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Biomarkers In Disease Diagnosis

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ABSTRACT

Biomarkers provide a dynamic and powerful approach to understanding the spectrum of disease with applications in observational and analytic epidemiology, randomized clinical trials, screening, diagnosis and prognosis. Biomarker is defined as alteration in the constituents of tissues or body fluids, these markers offer the means for homogeneous classification of a disease and risk factors, and then can extend our base information about the underlying pathogenesis of disease. A prerequisite for the clinical use of biomarker is elucidation of the specific indication, standardization of analytical methods, characterization of analytical features, incremental yield of different markers for given clinical indications. Biomarkers can also reflect the entire spectrum of disease from the earliest manifestations to the terminal stages. The major use of biomarkers has been employed in clinical investigation. The article features biomarkers in drug development and in disease diagnosis.

Keywords: Disease diagnosis, Biomarker, Drug development, Clinical investigation.

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Formulation and Evaluation of Fast Dissolving Tablets of An Anti Ulcer Drug by Sublimation Method

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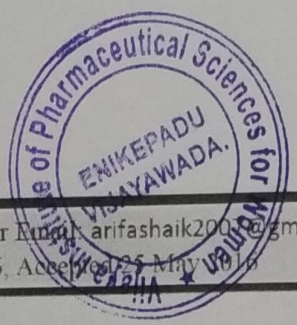
ABSTRACT

The purpose of present research was to formulate and develop the patient friendly pantoprazole sodium fast dissolving tablets using sublimation method to achieve rapid dissolution. In this study, an attempt was made to fasten the drug release from the oral tablets by incorporating the superdisintegrants and camphor/ammonium bicarbonate as subliming agents. The prepared fast dissolving tablets were subjected to pre-compression analysis and evaluated for hardness, weight variation, friability, wetting time, water absorption ratio and disintegration time. From the results of *in vitro* drug release studies, the formulation F9 exhibited fast release profile of about 95.21% in 14 min and disintegration time 90 sec when compared with other formulations. For the optimized formulation F9, the initial dissolution rate was 38.82% / 2 min. Fourier transform infrared spectroscopy studies revealed that there was no possibility of interactions between drug and excipients. The present study demonstrated potential for rapid absorption, improved bioavailability, effective therapy and patient compliance.

Keywords: Fast dissolving tablet, pantoprazole sodium, subliming agent, superdisintegrant, proton pump inhibitor.



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IN VITRO & IN VIVO ANTIASTHMATIC STUDIES ON THE FLORAL EXTRACTS OF *GOMPHRENA SERRATA L.*

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Abstract:

The present study has been conducted to evaluate the antiasthmatic potential from the inflorescence extracts of Gomphrena serrata, to validate its traditional use. The antiasthmatic activity of hydroalcoholic and acetone extracts was studied by two models histamine and acetyl choline induced bronchospasm in guinea pigs and histamine and acetyl choline induced contraction on isolated guinea pig ileum. The preconvulsive time at a dose of 400mg/Kg in guinea pigs and inhibition of contractions on guinea pig ileum at a concentration of 0.5mg were investigated and compared with the control groups. Phytochemical studies revealed the presence of flavonoids, phenolics, steroids, triterpenoids. The extracts have significantly reduced the bronchospasm induced by histamine and acetylcholine, as well as the contractions of ileum. Therefore the present study concludes that the hydroalcoholic and acetone extracts of Gomphrena serrata exhibited antiasthmatic activity which may be due to phytochemical substances probably causing suppression of antibody production or inhibition of antigen induced histamine and acetylcholine.

Key words: *Gomphrena serrata, asthma, bronchospasm, histamine, acetylcholine*

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Review Article

ZOO PHARMACOGNOSY: ANIMAL SELF-MEDICATION

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ABSTRACT

The consumption of plants, insects, dirt and microbes by animals for prophylactic or therapeutic use by themselves in illness or to improve their own health is termed as Zoo Pharmacognosy or animal self-medication. Different species of animals use different substances derived from nature which possesses therapeutic properties. Zoo Pharmacognosy can show us the solutions quicker. We must now take responsibility of our mismanagement, overuse and disregard of the species of this world. Once we are able to unlock all the potential benefits of Zoo Pharmacognosy and its positive implications for conservation, then and only then, can we revolutionize our world. The mechanism underlying the selection by animals of specific plants during illness is still unclear. The reasons of self-medication by animals include parasitism, indigestion, stomach upset, infections, neutralize toxins, *etc*. This particular behavior of animal self-medication like fur rubbing with plants, resins, citrus fruits, ant-eating, eating dirt, *etc* has driven attention to study further in order to discover new drugs. This paper describes various types, methods and reasons of Zoo Pharmacognosy by various animals.

Keywords: Zoo Pharmacognosy, Animal self-medicating behavior, Prophylactic, Therapeutic

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INTRODUCTION

Zoopharmacognosy is a behavior in which non-human animals apparently self-medicate by selecting and ingesting (or) by topically applying plants, soils, insects and psychoactive drugs to treat and prevent diseases. The term zoo pharmacognosy was derived from the words zoo ("animal"), pharma ("drug") and gnosy ("knowing") [14]. The concept of self-medication or zoo pharmacognosy in non-human vertebrates was first proposed [3]. Animals can use plant secondary metabolites as stimulants, laxatives, anti-parasitic and antibiotics or as antidotes for previously consumed toxins [3]. A well-known example of zoo pharmacognosy occurs when dogs eat grass to induce vomiting. However, the behavior is more diverse. Animals ingest non-foods such as soil, clay, charcoal and even toxic plants to prevent parasitic infection or poisoning. Beyond Zoopharmacognosy's obvious benefits, it also helps in the potential discovery of new medical cures. The methods by which animals self-medicate vary, but can be classified according to function as prophylactic (preventative, before infection or poisoning) or therapeutic (after infection, to combat the pathogen or poisoning) [2].

Types of zoo pharmacognosy

In general, animal self-medication has been classified into two types.

☐ Preventative

Prophylactic–act of using medicinal plants without any symptoms of infection or before infection.

☐ Curative

Therapeutic–act of using medicinal plants only after infection or illness [7].

Methods of self-medicating behaviors by animals

Ingestional plant medicine (internal use)

Secondary metabolites are part of plant's defense mechanism which protects from disease-causing microorganisms.

Ingestion of anti-parasitic plants

Parasitism

Parasites can weaken the host's immune system by either of the two following ways. The hematophagous parasites directly reduce host fitness by continuously sucking blood and nutrients from the body, or parasites can be reservoirs for many deadly transmittable diseases and can act as disease carriers (vectors) among host populations.

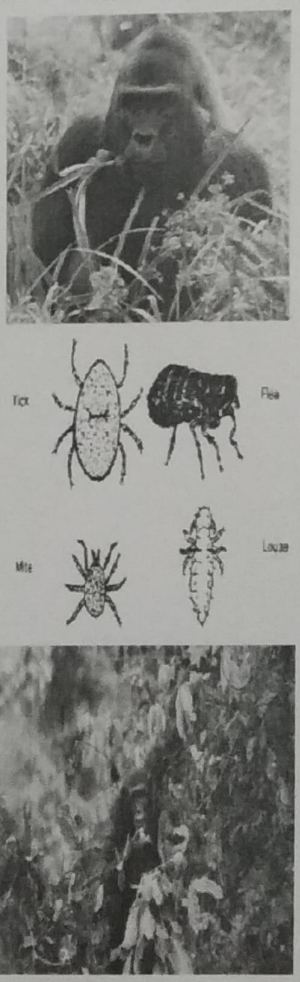

Fig. 1: Parasites (http://www.fao.org/docrep/t0690e/t0690e21.gif)

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Significance Test Based On Rayleigh Distribution

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ABSTRACT

This paper deals with the Rayleigh distribution as a life time model. Moments of order statistics and an ordered sample are used to define a test statistic for the null hypothesis that the considered random variable has Rayleigh distribution. The percentiles of the test statistic are evaluated. Power's of the test with half-logistic distribution and gamma distribution with shape parameter 2 as alternatives are also evaluated.

Key Words: *Testing, Moments, Order statistics, Power of Test*

1. Introduction

The well known Weibull distribution is one of the most widely used probability distribution in Reliability engineering discipline and also is studied by many researchers with respect to various problems on statistical inference. Weibull distribution with shape parameter 2 is known as Rayleigh distribution. In the field of statistical research, life testing experiments and reliability studies Rayleigh is the one of the most commonly used increasing failure rate models, whose probability density function is given by

$$f(x) = \frac{x}{\sigma^2} e^{-x^2/2\sigma^2}; x \geq 0 \qquad (1.1)$$
$$= 0, otherwise$$

where $\sigma > 0$, is the scale parameter of the distribution.
The cumulative distribution function is given by

$$F(x) = 1 - e^{-x^2/2\sigma^2}; \; for\; x \in [0, \infty) \qquad (1.2)$$
$$= 0, otherwise$$

In this direction several authors contributed in this field with respect to references there in.

2. The Graphs Of Frequency Curve Of Rayleigh Distribution

The graph of frequency curve of Rayleigh distribution look similar to half logistic distribution, gamma distribution with shape parameter 2 models. Incidentally Rayleigh distribution is a combination of half logistic distribution and gamma distribution with shape parameter 2. We present below the frequency curve of Rayleigh distribution that look similar to half logistic distribution, gamma distribution with shape parameter 2.

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Development & Evaluation of Mucoadhesive Microspheres of Roxatidine Acetate HCl

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Abstract: Present study aims to prepare and evaluate mucoadhesive microspheres of Roxatidine acetate HCl by ionotropic gelation method. Among all the formulations, M13 was selected as optimized formulation for mucoadhesive microspheres based on the evaluation parameters and drug release studies. *In vitro* release study of formulation M13 showed 99.4% 12 h in a controlled manner, which is essential for disease like peptic ulcer. The release order kinetics for M13 was best fit with the highest correlation coefficient was observed in Higuchi model, indicating diffusion controlled principle. The innovator Rotane 150 mg conventional tablet shows the drug release of 96.45% within 1 h. FT-IR and DSC analyses confirmed the absence of drug-polymer interaction. The results obtained from evaluation studies of Roxatidine mucoadhesive microspheres that system may be useful to achieve a controlled drug release and targeting also achieved by mucoadhesion of the microspheres to the GIT may help to reduce the dose of drug, dosing frequency and improve patient compliance when compared with marketed product

Key words: Roxatidine, mucoadhesiveness, gum olibanum, chitosan, microspheres.

Introduction:

The most desirable and convenient method of drug administration is the oral route due to the ease of administration and patient compliance. One limitation for oral delivery is poor bioavailability and for the drug candidates who show absorption window in the proximal gut and is the major obstacle to the development of controlled release formulation. Microsphere carrier systems, made from natural polymers are attracting considerable attentions for several years, for sustained drug delivery. Today, those dosage forms which can control the release rates and which are target specific have a great impact in development of novel drug delivery systems. Microspheres are part of such novel delivery systems[1,2].

The term microsphere is defined as a spherical particle with size from 1µm to 1000µm. The microspheres are characteristically free flowing powders consisting of proteins or synthetic polymers, which are biodegradable in nature, and ideally having a particle size less than 200 micrometer[3]. Microspheres are one of the multiparticulate drug delivery systems and are prepared by Ionotropic gelation method by dropping drug loaded polymeric solution using syringe into the aqueous solution of polyvalent cations to obtain prolonged (or) controlled drug delivery to improve bioavailability or stability and to target drug to specific sites[4].

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Formulation Development and Evaluation of Cimetidine Floating Microspheres

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Abstract: The present study was aimed to prepare Cimetidine floating microspheres by Ionotropic gelation technique with different drug to carrier ratio. All formulations of Cimetidine were characterized for particle size, scanning electron microscopy, FT-IR study, DSC, percentage yield, drug entrapment, stability studies and found to be within the limits. Among all the formulations, F13 was selected as optimized formulation based on the physicochemical and release studies. In the *in vitro* release study of formulation F13 showed 96.10% after 12 h in a controlled manner, which is essential for anti ulcer therapy. The innovator Cimetine conventional tablet showed the drug release of 96.15% within 1 h. The drug release of F13 formulation followed zero order and Higuchi kinetics indicating diffusion controlled drug release.

Key words: Cimetidine, chitosan, gum kondagogu, floating microspheres.

Introduction:

The term microsphere is defined as a spherical particle with size varying with diameters in the micrometer range (typically 1 µm to 1000 µm), containing a core substance. The microspheres are characteristically free flowing powders consisting of proteins or synthetic polymers, which are biodegradable in nature and ideally having a particle size less than 200 µm[1].

As the system floats over gastric contents, the drug is released slowly at desired rate resulting in increased gastric retention with reduced fluctuations in plasma drug concentration[2]. Floating microspheres have emerged as an efficient means of enhancing the bioavailability and controlled delivery of many drugs the increasing sophistication of delivery technology will ensure the development of increasing number of gastro-retentive drug delivery systems to optimize the delivery of molecules that exhibit absorption window, low bioavailability and extensive first pass metabolism[3,4].

Gastric emptying of dosage forms is an extremely variable process and ability to prolong and control the emptying time is a valuable asset for dosage forms, which reside in the stomach for a longer period of time than conventional dosage forms. Floating drug delivery system (FDDS) promises to be a potential approach for gastric retention. Floating microspheres have emerged as an efficient means of enhancing the bioavailability and controlled delivery of many drugs the increasing sophistication of delivery technology will ensure the development of increasing number of gastro-retentive drug delivery systems to optimize the delivery of molecules that exhibit absorption window, low bioavailability and extensive first pass metabolism[5].

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Impact of medicinal plants against malnutrition among women: An overview

Dr. B Parimala Devi

Abstract
Malnutrition is a serious health issue among women in developing countries like India. Women are prone to such, due to diverse reasons both urban and in rural areas. Around the globe women at all ages suffering invariably with health issues like Anemia, Malnutrition, Rheumatoid arthritis, Osteoporosis, Obesity, Menstrual irregularities. India, having its rich heritage of medicinal plants, playing a significant role in solving the issues faced by women elsewhere in the country by their simple and cheap herbal home remedies. From the historical point, usage of herbals by women for treating health issues seems to be interesting and encouraging. Least side effects, safety, cost affordability of traditional herbs being practiced for long time to control such problems. Recent days, life threatening diseases like cancer also alarming and the usage of herbals for the women highly recommended by Ayurveda and siddha system too. Culinary herbs, widely used by women for correction of many health issues in day to day life and there is an urgent need and awareness to be created among women in all ages to apply and for the usage of such herbals for their effective healthy life which is very much essential. This review highlight the major factors which cause severe health issues of malnutrition and related impacts of it among women and routine practices to be adopted by usage of medicinal plants to combat malnutrition such.

Keywords: Women, Medicinal plants, Health issues, Malnutrition

Introduction
Women plays a key role in family, society, higher positions and elsewhere in the society in the present scenario. They compete in every sections to prove themselves equally with that of men. Malnutrition mainly due to early marriage, repeated childbirth, pregnancy, poor diet and socioeconomic factors. And related health issues are Anemia, Rheumatoid arthritis, Obesity, Menstrual irregularities. Anaemia, the major health issue among women at all ages around the world. Around the world, women at all ages suffering with variety of health issues. Stress and Poor health care, malnutrition and many aspects still worsen the case. The average nutritional intake of women is 1400 calories daily. The necessary requirement is approximately 2200 calories 92% of women in India suffer from gynaecological problems [1] 300 women die every day due to childbirth and pregnancy related causes [2]. Moderate malnutrition continues to affect 46% of children under five years of age and 47% of rural women in India. Women's lack of empowerment is believed to be an important factor in the persistent prevalence of malnutrition. In India, women's empowerment often varies by community, with tribes sometimes being the most progressive. Improving women's nutrition, promoting gender equality, empowering women and ending violence against women could further reduce the prevalence of malnutrition of the Indian population [3].
Medicinal plants nowadays playing its role taking care of such issues. In order to understand the modern definition of women's health, it is important to understand women's health care viewed by the medical and medical research establishments. Traditionally, the health of women has been seen as synonymous with maternal or reproductive health. Childbirth and sexually transmitted diseases, cervical cancer have been the most important health issues for women in all ages and places. The women are getting more stress and lack of self care and poor. In addition the smoke from household biomass having serious impact includes eye problems, respiratory problems, chronic bronchitis and lung cancer among the women as the exposure time is more in our social setup. It may leads to anemia those susceptible to carbon monoxide toxicity. Mortality, smoking, chewing tobacco and alcohol use were four separate health variables in the analysis in Indian scenario.

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Design & *In Vitro* Evaluation of Floating Microspheres Using Roxatidine Acetate HCl

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ABSTRACT

The purpose of the research was to prepare and evaluate Roxatidine acetate HCl floating microspheres by ionotropic gelation method. Fourteen formulations were prepared, among all the formulations F13 was selected as optimized formulation based on the micromeretic and evaluation parameters including drug release studies. In the *in vitro* release study of formulation, F13 showed 95.65% drug release after 12 h in a controlled manner, which is desired for disease like peptic ulcer. *In vitro* release profiles from optimized formulation F13 were applied on various kinetic models. The best fit with the highest correlation coefficient was observed in zero order and Higuchi model, indicating diffusion controlled principle. The innovator Rotane 150 mg conventional tablet showed the drug release of 96.45% within 1 h. FT-IR and DSC analyses confirmed the absence of drug-polymer interaction. The results obtained from evaluation and performance study of different types of Roxatidine microspheres showed that system may be useful to achieve a controlled drug release profile, reduce the dose of drug, dosing frequency and improve patient compliance when compared with marketed product.

Key words: Roxatidine, buoyancy, HPMC, gum olibanum, microspheres.

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Formulation and Evaluation of Mucoadhesive Microspheres Containing Cimetidine

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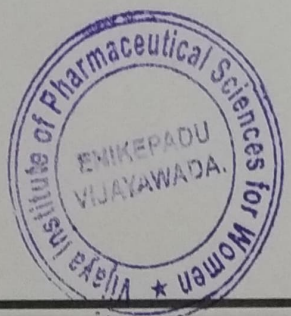
ABSTRACT

In the present research work mucoadhesive microspheres of Cimetidine were prepared using Ionotropic gelation technique. All the microspheres were characterized for particle size, scanning electron microscopy, FT-IR study, DSC, percentage yield, drug entrapment, stability studies and for *in vitro* release kinetics and found to be within the limits. Among all the formulations M12 was selected as optimized formulation based on the physicochemical and release studies. *In vitro* drug release study of optimized formulation M12 showed 99.12% after 12 h in a controlled manner, which is essential for anti ulcer therapy. The innovator Cimetine conventional tablet showed the drug release of 96.15% within 1 h. The drug release of Cimetidine optimized formulation M12 followed zero order and Higuchi kinetics indicating diffusion controlled drug release.

Keywords: Cimetidine, mucoadhesion, chitosan, gum kondagogu, xanthan gum.



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In-vitro anticancer activity of petroleum ether extract of *Cynodon dactylon*

Gunji Venkateswarlu, T. Swarupa Rani, M. Vani, P.A.J. Vineela

Abstract
The aim of the present study is to evaluate the effect of in-vitro anticancer activity of the petroleum ether extract of Cynodon dactylon against HEP-2 laryngeal, HELA cervical and MCF-7 breast cancer cell lines and it was compared with normal, Vero cell line using MTT assay showed a percentage of cell viability of 97% at 0.078 mg/ml which decrease with increase in concentration of extract. Anticancer activity of petroleum ether extract of *Cynodon dactylon* on HEP-2, HELA and MCF-7 cancer cell lines showed potent cytotoxic activity. The inhibition percentage with regard to cytotoxicity was found to be 93.5%, 88.5% and 79.2% at 10 mg/ml, which was comparable to the control Cyclophosphamide that showed a cytotoxicity of 96%, 92% and 83%. Therefore the minimum effective concentration of petroleum ether extract of *Cynodon dactylon* was non-toxic to Vero cells but toxic to HEP-2, HELA and MCF-7 cells(Ic50) was recorded at a concentration of 0.156 mg/ml 0.625 mg/ml of petroleum ether extract of *Cynodon dactylon*. Among these three cell lines *Cynodon dactylon* shows more activity in HEP-2 laryngeal cell line.

Keywords: *Cynodon dactylon*, HEP- 2, MCF-7 cell lines, MTT assay, DNA Fragmentation

1. Introduction

Plant derived agents are being used for the treatment of cancer. Several anticancer agents from plants include: taxol, vinblastine, vincristine, the camptothecin derivatives, topotecan and irinotecan, and etoposide derived from epipodo phyllotoxin are in clinical use all over the world. Numerous cancer research studies have been conducted using traditional medicinal plants in an effort to discover new therapeutic agents that lack the toxic side effects associated with current chemotherapeutic agents and the drugs under clinical phytomedicines has increased dramatically in the last two decades [7]. It has been also reported [8] that more than 50% of all modern drugs in clinical use are of natural products, many of which have been recognized to have the ability to include apoptosis in various cancer cells of human originals, there is an urgent need to develop much effective and less toxic drugs. *In vitro* studies [9]. Geinstien in plants such as parsley and soy foods inhibits protein try osine kinase, thereby disrupting signal transduction andinducingcell differentiation [10, 11]. Cynodon dactylon, Pers. belongs to the family of Poaceae [12] and is said to have many medicinal properties including Antihelmentic [13], Antidiuretic, petroleum eather Antiinflammatory, Hepatoprotective activity [14] as well as treatment of Urinary tract infections [15], Prostatitis, and Dysentery. Traditionally it is used in diabetes [16, 17] jaundice, kidney problems [18], urinary disease, gastro intestinal disorder [19], Constipation and abdominal pain. The whole plant is used for diuretic, dropsy, syphilis, wound infection and piles. *Cynodon dactylon* is used as antihemorrhagic in dysentery and nasal bleeding [20]. The juice of the plant is astringent and is applied externally to fresh cuts and wounds. It is used in the treatment of catarrhal ophthalmia, hysteria, epilepsy, insanity, and chronic diarrhea. The plant is folk remedy for anasarca, calculus, carbuncles, cough, hyper tension, snake bites, gout and rheumatic affections. *Cynodon dactylon* is a valuable herbal medicine and used for first aid for minor injuries [21, 22]. *Cynodon dactylon* is bitter, sharp hot taste, good odor, laxative, brain and heart tonic, aphrodisiac, expectorant, carminative and useful against grippe in children and for pains, inflammations, and toothache [23]. Virus-affected discolored leaves of Cynodon are used for the treatment of liver complaints. In Homoeopathic systems of medicine, it is used to treat all types of bleeding and skin troubles [24]. The petroleum eather extract of aerial parts of *C. dactylon* showed marked protection against convulsions induced by chemo convulsive agents in mice [25]. Petroleum ether extract of defatted *C. dactylon* has high antidiabetic potential along with good hypo lipidemic profile [26]. This suggests the potential for *Cynodon dactylon* to become an alternative to current diabetes medications. The methanolic extract of *Cynodon dactylon* possessed significant

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ANTIMICROBIAL ACTIVITY OF AMINOGLYCOSIDE ANTIBIOTICS COMBINED WITH CLOVE AND GINGER

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ABSTRACT

The present work was aimed the antimicrobial activity of clove, ginger methanol, and ethanol extracts alone and in combination with aminoglycoside antibiotics such as Streptomycin, Kanamycin, Gentamicin, Amikacin were analyzed by the agar disc diffusion method against three gram negative microorganism like *E. coli, Pseudomonas aeruginosa, Serratia marcescens.* The zones of inhibition obtained from the different agar plate were measured by antibiotic zone reader. According to the zone of inhibition observed in the entire agar plates, the methanol extract of clove and ginger with gentamicin showed maximum zone of inhibitions 27 mm against *S. marcescens.* The methanol extract of clove and ginger with kanamycin showed zone of inhibition 23 mm against *S. marcescens.* The ethanol extract of ginger with Gentamicin showed zone of inhibition 30 mm against *p. aeruginosa* and methanol extract of ginger with Amikacin showed zone of inhibition 16 mm against *p. aeruginosa.* The methanol extract of ginger showed lowest antimicrobial activity 12 mm against E. coli. Combination of ginger and clove extracts with aminoglycoside antibiotics increased the antimicrobial activity than the clove, ginger extracts separately. This is the new method of approach to decrease the resistance of antibiotics against microorganisms. The large varieties of compounds produced by plants have proved their antimicrobials, resistance modifiers and in combination with antimicrobial chemotherapy which should form the subject of further extensive study.

KEYWORDS: Antimicrobial activity, Ginger, Clove extracts, Aminoglycoside antibiotics.

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IN VITRO EVALUATION OF SALICYLIC ACID RELEASE FROM AN OINTMENT AND CREAM BY AGAR PLATE METHOD

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ABSTRACT

Delivering medicine to the general circulation through the skin is seen as a desirable alternative to taking it by mouth. The present study was aimed to find out the better dosage form for salicylic acid based on its release from two different semisolid formulations i.e., ointment and cream. Salicylic acid is the most commonly used and also prescribed for various dermatological ailments like psoriasis, acne, fungal infection and also as keratolytic. Salicylic acid ointment and Salicylic acid cream were prepared and evaluated the rate of release of salicylic acid from both ointment and cream by Agar plate method and compared the rate of its release from both the formulations i.e. ointment and cream. The violet/purple color developed on agar plates due to a complex reaction between salicylic acid and ferric chloride was measured to evaluate the drug releasing kinetics. This method is based on the diffusion and release pattern of drug from different semisolid formulation bases. The formulations were also characterized by physical parameters and results were found in acceptable limits. Salicylic acid release was found to be maximum in cream form compared to ointment form.

KEYWORDS: Salicylic acid, Diffusion, Agar medium, Oil in water cream, Releasing rate.

INTRODUCTION [1,2]

The semisolid dosage forms applied in transdermal drug delivery systems are very useful for efficient delivery of drugs without undergoing extensive first pass metabolism or enzymatic

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Research Article

PHYTOCHEMICAL AND ANTI DIABETIC ACTIVITY OF AQUEOUS EXTRACT OF *MORINDA CITRIFOLIA* FRUIT IN ALLOXON INDUCED DIABETIC RATS

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ABSTRACT

The anti diabetic potential, effects of aqueous extract of *Morinda citrifolia* (Rubiaceae) fruit in alloxan-induced diabetic rats was investigated. Aqueous extract of *Morinda citrifolia* fruit *produced* a significant anti diabetic activity at tested dose evels. Phytochemical Screening of extract and powder of *Morinda citrifolia* was tested for the presence of chemical constituents.

Keywords: *Morinda citrifolia* fruit pylorus ligation , anti diabetic activity, Phyto chemicals.

INTRODUCTION

Diabetes mellitus, often referred to simply as diabetes, is a syndrome of discovered as abnormal fuel metabolism, usually due to a combination of hereditary and environment causes, resulting in abnormally high blood sugar levels (hyperglycemia). Blood glucose levels are controlled by a complex interaction of multiple chemicals and hormones in the body, including the hormone insulin made in the beta cells of the pancreas.Diabetes develops due to a diminished production of insulin (in *type I*) or resistance to its effects (in *type 2* and *gestational*). Both lead to hyperglycemia, which largely causes the acute signs of diabetes: excessive urine production, resulting compensatory thirst and increased fluid intake, blurred vision, unexplained weights loss, lethargy, and changes in energy metabolism. Diabetes is important health problem. The infections by a syringe, insulin pump, or insulin pen deliver insulin, which is a basic treatment, exercise, meditation and insulin supplementation.

EXPERIMENTAL

Collection of Plant Material from different parts of South India and its Authentification was done. Aqueous Extract of *Morinda citrifolia* was procured from Mithali Herbal Extracts Vijayawada Andhra Pradesh INDIA Aqueous Extract and Crude dried powder of fruit of *Morinda citrifolia* is screened for Phytochemical and Antidiabetic activity on Rats.

Phytochemical investigation of *Morinda citrifolia* fruit Extract and Powder

Phytochemical tests were carried out to find the presence of chemical constituents in crude dried

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Pharmacovigilance: A Discourse Functional Perspective

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ABSTRACT

Pharmacovigilance is an integral part of clinical research. The potential awareness regarding adverse drug reactions has resulted in the emergence of the practice of Pharmacovigilance. Both clinical trials safety and post marketing pharmacovigilance are very significant in ensuring the drug safety. Pharmacovigilance methods can be categorized as Passive surveillance, Active surveillance, Comparative observational studies, targeted clinical investigations and Descriptive studies. The Central Drugs Standard Control Organization (CDSCO) already initiated a nationwide Pharmacovigilance programme under the aegis of Directorate General of Health Services (DGHS), Ministry of Health & Family Welfare and Government of India. The pharmacovigilance system in India has to be refined with the collaboration of pharmacovigilance experts. Implementation of a robust pharmacovigilance program in India in accordance with the objectives and recommendations of World Health Organization by Central Drugs Standard Control Organization is a prerequisite. It is the need of the hour to improve communication between the healthcare professionals and the public, and educating the health professionals well to understand the benefits/ risks of medicines they prescribe. Developing own national database and sharing information with other regulatory agencies will contribute a lot of required information from worldwide data to take the correct decision on medicines and products.

Keywords: Pharmacovigilance, adverse drug reactions, central drugs standard control organization, drug safety.

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