *Punica granatum* (L) and it has been shown to offer protection against the peptic ulcer.



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Research Article



Phytochemical Screening and *in-vitro* Anti-cataract Activity on the Leaves of *Ipomoea batatas* (L) LAM Ethanolic Extract

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ABSTRACT

The clouding of the eye's lens, called as a cataract, which leads to impairs vision. Cataract often develops slowly and can affect one or both eyes. When proteins in the eye aggregate to create clumps that stop the lens from focusing, a cataract develops. Older persons frequently develop cataracts. Natural products are more useful for body because they promote the repair mechanism in nature way. The anti-cataract activity may be attributed to the presence of different phytoconstituents present in the ethanolic extract of leaves on *Ipomoea batatas* (L.) lam, especially Vitamin A, ascorbic acid, β - carotene, carotenoids, and flavonoids. This phytoconstituents possess the antioxidant property to reduce the development of cataract. The present investigation was aimed to evaluate the efficacy of ethanolic extracts of *Ipomoea batatas* (L) lam leaves against glucose induced cataract in goat lens. In this *in-vitro* study goat lenses were subjected to photographic evaluation and subjected to biochemical parameters such as total proteins, water soluble proteins. Photographic examination of the eyes showed that treatment with ethanolic extracts of *Ipomoea batatas* (L) lam leaves retarded the progression of lens opacification. The total proteins and water-soluble proteins activity is increased in the extract treated lenses when compared with the standard drug ascorbic acid. From this study we conclude that ethanolic extract of leaves on *Ipomoea batatas* (L.) lam was significant reduction of cataract at the dose of 80 μ g/ml in goat lens.

Keywords: Anti-cataract, *Ipomoea batatas*, Goat lens, Vitamin A, Total proteins, Water soluble proteins.

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INTRODUCTION

The Cataracts were undoubtedly very common in antiquity. The word cataract which means both an opacity of the lens and a torrent of water, comes from the Greek word $\kappa\alpha\tau\alpha\rho\acute{\alpha}\kappa\tau\eta\varsigma$ (kataráktēs) meaning the fall of water. The Latins called it suffusio, an extravasation and coagulation of humors behind the iris¹. Opacity of the lens is a direct outcome of oxidative stress. Based on location of opacification within the lens, age-related cataracts are classified into three types: cortical, nuclear, and posterior subcapsular cataracts². Cataract is associated with old age and cataract is a major complication of diabetes Mellitus. It is a multifactorial disease occurs mainly due to the formation of large protein aggregates in the lens. The lens Na⁺ - K⁺ - ATPase activity plays an important role in maintaining lens transparency, and its impairment causes accumulation of Na⁺ and loss of K⁺ with hydration and swelling of the lens fibers leading to cataractogenesis. Normal lens contains containing glutathione and ascorbic acid as antioxidants. The old age people have less effective in anti-oxidative mechanism and

there is the increase in inactive insoluble proteins and semi-permeability of the lens capsule which may lead to cataract formation³.

A wide range of drugs like aldose reductase inhibitors, non-steroidal anti-inflammatory drugs (NSAIDs) are being tried for their anticataract activity⁴. There has been a growing interest in the various activities of indigenous plants. Many indigenous plants have been explored as potential promising sources of antioxidants. *Ipomoea batatas* (L.) lam is a dicotyledonous plant that belongs to the family, Convolvulaceae⁵. The plant locally known as "Sarkaraivallikizangu or sweet potato"⁶. The nutritionally important compounds like phenolic, flavonoids, alkaloid, sterols, terpenoids, glycosides and many other metabolites have been isolated from different parts of *Ipomoea batatas* (L.) lam and possess various pharmacological activities⁷⁻¹⁰.

Sweet potato is an extremely versatile and delicious vegetable that possess high nutritional value. Sweet potato has been grown in tropical and subtropical regions. Due to its versatility, sweet potatoes now are recommended over other vegetables. The medicinal properties of sweet potato include antioxidant, antimicrobial agent, anti-inflammatory, anti-arthritis, hypolipidemic, antidiabetic activity, hematinic, anti-proliferative, cytotoxic, diuretic, wound healing, hepatoprotective, anti-mutagenic and anti-carcinogenic, immunomodulatory activities. Magnesium, an essential mineral contained in sweet potatoes that assists in

