

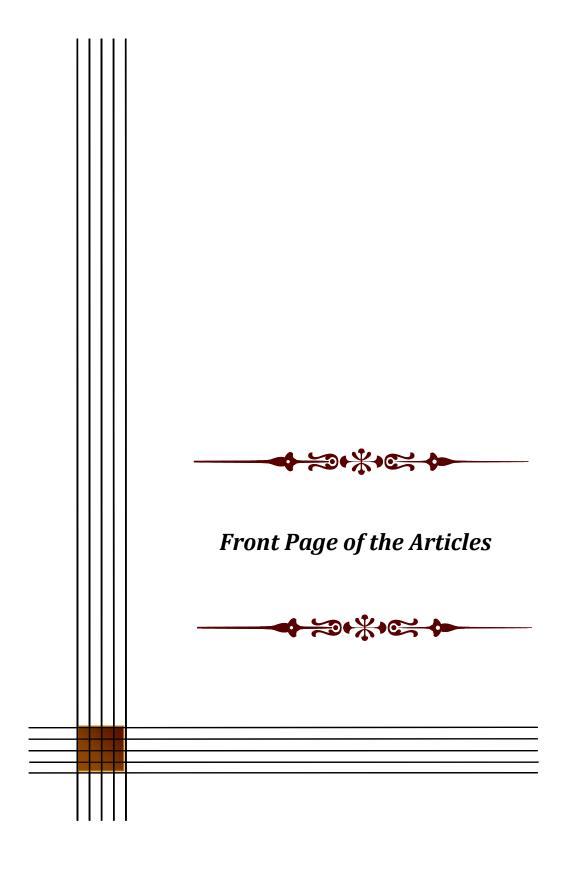
3.3.2 Number of research papers per teachers in the Journals notified on UGC website during the year 2022-23

Number of research papers in the Journals notified on UGC website and indexed in Scopus, Web of Science, PubMed, ResearchGate & others as input during the year 2022-23 given below;

Year	2022-23
Number of	74
Research Papers	



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MEDICINAL PLANT HAVING ANTIMICROBIAL ACTIVITY.

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Guided By: - Dr. K.B.Kotade, Mrs. Roma Sharma.







Abstract.

There is a requirement to find out new antimicrobial compounds with innovative chemical structures and Nobel mechanisms of action because there has been a frightening increase in the incidence of new and unrecognised infectious diseases. In recent years, drug resistance to human pathogenic bacteria has most commonly observed from all over the world. In the present scenario of emergence of multiple drug resistance to human pathogenic organisms, this has necessitated a search for new antimicrobial substances from various sources including plants, animals that are natural in origin. In this review article, we can collect information about various antimicrobial plant, their Pharmacognostic scheme, and phytochemical study.

Introduction.

An antimicrobial is an agent that destroy microorganism or stop their growth. Antimicrobial extract, preparation has been common practice in various medicinal system for at least 2000 years. Ancient Egyptians, ancient Greeks and ancient Indians used specific moulds & plant extract to treat infection. Many plants having significant therapeutic properties but due to the lack of documentation, evidences we all are unknown. Water extracts of Acacia nilotica, Justicia zelanica, Lantana camara, Saraca asoca, Phyllanthus urinaria, Thevetia nerifolia,

Jatropha gossypifolia Saraca asoca, Tamarindus indica, Aegle marmelos, Acacia nilotica, Chlorophytum borivilianum, Mangifera indica, Woodfordia fruticosa and Phyllanthus emblica showed antimicrobial activity. Many plants having tannins, alkaloids, and flavoraids, such secondary metabolites that give antimicrobial activity to the plant. Flavonoids are the most assuring control of the plant. Flavonoids are the most assuring control of the plant. Flavonoids are the most assuring control of the plant of the plant of the plant. Flavonoids are the most assuring control of the plant of the

antimicrobial agents, which give favourable antibacterial activity. Most of alkaloids exhibit relatively weaker antibacterial effect; however, berberine gives strong antimicrobial activities. Many terpenes and partial essential oils givesss strong antimicrobial activity. Organic acids, e.g., chlorogenic acid from Lonicera japonica Thunb. Show exploitable antimicrobial activity. According to Kuete and Efferth, 142 antibacterial activity parameters given for herb extracts and pure compounds. The antimicrobial mechanisms of herbal components involve damage to the cell membrane and wall, inhibition of nucleic acid and protein synthesis (e.g., inhibition of DNA topoisomerase I, II and IV), inhibition of energy metabolism (e.g., inhibition of NADHcytochrome c reductase, succinate dehydrogenase and malate dehydrogenase), inhibition of bacterial efflux pumps, and increased intracellular osmotic pressure. Organic acids also achieve their antimicrobial activities by increasing intracellular pH. In general, damage to cell membranes is the most common antimicrobial pathway. The purpose of study was to evaluate the antimicrobial activity of some medicinal plant used in Ayurveda and traditional medicinal system for treatment of infection occur due to the microorganisms. Many medicinal plant act as antimicrobial activity some example are as following from different families were tested for their potential activity against microbial pathogens, Justicia zelanica, Phyllanthus urinaria, Thevetia nerifolia, Acacia leucophloea, Solanum surattense, Tephrosia purpurea, Jatropha gossypifolia, Pithecolobium dulce, Holoptelea integrifolia, Lantana camara, Şaraca asoca, Tamarindus indica, Aegle marmelos, Adacia nilotica,

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INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

"Review on Thyroid Disorders"

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Abstract:

India has an estimated 42 million people suffering from thyroidal disorders. One of the largest endocrine glands in the body, the thyroid gland is crucial to the growth, development, and metabolism of the human body. By continuously releasing a regular amount of thyroid hormones into the bloodstream, it also assists in the regulation of numerous other activities. Hyperthyroidism is due to over and Hyperthyroidism is due to under secretion of thyroid hormones. Hyperthyroidism may cause because of diffused hyperplasia of the thyroid associated with Graves' disease, the ingestion of excess exogenous thyroid hormones, overactive multi nodular goiter and overactive adenoma of thyroid. Hypothyroidism usually develops from iodine deficiency. Hypothyroidism developed from chronic lymphocytic the thyroiditis, is known as Hashimoto's disease. It can also developed from decreased TSH level. Iodine as an integral part of thyroid hormones plays major role in both hypo and hyperthyroidism. Availability of iodine to thyroid gland is mainly from foods and water and if these sources are deficient in iodine, then problems like hypothyroidism, cretinism and other iodine deficiency disorders can develop. The prevalence of hyperthyroidism/thyrotoxicosis and hypothyroidism vary in different countries. Hyperthyroidism prevalence was higher in females than males. Similarly, the prevalence of hypothyroidism and sub clinical hypothyroidism was higher in females than males.

Key words: Goitre, Hyperthyroidism, Hypothyroidism, Iodine deficiency, Thyroid disorders, Thyroid hormones, Thyroid Stimulating Hormone (TSH), Thyroxine(T4), Tri-iodothyronine (T3)

1.Introduction:

Today thyroid disorders are more common among the population. 42 million people are suffering from thyroidal illness or disorders. It is most common disorder of endocrine system. Thyroid gland is located in neck in front of trachea and below the larynx also called as Adam's apple at 5th ,6th ,7th cervical and 1st thoracic vertebrae and is of butterfly shaped. Morphology of thyroid gland includes 2inch of size which consist of 2 lobes, one of each side of trachea (also called windpipe). This lobes are connected by small bridge of thyroid tissue called isthmus. This gland weighs about 18-25 gms.

Function of this gland is to produce, store and release thyroid hormones (TH) in body. This thyroid hormone plays vital role in controlling a broad range of physiological functions in body. This includes metabolism, temperature / heat/ energy homeostasis, cellular growth and development. Women's are more prone to the thyroidal disorders than men as hormonal imbalances are greater in them or due to the condition like PCOS. People with diabetes mellitus are also majorly prone to thyroidal disorders as TH plays important role in glucose metabolism. Thyroid hormones are involved in stimulating erythropoiesis and also in increasing erythrocyte 2,3-diphosphglycerate concentration which can helps in enhancing delivery of oxygen to the tissues. That is why sometimes decreased in thyroid hormone concentration can lead to anemia which may be normocytic, hypochromic, microcytic or macrocytic.

There are mainly two types of thyroid horroges i.e., Transdothyronine (T3) and Tetraiodothyronine (T4). Tetraiodothyronine is also called as Thyroxine. The stimulation between the levels of thyroid hormones and thyroid Stimulation hormone two main types of thyroid disorders are there. These are Hypothyroidism and Hyperthyroidism. The of the popular prodocrine diseases i.e., primary hypothyroidism is

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UGC Care Group 1 Journal

AWARENESS, SAFETY MEASURES AND PRECAUTIONS TO COMBAT TOMATO FEVER- A ESSENTIAL REVIEW STUDY

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ABSTRACT

Tomato fever is a self-limiting viral disease most commonly seen in young children from age one to nine. The condition is commonly referred to as "tomato fever" due to the redness of the blisters shaped like tomatoes that appear on the bodies of those who are infected. The specific cause of the illness is still unknown, however it is now thought to be a rare form of viral infection. It is mostly brought on by Coxsackie virus A-6 & A16. Coughing, fever, sneezing, fatigue and tiredness, skin rashes, irritability, red skin blisters, and dehydration are some of the symptoms of the fever. As a result of the current pandemic, everyone has learned about hygiene, which is a key component in this fever. A Prospective review study was carried out to make sure people were aware of the ongoing endemic tomato fever among the children.

KEYWORDS: Tomato fever, Head foot mouth disease (HFMD), Children, Coxsackie virus, Enterovirus.

INTRODUCTION

There is a new virus that causes a suspected viral flu called tomato fever. The condition is commonly referred to as "tomato flu" or "tomato fever" due to the redness of the blisters shaped like tomatoes that appear on the bodies of those who are infected.^{2,3} Coughing, fever, sneezing, fatigue and tiredness, skin rashes, irritability, red skin blisters, and dehydration are some of the symptoms of the fever. The virus may stay in their system for many weeks even after the disease's signs and symptoms have subsided.⁵ Notably, the illness does not offer any significant risks for life, while being very contagious.6

Reports have implied that tomato fever is a self-limiting disease which is primarily targeting young children between 1 to 10 years of age and adults with weak immunity. India recorded over 100 tomato fever cases in mainly in four different states - Haryana, Odisha, Kerala and Tamil Nadu even Maharashtra also. Most cases are among kids between the age of 1-9 years.7

TOMATO FEVER CAUSES

The specific cause of the illness is still unknown, however it is now thought to be a rare form of viral infection. Some have also suggested that it may be a side effect of dengue or chikungunya.6

Tomato fever has no link with coronavirus, dengue, chikungunya and monkeypox. Tomato Fever is caused by a virus and shows symptoms similar to those of Covid-19 but is not related to SARS COV-2.7 Head foot mouth disease (HFMD) rather than tomato fever is the likely source of this outbreak. It is mostly brought on by Coxsackie virus A-6 & A16.8 According to renowned virologist Dr. Jacob John, Coxsackie A16 and Enterovirus 71 are the two viruses that cause HFMD.9

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A Phytopharmacological Review on Garcinia Indica Fruit (kokum)

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Abstract:

Kokum fruit is a wonder berry that has a pleasant, tangy-sweet taste and a myriad of health benefits. This amazing fruit in the Sahyadri Mountain range of Western India. Kokum (Garcinia Indica), grows on ornamental fruit trees and it does not require any irrigation, fertilizers, or spraying. The most commonly used part of the plant is the fruit of Kokum. Kokum is loaded with various vitamins and minerals like B-complex, potassium, manganese, and magnesium, these help control heart rate and blood pressure, offering protection against stroke and coronary heart diseases. Kokum has culinary, medicinal as well as industrial uses. This super fruit has long been used to combat digestive problems such as indigestion, flatulence, acidity, and constipation. Also, this fruit possesses useful anti-bacterial, anti-oxidant, chelating, anti-fungal, anti-cancer, anti-inflammatory, cardio-protective, and anti-ulcer activities.

This review article encompasses the phytoconstituents, traditional uses, and medicinal-nutritional properties of Garcinia India which is also called Kokum as a traditional name.

Keywords: Kokum, anti-microbial, anti-cancer, garcinia indica, anti-ulcer.

1. Introduction

Garcinia India belongs to the botanical family of clusiaceae or according to the old classification it belongs to the family of Guttiferae which has approximately 1350 species. Genus Garcinia of the Clusiaceae family includes around 200 species of trees or shrubs, of which Garcinia Indica is the most common.

Kokum is also known by different English names like wild mangosteen or red mango. In India, it is known by names such as Bindin, Biran, Bhirand, Bhinda, Katambi, Panarpuli, Ratamba or Amsool.Kokum is a berry (Figure 1. Kokum fruit) with fleshy endocarp whose seeds, rind, juice, and pulp have a myriad of health benefits. Due to its heat neutralizing property a healthy soft drink is made from it to relieve sunstroke. Also, a soft drink, named 'Amrut kokum' is made by squeezing Kokum fruit in sugar syrup, which is quite popular during the summer season. Kokum seed is a good source of fat called Kokum butter. It is used in the chocolate and confectionary industry. Sometimes it is also used in surfactant and ointment industries [1-2-3].



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Research Paper

UGC CARE Listed (Group -I) Journal

Formulation and quality evaluation of Multigrain Neutra-chikki Sachin B. Somwanshi¹, Shital Godase², Chaitali Avhad³

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Abstract

An organism assimilates food and utilises it for development and maintenance through the process of nutrition, which is an organic process of nourishing or being fed. The study of food and drink in humans is a field of science that provides sources of nutrients for the body. Nutrition is the process of giving the materials required for life in the form of food to cells and organisms. A healthy diet can prevent or treat a number of common health issues.

Chikki a traditional candy delicacy created with groundnut and jaggery is enjoyed by people of all age group in India. An attempt was made to improve its nutritional quality by developing a multigrain Nutra-chikki with pumpkin seed, fennel seed and peanut, and the nutritional assessment were evaluated. The prepared multigrain Nutra-chikki was also organoleptically assessed using a sensory affective hedonic scale.

The results indicates that multigrain Nutra-chikki comprises of protein 14.78 g, fat 16.6 g, and minerals like iron 9.67 mg, calcium 269.9 mg which is nutritionally superior to groundnut chikki. It also showed acceptable sensory score of 8.3 for overall characteristics against groundnut chikki.

Keywords: Nutraceutical, Chikki, Pumpkin, Fennel, Peanut.

Introduction

The term "nutraceutical" is a combination of "nutrition" and "pharmaceutical." Nutraceuticals, broadly speaking, are foods or components of foods that significantly alter and maintain the normal physiological processes that support healthy human beings. The food products used as nutraceuticals can be categorised as dietary fibre, prebiotics, probiotics, polyunsaturated fatty acids, antioxidants and other different types of herbal natural foods. These dietary supplements are used to treat a number of illnesses, including diabetes, cholesterol, osteoporosis, cancer, obesity, and cardiovascular disease. Overall, "nutraceutical" has ushered in a new era of medicine and health, one in which the food industry has evolved into a field focused on research. This article aims to educate readers on the benefits of dietary supplements for treating a variety of diseases.1

The global market for nutraceuticals, which include herbal and dietary supplements, is expanding quickly and is already worth more than \$100 billion USD. Curcumin from turmeric, glucosamine from ginseng, and omega-3 fatty acids from linseed are a few of the popular plantderived (herbal) nutraceuticals.2

Pumpkins seeds are produced all over the world as a vegetable and medicine.3 Pumpkin seeds are rich in antioxidants, healthy fats, and minerals. Possible benefits of eating pumpkin seeds include boosting bone health, sexual wellbeing, and the immune system. 4.5 It also contains a lot of different amino acids, carotenoids, dietary fiber, vitamins, and minerals. It is a very effective health supplement as a result.6

The dried form of fennel, known as saunf, is a storehouse of essential nutrients. Low in calories and high in vitamin C, saunf seeds support the immune system, promote the creation of collagen, and act as a strong antioxidant that scavenges free radicals. Fennel seeds, which are high in manganese, stimulate metabolism, activate enzymes, control blood sugar, and build bones. In addition to these, significant amounts of selenium, calcium, magnesium, potassium, and iron support skin health, regulate blood pressure, and treat anaemia.7,8

Thus present study was developed with the intention of incorporating these multigrains such as pumpkin seeds, fennel seeds and peanuts as nutritional source to the traditional Indian sweet jaggery based chikki, which is popular throughout the country and consumed by all the sections of the population.

Materials And Method:

Materials used:

1. Pumpkin seeds:

Pumpkin seeds are a nutrient-dense food that has also demonstrated several medical benefits. It has 2gms of protein, 2gms of fat, and 7 gm of carbohydrates. The seed may be used as a dietary supplement since it contains a high quantity of macro elements (magnesium, phosphorus, and calcium) and a moderate amount of micro elements (calcium, manganese, copper, and zinc)8.

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2. Jaggery:

Traditional Indian sweetener known as raggetters, but readily available and nutritive. The macronutrients included in jaggery provide a variety of halth benefits, including antitoxin and

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FORMULATION DEVELOPMENT AND EVALUATION OF WAX INCORPORATED FLOATING BEADS OF CILNIDIPINE

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Abstract: conventional oral dosage forms having low bioavailability problems due to their rapid gastric transition from stomach, in case of drugs which are less soluble at alkaline pH of intestine. Further drugs which produce their local action in the stomach get rapidly emptied and do not get enough residence time in stomach. Hence, the frequency of dose administration in such cases is increased. To avoid these problems, various efforts have been made to prolong the retention time of drug the stomach. Floating drug delivery system (FDDS) is one of the most important approaches in prolonging the retention time of the drug in the stomach, FDDS is low density systems that have sufficient buoyancy to float over the gastric contents and remain buoyant in the stomach for a prolonged period of time without affecting the gastric contents, the drug is released slowly at the desired rate which results in better control of the fluctuations in plasma drug concentration. Based on the mechanism of buoyancy,

Sodium alginate, carnauba wax and bees wax were selected for the preparation of floating alginate wax beads. The identity of Cilnidipine was confirmed by physical characteristics, spectrophotometric analysis such as Ultra violet visible spectrophotometric, Fourier Transform – Infra red and differential thermal calorimetric studies by preparing the floating alginate wax beads of Cilnidipine, the effect of different variables on floating alginate wax beads was studied. The prepared floating beads were evaluated for micromeritic properties, % drug contents, floating lag time, floating time, swelling index and % drug release in 0.1N Hydrochloric acid and its accelerated stability study.

Keywords - Floating Beads, Cilnidipine, Ultraviolet Visible spectroscopy, FTIR.

I. INTRODUCTION

Floating drug delivery system are designed to prolong the gastric residence time after the administration of dosage form and controlling the release of drug especially useful for achieving controlled plasma level as well as improving bioavailability. Conventional pharmaceutical dosage forms with narrow absorption window in the gastro intestine tract have poor absorption. Therefore Floating drug delivery system have been developed, which offer the advantages in prolonging the gastric emptying time. Prolonged gastric retention improves bioavailability, increases the duration of drug release, reduces the drug waste and improves the drug stability that is less soluble in high environment. This system composed of ion exchange resin beads loaded with bicarbonate and a negatively charged drug tagged to resin. Porous alginate beads are prepared by incorporating CO2 gas generating agents like NaHCO3 and CaCO3. Bicarbonates are merged with stirring into aqueous solution of sodium alginate and then mixture is added to solution of calcium chloride with 10% acetic acid. So due to acetic acid and bicarbonate, CO2 gas is generated and simultaneously gelling of beads are occurred by calcium ions and CO2 which goes out from beads during stirring and creating porous structures in calcium alginate floating beads.

MECHANISM OF FLOATING SYSTEM

Various attempts are made to obtain retention of dosage form in the stomach by increasing RT of stomach. These include introduction of different gastro retention dosage forms as floating systems (gas generating system and swelling and expanding system), muco-adhesive system, high density system, modified shape systems, gastrio—emptying delaying devices and co administration of gastric empting delaying drugs. From this the floating drug delivery systems (FDDS) is most commonly used. FDDS have a bulk density less than gastric fluids and so remain buoyant in the stomach without affecting the gastric emptying rate for a prolong period of time. When the system floats on gastric contents the drug is released slowly at the desire rate from the system. After the drug is released, the residue is emptied from the stomach. This results in increasing the gastric empting time of stomach as well as controlling the fluctuations in PDC.

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REVIEW ON SUSTAINED RELEASE MATRIX TABLETS

Ms. Muskan, A. Khan1 and Dr. Sachin B. Somwanshi2

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- Associate Professor, Department of Pharmaceutics, P.R.E.S's, College of Pharmacy (For Women), Chincholi, Nashik, Maharahstra.

Abstract:

Oral medication conveyance is the most liked and convenient choice as the oral course gives most noteworthy dynamic surface region among all medication conveyance frameworks for organization of different medications. The appeal of these measurements structures is expected to awareness to harmfulness and insufficiency of medications when regulated by oral unsurprising technique in the structure of tablets and cases. There are a few benefits of supported discharge drug conveyance over traditional measurements\ structures like better persistent consistence because of less incessant medication organization, greatest utilization of the drug, expanded wellbeing edge of powerful medication, decrease of vacillation in consistent state drug levels, decline in medical services costs through improved treatment and more limited therapy period. The essential objective of supported discharge structures is the improvement of medication treatment surveyed by the connection among benefits and drawbacks of the utilization of supported discharge framework.

Keyword: Matrix tablets, Sustained release polymers, Patient convenience and compliance.



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Formulation and Evaluation of Herbal Lipstick using Beta Vulgaris

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ABSTRACT

The rising demand for natural and herbal cosmetics has fueled the exploration of alternative ingredients in the formulation of beauty products. This study focuses on the formulation and evaluation of a herbal lipstick utilizing Beta vulgaris powder, derived from the commonly known beetroot plant. The research begins with the procurement and preparation of Beta vulgaris powder through a suitable extraction method. The powder is then incorporated into a base lipstick formulation comprising natural and safe ingredients such as waxes, oils, and pigments. The optimization process involves adjusting the concentration of Beta vulgaris powder to achieve desired color, texture, and stability of the lipstick. The evaluation of the herbal lipstick involves a comprehensive range of tests and analyses. Color properties are assessed using colorimetric analysis, including measurements of hue, chroma, and intensity. Physical characteristics such as texture, spreadability, and melting point are evaluated using standardized techniques. Stability studies are conducted to examine

changes in color, texture, and fragrance over time. Safety and efficacy assessments are performed to ensure the suitability of the herbal lipstick for use. Skin compatibility tests, including patch testing and irritation potential evaluations, are carried out to determine the product's potential adverse effects. Microbiological analysis is conducted to ensure the absence of harmful microorganisms and validate product safety. Additionally, sensory evaluations are performed to gauge consumer preferences and acceptance of the herbal lipstick. The outcomes of this study contribute to the development of a natural and herbal lipstick formulation using Beta vulgaris powder. The findings provide insights into the feasibility and benefits of incorporating this natural ingredient into cosmetic products. The research also offers valuable information regarding the stability, safety, and efficacy of the formulated lipstick, supporting its commercial viability and meeting consumer demands for natural and sustainable cosmetic alternatives. In conclusion, this study showcases the potential of Beta vulgaris powder as a



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'PNEUMONOULTRAMICROSCOPICSILICOV OLCANOCONIOSIS"

¹Komal Somnath Shelar, ²Kiran B Dhamak

Pravara Rural Education Society's College of Pharmacy (for women), Chincholi, Nashik, India.

Abstract: -

PNEUMONOULTRAMICROSCOPICSILICOVOLCANOCONIOSIS the biggest English word, has 45 letters and is used to describe silicosis, a lung condition brought on by breathing in extremely fine silica dust that inflames the lungs. Silicosis is a type of occupational lung illness brought on by breathing in crystalline silica (also known as silicon dioxide, or SiO₂). Workplaces include quartz crushing plants (which grind quartz into flour), ceramic, glass, stone quarries and mines, among other places. This fibrotic and inflammatory process involved silicosis is a result of both humoral and cell-mediated immunological responses. This silica dust can result in fluid retention and scar tissue formation in the lungs, which impairs breathing. Four different forms of silicosis exist: classical, complicated, accelerated and acute. The idea that the pathophysiology of silicosis (black lung disease) involves interactions between silica and pulmonary macrophages. Silica probably affects macrophages via changing how they operate while they are still living rather than just by disrupting them. The release of mediator molecules from macrophages, including interleukin-1 (IL-1), that change other cells behaviour and function is thought to be promoted. In growing silicotic nodules, lymphocytes and macrophages can be seen in close proximity to one another, and bronchoalveolar lavage samples from animals and people who have been exposed to silica dust include higher proportions of lymphocytes than normal. The macrophage has been identified as a key contributor to the accompanying fibrosis to silicosis. Silicosis is a chronic condition that is incurable. Therapies alleviate symptoms and manage infections that silicosis sufferers are susceptible to. Any person with silicosis may experience a number of complications: increased chance of TB, COPD and lung infections. Massive progressive fibrosis, scarring and stiffness of the lung, which makes breathing difficult. Increasing massive fibrosis can manifest as simple or accelerated silicosis, with the accelerated variant with respiratory failure being more typical.

Keywords: - Crystalline silica, Pneumonoultramicroscopicsilicovolcanoconiosis, Silica, Silicosis, Quartz, Black Lung Disease, Interleukin, Lymphocytes, Fibrosis, Macrophages, Silicotic Nodules, COPD, Tuberculosis.)

1.Purpose: -

educate healthcare of The program's purpose is to professionals the prevalence pneumonoultramicroscopicsilicovolcanoconiosis.

2.Objectives: -

- Discuss the prevalence of pneumonoultramicroscopicsilicovolcanoconiosis. i.
- ii. Review the etiology of pneumonoultramicroscopicsilicovolcanoconiosis.
- Provide an explanation of the pathophysiology of pneumonoultramicroscopicsilicovolcanoconiosis. iii.
- iv. List the sign and symptoms of pneumonoultramicroscopicsilicovolcanoconiosis.
- Summarize the diagnosis and treatment options for pneumonoultramicroscopicsilicovolcanoconiosis.

3.Introduction: -

Silicosis also known as Grinder's disease, Black lung disease and Potter's rot. Silicosis is a type of pneumoconiosis that commonly affects miners and other workers exposed to free crystalline silica dust for an extended period of time. Worker exposure to crystalline silica damages the lung as silica particles are trapped in tissue, fibrotic nodules and scarring form around them. Silicosis is the medical term for this lung fibrotic disease. When brought on by a specific exposure to the fine silica dust found in volcanoes, this disease's full name is

Pneumonoultramicroscopicsilicovolcanoconiosis (1). It is a crystalline type of silicon dioxide (SiO2) that includes tridymite, quartz, and cristobalite. The most prevalent wall and a key ingredient in several types of rocks,

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including granite, slate, and sandstone (2).

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INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

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A systematic review: On efficacy of Herbal Remedies targeting weight loss

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Abstract

Obesity is a significant nutritional health problem in the modern world. In fact, both industrialised and developing nations are experiencing an increase in this issue. Even if we live and survive in a nation where we are unaware of these health-related problems. But this problem affects a sizable section of our population. Obesity is a condition when there has been an accumulation of extra fat to the point, or extent, where it has affected the health of the person or individual. This unusual disease also has an impact on BMI (Body Mass Index). Obesity is a dangerous condition that raises the chance of numerous deadly illnesses, including diabetes, heart disease, and cancer that is life-threatening. This review focuses on the various herbal remedies used to aid weight loss.

Keywords

Obesity

Herbal remedies

Weight loss

BMI (Body Mass Index)

Health issues

Introduction



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Long-term effects of an individual's excess body weight can be unpleasant and even dangerous to the staff. Obesity is a dangerous problem since it can lead to a variety of prenatal disorders and serious health concerns like heart problems, diabetes, colon and breast cancer (most commonly after menopause), endometrial

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"Review on Umbilical Cord Stem Cell Therapy"

¹Priyanka Dnyaneshwar Pawar, ²Kaveri T. Vaditake

Abstract:

The blood present in the vessels of the umbilical cord and placenta is known as umbilical cord blood. This blood has at least three distinct populations of stem cells, each with its own set of characteristics and properties. The second most popular source of stem cells for cell therapy is umbilical cord blood (UCB). As a result, regenerative medicine and the use of umbilical cord mesenchymal stem cell (UC-MSC) treatments have lately emerged as viable alternatives. UC-MSCs are multifunctional stem cells found in newborn umbilical cord tissue that can develop into a variety of cells with a wide range of therapeutic applications.

Key words:

Umbilical cord (UC), Mesenchymal stem cells (UC-MSC), Regenerative medicine, Umbilical cord stem cells therapy, Multifunctional stem cells.

1.Introduction:

The umbilical cord serves as a key link between the foetus and the placenta. The development of the umbilical cord begins in the embryologic stage around week 3 with the production of the connecting stalk. By week 7, the umbilical cord, which consists of the connecting stalk, vitelline duct, and umbilical veins encircling the amniotic membrane, has fully developed. The umbilical vessels transmit foetal blood back and forth to the placenta, with the umbilical vein bringing oxygenated blood containing nutrients from the placenta to the foetus and the umbilical arteries sending deoxygenated blood containing waste materials from the foetus to the placenta.

At the conclusion of the first trimester, embryonic tissues regress, leaving the umbilical cord, which is made up of two umbilical arteries and one umbilical vein, surrounded by Wharton's jelly, an extracellular matrix that resembles gelatin. The second trimester is when the umbilical chord elongates the most often. The typical umbilical chord has up to 40 helical twists and measures 50 to 60 centimeters in length and 2 cm in diameter. Increased foetal morbidity and mortality have been linked to abnormalities of the umbilical cord. (1, 2,3)

2.Umbilical cord stem cells

A kind of cell known as stem cells may self-renew and go through lineage differentiation. Developmental plasticity is the capacity of stem cells to generate one or more differentiated cell types. The three primary sources of stem cells in the human body are umbilical, adult, and embryonic. (4)

The umbilical cord, often thought to be a waste product, was discovered in 1974 to be a source of hematopoietic stem and progenitor cells. Aside from hematopoietic stem cells (HSCs), several scientists have identified mesenchymal stem cells (MSCs) from umbilical cord blood, while other investigations have failed to confirm their existence in significant proportions. (5)

Stem cells are simple cells that satisfy three essential characteristics. To begin, stem cells replenish themselves throughout life, dividing to make identical daughter cells and therefore maintaining the stem cell population. Second, stem cells have the ability to differentiate into specialized progeny cells. As stem cells develop, they may divide asymmetrically to produce an identical cell and a daughter cell that acquires specialized shape, phenotypic, and physiological features that identify it as a cell belonging to a given tissue.

"Pluripotent" cells are those that can develop into tissues derived from all three germ layers, such as ectoderm, Stem endoderm, and mesoderm. The embryonic stem cells (ESCa) produced from the inner cell mass of early embryos are the

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"Novel Treatment of Dostarlimab on Colorectal Cancer"

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Abstract:-

Dostarlimab (JEMPERLI), a PD-1 monoclonal antibody, is used to treat adult patients with advanced or recurrent endometrial cancer who have progressed while receiving treatment with a platinum-containing regimen or after receiving prior therapy. This application was swiftly approved based on the rate of tumour response and the length of the response, both of which were determined using an FDA-approved test. The continuation of approval for this indication is dependent on additional confirmatory trials proving and proving therapeutic benefit. The clinical trial NCT04165772 showed a rectal cancer remission rate of 100% in June 2022. This clinical trial demonstrated that it is possible to match a tumor's genetics with its treatment. Patients are still being enrolled in this research trial, A few decades ago, the incidence of colorectal cancer was low. Nonetheless, it has emerged as a common malignancy and now represents 10% of cancer-related deaths in western nations. The "surge" in colorectal cancer cases in developed nations is thought to be caused by an ageing population, poor modern eating practises, and an increase in risk factors like smoking, inactivity, and obesity. Laparoscopic surgery for primary disease, more aggressive resection of metastatic disease (such as liver and pulmonary metastases), radiotherapy for rectal cancer, and neoadjuvant and palliative chemotherapies are some of the new treatments for primary and metastatic colorectal cancer that have emerged, giving patients more options. On cure rates and long-term survival, these new therapy alternatives haven't made much of a difference.

Keywords: - Dostarlimab, Jemperli, Monoclonal Antibody, Colorectal cancer.

1.Introduction:

The general living standard around the globe has increased, and there is greater access to quality healthcare, which has greatly aided in disease diagnosis and treatment. The average life expectancy in the majority of the world's regions has been impacted by these policies. Yet, despite the fact that these medical advancements have reduced communicable disease mortality rates globally, cancer-related mortality has climbed by roughly 40% over the previous 40 years. 13 million individuals are predicted to pass away from cancer in 2030, with a further 60% increase anticipated in the following 15 years.[1] Modes: The main causes of cancer-related mortality have also changed, attributable to alterations in disease incidence, introduction of screening programmes and therapeutic improvements. Colorectal cancer was rather rare in 1950, but has become a predominant cancer in Western countries, now accounting for approximately 10% of cancer-related mortality. Reasons explaining this increased incidence include population ageing and the preponderance of poor dietary habits, smoking, low physical activity and obesity in western countries. The change in incidence is not only apparent in the rates of sporadic disease, but also in some familial cancer syndromes. Indeed, given that rates of Helicobacter pylori infection (a causative factor of gastric cancer) have fallen dramatically, colorectal cancer is now the predominant presentation of Lynch syndrome (a hereditary non-polyposis type of colorectal cancer), whereas carriers of this syndrome used to be predominantly affected by gastric cancer. The key contributors to cancer-related mortality have also altered as a result of changes in dispass incidence, be implementation of screening programmes, and advancements in therapeutics. Until 1950, colorectal cancer was relatively uncommon, but today it is a common malignancy in Western nations, accounting to the population as well as the prevalence of unhealthy eating mabits, 2 smoking, inactivity, and obesity in western nations, accounting mabits, 2 smoking, inactivity, and obesity in western nations, accounting mabits, 2 smoking, inactivity, and obesity in western nations, accounting the same of the prevalence of unhealthy eating mabits, 2 smoking, inactivity, and obesity in western nations, accounting the same of the prevalence of unhealthy eating mabits, 2 smoking, inactivity, and obesity in western nations, accounting the same of the prevalence of unhealthy eating mabits, 2 smoking, inactivity, and obesity in western nations, accounting the same of the prevalence of unhealthy eating mabits, 2 smoking, inactivity, and obesity in western nations, accounting the same of the prevalence of unhealthy eating mabits, 2 smoking, and obesity in western nations, accounting the same of the same of

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INTERNATIONAL JOURNAL OF CREATIVE **RESEARCH THOUGHTS (IJCRT)**

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Review On Organic Farming For Medicinal And **Aromatic Plants.**

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Abstract

Organic farming not only fulfill the good food conditions but also provides healthy life to consumers. Organic husbandry minimize all forms of pollution. It's free from all dangerous chemicals, Fungicides etc. Health is the most important aspect of living systems. Organic husbandry should sustain and enhance the health of factory, creatures, humans and soil. ultramodern husbandry involves the use of dangerous chemicals like synthetic chemical diseases and Fungicides which isn't only causes the poisonous goods on mortal health but also affects soil fertility and terrain. Organic husbandry is terrain friendly and produces high- quality food and also maintains long term fertility of soil. [1]

Organic farming enhances soil organic carbon, available phosphorus content and microbial population/ enzymatic exertion of soil and therefore making it sustainable for organic crop product, operation of different organic emendations in combinations and in a accretive manner can supply the nutrient demand of organic medicinal shops cropping system. The used main weed control strategies in organic cropping system is frequently the combination of artistic or husbandry ways with direct mechanical and thermal styles. Pests are generally not a significant problem in organic system, since healthy shops living in good soil with the balanced nutrition are more suitable to repel against pest and complaint attacks. still, marketable product of bio fungicides containing different bacteria, fungi and contagions has been accepted to control certain insects, pests and conditions in organic crop product systems. Owing to positive influence of organic factors in medicinal shops cropping system, it's thus, be assumed that those growers who espoused organic operation practices, have set up a way to ameliorate the quality of their soil, or at least stemmed the deterioration icing productive capacity for unborn generations. From this review, specialized aspects of medicinal shops organic husbandry shows ultramodern conception and environmentally friendly. By these ways, the profitable aspects in the agrarian sector are being better. [2]

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INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

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Review on Recent Advances in Cancerand Life Threatening Leukaemia

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Abstract :-

Cancer remains a Major cause of death encyclopedically. Cancer is characterized by proliferation of cells that have managed to shirk central endogenous control mechanisms. Cancers are grouped according to their organ or towel of origin, but decreasingly also grounded on molecular characteristics of the separate cancer cells. Due to the rapid-fire technological advances of the last times, it's now possible to dissect the molecular makeup of different cancer types in detail within short time ages. The accumulating knowledge about development and progression of cancer can be used to develop more precise diagnostics and further effective and/ or lower poisonous cancer curatives. In the long run, the thing is to offer to every cancer case a remedial authority that's acclimatized to his individual complaint and situation in an optimal way. Now a day's cancer is the most current life hanging complaint which is spreading because of the life we're living. Cancer is due to unbridled growth of cell which can be cured if diagnosed in early stage of life. Treatment of cancer depends on the colorful internal and external factors causing cancer. Cancer is screened by different webbing test and a number of treatments are now available these days similar as gene remedy, chemotherapy, surgery, radiation remedy, immunotherapy etc. In future up to 2030 around22.2 million cases are anticipated to be diagnosed for cancer.

Key words :- screening, carcinogenesis, chemotherapy, Hogkin disease, immunotherapy, etiology

Introduction:-

Cancer is a major global issue causing further than eight million deaths annually, lately, the International Agency for Research on Cancer (IARC) reported that 7.6 million deaths worldwide were due to cancer [3]. Likewise, 12.7 million new cases are estimated per time. It has been reported that developing countries are at advanced threat of cancer; according to a check, 63 of cancer-related deaths were reported only from developing countries. [1] Cancer is a multifactorial complaint involving complex variations in the genome affected by the relations between host and terrain. The emblems of cancer include independence from growth signals, irresponsiveness to signals which halt the cell division, unbridled replication, elusion of apoptosis, sustained angiogenesis, and eventually the capacity to access in other apkins, known as metastasis. [1]The medium of benign excrescence manifests dysregulation of colorful nonsupervisory proteins and extracellular terrain which plays a vital part in fabrication and development of cancers. Before 1950, only surgery was considered as a option for the cure of cancer. After 1960, radiation remedy was initiated to controlled complaint. With the passage of time, it was realized that individual treatment of surgery isn't effective as compared to their use in combination to control the cancer, currently, medicines, natural motes, and vulnerable mediated curatives are being used. Till moment, we haven't reached the excepted remedy position that resists the mortality rate and decreases the prolonged survival time for metastatic cancer. [2]

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Formulation and Evaluation of Herbal Face Pack For Enhancement Of Beauty

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Abstract:

Everybody wants to get a fair and charming skin. Now a days acne, black heads, pimples are common Problem. According to Ayurveda, skin problems are normally due to impurity in blood. Herbal face packs are used to simulate blood circulation, rejuvenate the muscles and help to maintain the elasticity of the skin and remove dirt from skin pores. The main objective of this study is to formulate and evaluate an herbal face pack for cosmetic use using natural ingredients in varying concentration plant materials such as Multani mitti, turmeric, neem, sandalwood, Tulsi, and pudina. Ayurvedic formulations are safer than synthetic formulation because its side effect is very low. The main purpose of Herbal face packs is to remove the dark circle, Pimples, Scars, through the increase blood circulation and remove dirt particles from the skin pores. The ingredients have been reported in this research paper having good anti-inflammatory, anti-oxidants and antimicrobial activity. These materials were obtained from the respective plants, dried, powdered, then pass through sieve no. #120 mixed geometrically, and tested for their organoleptic, physico-chemical properties, general powder properties, microbial load, chemical evaluation and stability studies. The usage of herbal face packs or masks helps to retain the elasticity of the skin, promote blood flow, and clear out skin pores for all skin types. Thus, in the present work, we found good properties for the face packs and further optimization studies are required on this study to find the useful benefits of face packs on human use as cosmetic product.

Key words: Face pack, Herbal, Natural, Evaluation.

Introduction: -

Everyone aspires to have beautiful skin that is fair. Acne, black heads, pimples, and dark circles are now very frequent among young people and those who have the condition. According to Ayurveda, blood impurities are typically the cause of skin issues. Skin-related disorders are brought on by toxins that have built up in the blood due to poor diet and lifestyle choices. Cosmetics are commercially available products that are used to improve the appearance of the skin by action of cleansing, beautifying, promoting attractiveness. From the ancient time, different herbs are used for cleaning, beautifying and to manage them. Face skin is the major part which indicates the health of an individua. 1,2 It consists of materials such as amino acids, lipids and carbohydrates etc. So that a balanced nutrition is required for the skin to keep it clear glossy and healthy. 3 In ayurveda, the herbal paste is called as "mukha lepa" used for as a facial therapy. This herbal paste smeared on face to treat acne, pimple, scars, marks and pigments. 4



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Development and Validation of TLC/Densitometry Determination of Trimetazidinein Bulk and in Pharmaceutical Formulation

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ABSTRACT

A simple, accurate and subsequent stability indicating HPTLC method for estimation of Trimetazidine in their formulation was developed and validated as per the guidelines given by International Conference on Harmonization .In the method development TLC aluminium plates precoated with silica gel 60F 254 –(Merck, Germany) as the stationary phase. The solvent system of toluene and methanol in the ratio of 4:1 v/v was selected as mobile phase. TMZ showed compact spot with R_f 0.54. The well defined and resolved spots were obtained when the chamber was saturated for 20 min.

Densitometric measurement of Trimetazidine was performed in the absorbance mode at 274 nm. The calibration curve of the drug obseved in the range of 50 – 300 ng/band. The correlation of coefficient was found to be 0.9993 The regression line equation for was found to be y = 14.306x + 3812.5.A %RSD of less than two implies that the procedure is precise and accurate. The goal of stability testing is to offer evidence for how medication quality fluctuates over time under the impact of natural variables such as humidity, light, and temperature, allowing for storage settings, retest intervals, and calculating the medicine's shelf life.In HPTLC, the degradation products were well separated from the pure medication, with considerably different retention factors. The approach was demonstrated to be a stability indicating method and may be utilised in practise for bulk and dose forms, as well as to evaluate shelf life.

KEYWORDS: HPTLC, Trimetazidine, Stability-indicating, Method Validation

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INTRODUCTION

Trimetazidine(TMZ) is a piperazine derivative indicated for the symptomatic treatment of

elSSN1303-5150

stable angina pectoris in patients inadequately controlled or intolerant to first line therapies. It decreases the oxygen

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Original Article

Eco-Friendly Analytical Quality By Design-Based Liquid Chromatographic Method For Estimation Of Molnupiravir In Bulk And Pharmaceutical Formulation

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DOI: 10.47750/pnr.2022.13.S10.06.584

Abstract

Implementation of quality by design (Q_bD) in developing greener analytical methods provides valuable knowledge about the use of greener chemicals and their impact on method performance. Green analytical chemistry (GAC) has mainly focussed on developing analytical methods that are safe for the environment and the analyst. The GAC works on 12 principles that mainly focus on reducing solvent usage, replacing toxic chemicals, reusing the generated waste, and avoiding unnecessary steps. The prime focus of the existing study was to develop analytical quality by design aided stability indicating green high performance liquid chromatography (HPLC) method for estimation of Molnupiravir in a capsule dosage form. The critical chromatographic factors were the % of ethanol in the mobile phase, and flow rate, their overall effect on the responses like capacity factor, tailing factor and theoretical plates were studied to optimize the method. A rotatable central composite design was employed, and the optimized conditions for chromatographic separation were made with a run time of 10 minutes using Zorbax C18 column (4.6×150 mm, 5 µm) with 0.1% acetic acid and ethanol (70:30 v/v) as components of a mobile phase, flowing at a rate of 1.0 ml/minute. Photodiode array detection was carried out at 235 nm. The retention time was found to be 4.21 min. According to the ICH guidlines, the proposed method was validated and stress studies revealed that Molnupiravir is prone to acidic and basic stress conditions. An analytical eco-scale score evaluated the greenness profile, and a software-based evaluation Analytical Greenness metrics, which affirmed excellent greenness. The developed HPLC method is more eco-friendly and shall be adopted in the routine quality control of Molnupiravir in a capsule dosage form

KEYWORDS: Green assessment, Molnupiravir, Method Validation, QBD, Stability testing,

1. INTRODUCTION

Molnupiravir(MPV) is a prodrug of the synthetic nucleoside derivative N⁴-hydroxycytidine and exerts its antiviral action by introducing copying errors during viral RNA replication. [1] Molnupiravir inhibits viral reproduction by promoting widespread mutations in the replication of viral RNA by RNA-directed RNA polymerase. [2] Molnupiravir is indicated for the treatment of mild-to-moderate coronavirus disease (COVID-19) in adults with positive results of direct SARS-CoV-2 viral testing who are at high risk for progression to severe COVID-19. The

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Development and Validation of RP-HPLC Method for Estimation of Butenafine Hydrochloride in Bulk and Nanolipid Gel

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Abstract

The objective present work was to develop and validate a simple, precise, rapid, sensitive and accurate HPLC method for determination of butenafine HCl in nanolipidgel. Chromatographic separation was achieved on HPLC 3000 binary gradient system with a Cosmosil C18 (250 x 4.6, 5 μ) column set at 30°C using mobile phase methanol:water (80:20 % v/v) pH adjusted to 3.0 with ortho-phosphoric acid. The flow rate was maintained constant at 0.8 ml/min. Data aquisition was done 283 nm. The retention time of Butenafine HCl (BFH) was obtained at 5 min. DL and QL for BFH were found to be 1.0193 µg/mL and 3.0889 µg/mL respectively. Developed RP-HPLC method was found to be robust and rugged. BFH content was found to be 99.8370±0.21% with a % RSD of 0.2148 and 99.9378±0.15% with a % RSD of 0.1585 in nanolipidgel and in marketed formulation Fintop® cream respectively. The developed RP-HPLC method was simple, reproducible and accurate for estimation of BFH in nanolipidgel. The results of linearity and precision suggest the repeatability and accuracy of method. The developed method could be used for investigation of butenafine in conventional formulations as well as for novel formulation accurately.

Keywords: Butenfine hydrochloride, solid lipid nanoparticles, nanolipidgel, RP-HPLC, modified solvent emulsification technique



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HPTLC method development for bictegravir, emtricitabine and tenofovir in bulk and dosage form in presence of its degradation products

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Section A-Research paper

HPTLC method development for bictegravir, emtricitabine and tenofovir in bulk and dosage form in presence of its degradation products

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ABSTRACT

Simple, accurate and stability-indicating high-performance thin- layer chromatographic method for densitometric determination of Bictegravir, Emtricitabine and Tenofovir in bulk and in dosage form was developed and validated as per the ICH guidelines . TLC aluminium plates precoated with silica gel 60F 254 - (Merck, Germany) as the stationary phase were used in the method development. Toluene: Ethyl acetate: methanol: acetic acid (4.0:3.0:3.0:0.2 v/v/v) was used as the development solvent. Bictegravir, Emtricitabine, and Tenofovir were densitometrically measured in absorbance mode at 272 nm. The system was found to give very well resolved spot for Bictegravir, Emtricitabine and Tenofovir at Rf value of 0.26, 0.42 and 0.63 respectively. The calibration curve of the drug 200 to 1600 ng/spot for BIC, 100-800 ng/spot for TAF and concentration range 500 to 4000 ng/spot for ETB was observed. The correlation of coefficient was found to be 0.998 for BIC, 0.9994 for ETB and 0.999 for TAF. The regression line equation for Bictegravir, Emtricitabine and Tenofovir was found to be y = 2.785 x + 2415, y = 1.789 x + 2743 and y = 1.644 x + 2843 respectively. The %RSD less than two indicates method is precise and accurate. In HPTLC, the degradation products were well separated from the pure drug, with significantly different retention factors. The method was demonstrated to be a stability indicating method and can be used in practice to determine shelf life.. Statistical analysis demonstrated that the method is simple, accurate, and selective for estimating Bictegravir, Emtricitabine, and Tenofovir drug concentrations. When subjected to different stress conditions, the proposed method effectively separates the drug from its degradation products and can be used as a stability indicating method.

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Section A -Research paper

QUANTIFICATION OF SOFOSBUVIR AND LEDIPASVIR IN BULK AND DOSAGE FORM BY HPTLC AND RP-HPLC METHODS IN PRESENCE OF ITS DEGRADATION PRODUCTS

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Abstract

The combine dosage form of Sofosbuvir (SFB) and Ledipasvir (LDV) used in the treatment of Hepatitis C virus genotype 1 infection. A simple, accurate and subsequent stability indicating HPLC and HPTLC methods for simultaneous estimation of SFB and LDV in their combined formulation was developed and validated as per the guidelines given by International Conference on Harmonization

In HPTLC, separations was achieved on aluminium plate precoated with silica gel 60 F₂₅₄ using toluene:methanol:ethyl acetate: acetic acid (6:2:2:0.3, V/V/V/V) as mobile phase. The compact bands of SFB and LDV at 0.53 ± 0.01 and 0.37 ± 0.02 respectively were scanned at 254 nm. In RP-HPLC separation was achieved on Agilent 1260,binary pump , with C18 (250 cm × 4.6 mm) 5 μ m column. The mobile phase composition of Phosphate buffer pH 2.5: Acetonitrile: Methanol (60:30:10 (V/V/V) used for development with flow rate of 1.5 ml/min maintained at an room temperature. The retention time obtained for LDV and SFB were at 3.144

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Review on Herbal kajal

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Abstract:- Kohl is a revolutionary technique and a novel are conceived of as the production of Kohl herbal kajal with medicinal plants for enhancement. The key benefits of these Cosmetics items are greater patient conformity, waterresistant properties, durability and cost-efficient shaping Curve. Revealed the values were within the prescribed limits by standardization of the herbs was performed based on different physiochemical parameters. On the basis of selected parameters and its anti-microbial potential was compare with comparator products the herbal kajal was evaluated. Kohl's have been used since antiquity in various civilizations of the world, and dates back to the Bronze Age. It is chiefly used by the females of South Asia, Middle East and Africa. It is known as "qwalli" in West Africa and "surma", "kajal", or "kaadige" in South Asia. The concerns are even more grave since kohl finds greater acceptability in women and infant population. Herbal kohl was formulated and scientific intent was used for selection of ingredients. The herbal kohl formulated showed antimicrobial activity, the major concern of the study.

Keywords:- Kohl, Kajal, Surma, Herbal Kohl.

I. INTRODUCTION

Eyes are the important connections between the outer and inner worlds. For the element of fire and light that governs our eyes pitta dosha stands for that in Ayurveda. Hence eyes are very important organ in our body system. For care and beautification of eyes vedic science offers several natural, safe and effective techniques. With the help of science of ayurveda, several herbs and floras were used to make Ayurvedic cosmetics that not only beautified the skin but as well as act as the shield against any kind of external affects for the body. In cosmetics for useful purposes such as moisturizing, whitening, coloring, sunscreen, antioxidant, immunostimulant, cleansing, preservatives, thickeners, etc. plants products are also used. Role of kajal in eye products can't be ignored as it is one of those products.

Kajal is worn for many reasons including tradition, beautification, to ward off the "evil eye". It is the widespread belief that kohl is medically beneficial for the eyes, and finally because wearing kohl is encouraged within the sunna, the traditional behavioral guidelines of the Islamic religion [2] . There are number of plants which are used opthalmic disorders, either single or in compound formulations are present in the Ayurvedic system of medicine, as mentioned in ancient Indian books like Charak Samhita, Sushrut Samhita, Bhav prakasha, Ras Tarang, Nayan Drastam and Astanghriday. Various eye disorders and diseases like Abhishyand (Conjunctivitis), Adhimanth (Glaucoma), Timir (Cataract), etc. have been described in great details1 in Ayurveda.(Indian system of medicine). Their etiology and treatments have also been described. Use of Various herbal drugs in different dosage forms like extract, arkas (aqueous distillate), kajal (collerium), and fomentation and washing with different extracts have also been prescribed frequently [3]. Not only the use of animals for laboratory testing but also with the use of materials and ingredients derived from animal sourcesis the concern in this area. For the standards and quality of drugs and cosmetics manufactured and sold in India the Drugs and Cosmetic act is concerned.

II. HISTORY

Eye make-up has been used for thousands of years. Materials used by ancient civilizations include "kohl (based on antimony trisulphide), 'malachite (for giving green tint), 'tsocco' (based on antimony), peruvian bark. Kohl is a black colouring. Egyptian women used kohl as well as malachite Malachite confers a green tint. Indian women tinted their eyelids with tsocco. Japanese and Chinese women used peruvian bark for preparing eye make- up.

In modern time, eye make-up is an essential item of facial make-up, cosmetics which are used in the area of eyes include the following:

Everylatory

Eyeshadow, Mascara, Eyebrow pencil, Eye cream, Kajal.

There are several plants that are used as ophthalmic disorders. As stated in ancient Indian books such as Charak Samhita, Sushrut Samhita, Bhav Prakash, Ras Tarang, Nayan

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Green stability indicating HPTLC Method for the Determination of Abacavir, Lamivudine and Dolutegravir in Bulk and Dosage Form

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Abstract:

Objective: To develop a green and robust stability-indicating high-performance thin-layer chromatographic method for densitometric determination of Abacavir(ABV), Lamivudine(LMV) and Dolutegravir(DTG) in bulk and dosage form by implementing GAC principles.

Methods: Chromatographic separation was carried by using TLC aluminium plates precoated with silica gel 60F 254 –(Merck, Germany) as the stationary phase. The solvent system of Ethanol:Acetone:Ammonia (7:3:0.2v/v/v) was used for the development and measurement was performed at 273nm. The proposed method subjected to different stress condition. The method was assessed using green assessment tools such as National Environmental Methods Index(NEMI),Analytical Eco-Scale(AES),Green Analytical Procedure Index(GAPI) and Analytical GREEnness (AGREE).

Findings: The system was found to give very well resolved spot for Dolutegravir, Lamivudine and Abacavir at Rf value of 0.24, 0.39 and 0.59 respectively. The calibration curve of the drug 200 -1600 ng/spot for DTG, 500 to 4000 ng/spot for LMV and concentration range 1000-8000 ng/spot for ABV was observed. The correlation of coefficient was found to be 0.9991 for DTG, 0.9996 for LMV and 0.9994 for ABV. The method was validated as per International Conference on Harmonization (ICH) guidelines. The %RSD less than two indicates method is precise and accurate. The degradation products were well resolved from the pure drug with significantly different retention factor in HPTLC. The developed method has been assessed for its greenness. The results show a score of nine green pictograms out of fifteen for GAPI, four green parts in NEMI, a score of 97 for AES which is near to 100, a score of 0.88 for AGREE indicates that the developed method is entirely eco-friendly and adaptable as a sustainable method.

Novelty: The method was proved as a eco-friendly stability indicating method and can be used in practice for bulk and the dosage forms and also to evaluate the shelf life

Keywords: Abacavir , Dolutegravir, Green HPTLC, Lamivudine, Stability-indicating.

Introduction

Abacavir(ABV) is a nucleoside reverse transcriptase inhibitor (NRTI) with activity against Human Immunodeficiency Virus Type 1 (HIV-1). Abacavir is phosphorylated to active metabolites that compete for incorporation into viral DNA. They inhibit the HIV reverse transcriptase enzyme competitively and act as a chain terminator of DNA synthesis. Chemically Abacavir, (is (1S,cis) – 4 - [2-amino-6(cyclopropyl amino)-9H-purin-9-yl]-2-cyclopentene-1-methanol sulfate.[1]

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Synthesis and Antimicrobial Activity of Some Pyrazolo[3,4-c]pyrazoles

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ABSTRACT

Nitrogen containing heterocyclic compounds and derivatives thereof are invaluable as a source of therapeutic agents. Pyrazole, with two nitrogen atoms and aromatic character, provides diverse functionality and stereochemical complexity in a five-member ring structure. In Knorr pyrazole synthesis, diimine compound gets deprotonated to regenerate the acid catalyst and provides the final pyrazole product. Formation of pyrazole derivatives from hydrazines, hydrazides, semicarbazides, thiosemicarbazide and aminoguanidines by condensation with 1, 3-dicarbonyl compounds is possible. As fused pyrazoles are reported to be well known pharmacophores, this has motivated to synthesize some of the pyrazolopyrazole derivatives by using hydrazine hydrate, thiosemicarbazide and semicarbazide. A series of 3-(aryl)-4-methyl-3a,6-dihydropyrazolo[3,4-c]pyrazole-2(3H)-carbothioamides (IVa3-e3), 3-(aryl)-4-methyl-3a,6-dihydropyrazolo[3,4-c]pyrazole-2(3H)-carbothioamide (IVa2-e2) and 4-(aryl)-3-methyl-1,3a,4,5-tetrahydropyrazolo[3,4-c]pyrazoles (IVa1-e1) were synthesized by conventional method where fused pyrazopyrazoles were prepared. All the compounds were synthesized with good yield (56-81 %) and characterized by IR, ¹H NMR spectral data and C, H, N elemental analysis. All the synthesized compounds exhibited antimicrobial activity.

KEYWORDS: -Heterocyclic compounds, pyrazole, pyrazolopyrazole, antimicrobial, IR, ¹H NMR, C, H, N elemental analysis

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Original Article

Enhancement Of Dissolution Profile By Solid Dispersion Using Kneading Technique

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Abstract

This article investigates enhancement of the dissolution profile of ibuprofen using solid dispersion with β -cyclodextrin. The article also describes the preparation of oridispersible tablets of ibuprofen by using a high amount of superdisintegrants. A phase solubility method was used to evaluate the effect of various water-soluble polymers on aqueous solubility of ibuprofen. β -cyclodextrin was selected and solid dispersions were prepared by the method of kneading. Dissolution studies using the USP paddle method were performed for solid dispersions of ibuprofen. Infrared (IR) spectroscopy, differential scanning calorimetry (DSC), and x-ray diffractometry (XRD) were performed to identify the physicochemical interaction between drug and carrier, hence its effect on dissolution. IR spectroscopy, XRD, and DSC showed no change in the crystal structure of ibuprofen. Dissolution of ibuprofen improved significantly in solid dispersion products (F3 99% in 15 minutes). Tablets containing solid dispersion exhibited better dissolution profile, wetting time, water absorption ratio and disintegration time than other batches. Thus, the solid dispersion technique can be successfully used for improvement of dissolution of ibuprofen.

KEYWORDS: Solid dispersion, ibuprofen, dissolution enhancement, orodispersible tablet.

1 INTRODUCTION

Out of many categories, NSAID's are the most widely prescribed medications in the world. As a therapeutic class, NSAID's exhibit analgesic, anti-inflammatory, antipyretic, and platelet inhibitory properties. Ibuprofen, a COX-2 inhibitor, is a potent non-steroidal anti-inflammatory drug. It is a weakly acidic drug having high permeability through stomach because it remains 99.9% unionized in stomach (pKa of Ibuprofen -4.43)(1). Inspite of having excellent oral bioavailability (96%), its problem of poor aqueous solubility makes its absorption and dissolution rate limited and which eventually delays its onset of action(2-3). To overcome this problem of solubility there are number of techniques available and reported in literature to enhance the solubility of poorly water soluble drug, such as solid dispersions, complexation, micronization supercritical fluid process, polymorphs and eutectic mixtures etc. we can use the technique of solid dispersion in which the hydrophilic carriers are used to help increase the low aqueous solubility(4-5). This technique has been implied to many such poorly aqueous soluble drug entities such as Nimesulide, Nifedipine, Nimodipine and so on. The hydrophilic carriers which are usually used during solid dispersion are Polyethylene glycols, Polyvinylpyrrolidone, Gums & Sugars, etc (6-7).

Solid dispersion, which was introduced in the early 1970s, is essentially a multicomponent system, having drug dispersed in and around hydrophilic carrier(s)(8). Solid dispersion technique has been used for a wide variety of poorly aqueous soluble drugs for improvement of dissolution characteristics and bioavailability of poorly aqueous-soluble drugs. β —cyclodextrin, PEG 6000 and Polyvinylpyrrolidone (PVP) has been used for the preparation of solid dispersion as a component of the binary system for various drugs (9-10).

The present work aims to evaluate the potential of the solid dispersion technique for development of orodispersible tablets of ibuprofen using β —cyclodextrin, PVP K-30and PEG 6000 as the hydrophilic carrier. Furthermore, the study undertakes to investigate kneading as a method for preparation of such binary systems, their solid state characterization, interaction in the liquid state, and attempts to see the possible mechanism of improved dissolution rate(11-12). The main advantage of orodispersible tablets is that the bioavailability of drugs may increase due to oral and pre-gastric absorption, resulting in reduction of first-pass metabolism in the gastrointestinal tract(4,13).

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A Comprehensive Review on Floating Drug Delivery System

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ABSTRACT

The recent literature with some special interest on the principal mechanism of floatation to obtain gastric retention is the main purpose of writing this review on floating drug delivery systems (FDDS). The recent developments infloating drug delivery containing the physiological systems formulation variables impacting on gastric retention time, approaches to formulating of singleunit and multiple-unit floating systems, and their classification and formulation aspects are discussed in detail. This review also summarizes evaluation parameters and application of floating drug delivery systems. These systems areuseful to several problems introduced during formulations of a pharmaceutical dosage form.

INTRODUCTION

The solid oral dosage forms such as capsules, tablets gives specific drug concentration in Systemic blood circulation without getting any control over drug delivery system and also cause fluctuations in plasma concentrations.[1] There are so many attempts been performed develop to prolonged(sustained) release preparations with extended clinical effects and reducedfrequency of dose. A problem continuously encounteredwith conventional sustained release dosage forms is the residence time in stomach is unable to increase and there is no control over drug delivery of drug which leads to fluctuations in plasma drug concentration level. The most convenient and preferredmeans of any drug delivery to the systematic circulation is the oral Administration. To achieveimproved therapeutic advantages the oral controlled release drug delivery system have recently beenof increasing interest in pharmaceutical field, such as ease ofadministration of doses, patient compliance towards the product and flexibility informulation of drug.[2]Those drugs are eliminated quickly from the systemic circulation who are easily absorbed fromgastrointestinal tract (GIT) and have short half-life. To achieve suitable therapeutic activity in body these drugs is required frequent dosing. The

development of sustained-controlled release oral formulations is to avoid this limitation and it is an attempt to release the drug slowly into the gastrointestinal tractand maintain the therapeutic drug concentration in the blood circulation for a long period of time. For to get maximum gastric retention of solid dosage forms is followed by the mechanisms of muco-adhesion, sedimentation, flotation, modified shapesystems, expansion, or by simultaneous administration pharmacologicalagents followed by emptying. The classification of floating drug deliverysystems (FDDS) has been described in detail on the basis of these approaches. [1]To get the efficiency and application of such systems the in vivo/in vitroevaluation of FDDS has also been discussed by the researchers. With bioavailability problems severalrecent examples have also been reported showing the efficiencyof such systems for drugs. The diminished efficacy of the administered dose due to incomplete drug release from the DDS caused by the relatively short gastric residence time in humans (2-3h) through the major absorption zone such as proximal part of GIT. Thus, considerations have led to the development of oral controlled-release(CR) dosage forms possessing gastric retention capabilities are the control of location of a Drug delivery system, especially for drugs exhibiting an absorption window in the GI tract or drugs with a stability problem, in a specific region of the GI tract offers several advantages.[3] In this review the technological developments which are currently invented in floating drug delivery system and patented or clinically available products are also discussed.

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PREPARATION, EXPANSION BESIDES DESCRIPTION OF LONG-ACTING PATCHES OF ANTI-FUNGAL AIMED AT EFFECTIVE DISTRIBUTION THROUGH COMBINATION API-CONTROLLED RELEASE POLYMERS

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Abstract:

The goal of the current study was to create an alternate dosage form for treating a fungal infection in place of the currently used oral, parenteral, and transdermal patches. HPMC E5 through PVP K 30 then HPMC E5 by Eudragit L100 polymers were used cutting-edge various proportions via a solvent evaporation process to create transdermal patches containing Clotrimazole. Several evaluation criteria, including width, portable fortitude, heaviness consistency, gratified consistency, distension directory, percentage humidity content, humidity acceptance, superficial pH, then in vitro release experiments, were applied to all the patches that were created. Concerning honesty, suppleness, drug spreading, besides additional excellence regulator criteria, all patches displayed satisfactory features. In-vitro membrane penetrability experiments likewise revealed that 97.04% of the medication Clotrimazole infused finished the swine abdomen membrane cuttingedge 24 hours, and formulation F5 demonstrated extended drug release (96.53%) for 24 hours. This shows that Clotrimazole's transdermal administration maintains the drug's claimed regulated release for a long time.

Keywords: Clotrimazole, HPMC, Eudragit, Transdermal distribution, Patch.

Introduction

Transdermic patches remain used towards treat a variety of ailments, and the transdermic medication distribution scheme (TDDS) remains a extensively acknowledged method of medication distribution ^[1]. Transdermic administration promotes persistent obedience then avoids first-pass breakdown, respectively, leading to finished-injectable then oral methods. Even drug-related gastrointestinal issues and poor absorption can be avoided with their help ^[2]. Transdermal medication administration systems are designed to minimise drug retention and metabolism in the skin while increasing skin flux into systemic circulation ^[3-5]. These therapeutic advantages reflect TDDS's greater marketing potential ^[6]. Although most medication molecules enter the body

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Bioactivity, Chemical and Functional Characterization of Karaya Gum Sterculia

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Abstract:

Natural biopolymers have a wide range of uses and bioactivities. In this investigation, karaya gum was gathered and put to use for bioactivity tests. Thin layer chromatography (TLC), a UV-Vis spectrophotometer, and FTIR were used to characterise gum and screen it for phytochemicals. Additionally, it was tested for bioactivity in tests that looked at antioxidant activity and antibacterial activity against S. aureus and E. coli. The antioxidant and antibacterial properties of Karaya gum were effective against S. aureus and E. coli. The presence of sugars such sucrose, glucose, xylose, and other sugars was shown by UV-VIS spectroscopy examination. Alcohol, phenols, aldehydes, and ketones were among the functional groups that were detected using FTIR analysis.

Keywords: Karaya gum, bioactivity, sustainability, karaya gum sterculia

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Neuro Quantology 2022; 20(13):1455-1462

1. Introduction

Plant gums have been used widely in several medical applications, as it is the cheapest and most available raw material for polysaccharide production. These gums are usually formed after a wound in a superior plant as a result of their protection mechanisms. The ability of these materials to be bio-safe and biodegradable, makes it perfect to create a drug delivery system to enhance drug-delivery matrix due to their elevated water-produced swelling, dispersible in tablets, availability, low cost, and thickening characteristics in oral-administered liquids²⁻⁵. But, the chemical composition of the gum is

important since it can affect the extraction technique and also can define the uses of the gum⁶. The karaya gum is an exudate from a big bushy tree known as *Sterculia urens*, this tree is originated from the family Sterculiaceae, that can be found in a dry forest located at the central and northern part of India. Another source for karaya gum is from *S.setigera* in Senegal and Mali, and minorsup- pliesform *S. villosa* in Sudan, India and Pakistan⁷⁻⁸. The production of these gums is so critical, the exudation will only begin after tapping the trunks by a manpower and then it continues for several days, the large exudes is dried in hot and dry weather, broken, cleaned to

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Tablet in Tablet Technique for Oral Drug Delivery

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Abstract

The innovation of controlled release formulations with multiple functions to ensure successful drug administration has entered a new era with the multilayer tablet. Bilayer tablets can help to prevent chemical disparities between pharmaceutically active substances (APIs) and promote the development of diverse profiles by separating them physically. The multilayer tablet is suited for the sequential release of two medications in combination, as well as for the continuous release of tablets, with one layer serving as a loading dosage and the other serving as a maintenance dose. As a result, the usage of bilayer tablets for antihypertensive, diabetic, anti-inflammatory, and analgesic medications, where combination therapy is frequently utilised, is a very different aspect. Bilayer tablets are being developed by many pharmaceutical companies for a number of reasons, including patent extension, therapeutics, and marketing, to mention a few. Although the basic principles of tablet manufacture remain the same, much more must be considered because the creation of multilayer tablets necessitates the use of several incompatible components, additional equipment, and numerous formulation and operating issues. The purpose of today's essay is to present an overview of bilayer tablet technology, the problems of multilayer tablet production, the numerous tablet presses utilised, quality criteria and GMP for their manufacture, as well as current advances in bilayer tablet technology.

Key Words: Multi-layer tablet, Loading dose, Maintenance dose, Bi-layer technology

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Introduction

Oral medication delivery is the most prevalent method of administering drugs among the drug delivery techniques. Pharmaceutical studies have recently shifted its focus to controlled drug delivery, which has distinct advantages over the standard release formulation of the same medicine.[1] Controlled delivery systems with zero-order medication distribution offer the potential to improve efficiency while reducing dose frequency and toxicity. By providing additional release region over time to compensate for the reduced release rate, the multilayer matrix system overcomes the inherent problems of non linearities encountered with diffusion-controlled matrix devices. [2]This technology also exhibits a high degree of adaptability for a variety of applications. The functioning of these systems relies heavily on polymeric materials. In the production of matrix-type controlled delivery systems, hydrophilic polymers are frequently employed.[3] Bilayer tablets are being developed

by many pharmaceutical companies for a number reasons, including patent extension, therapeutics, and marketing, to name a few. Existing but modified tablet presses are always utilised to design and manufacture such tablets in order to reduce capital investment. As a result, using customised tablet presses to make a highquality bilayer tablet under GMP conditions is not practicable, particularly when production demands are high.[4] The costs and challenges of bringing new pharmacological devices to market have escalated over the last 30 years, and greater focus hasbeen dedicated to the development of drug delivery systems. The dual-layer tablet represents a new age of successful development that offers regulated versions with a variety of features that enable drug delivery. [5] The prescription control of multilayer drug control versions, the mechanism of drug promotion, system design, and numerous parameters and process factors are all covered in this review.

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Development of Stability Indicating Analytical Methods for Some Drugs in Bulk and Pharmaceutical Dosage Forms Rahul D. Khaire^{1*}, P. Y. Pawar²

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Abstract: Rilpivirine and Dolutegravir can be determined simultaneously in bulk and pharmaceutical dose forms using a quick, accurate, and stable HPLC technique. An analytical technique called a stability indicating method (SIM) is used to quantify the loss of active pharmaceutical ingredient (API) in a drug product as a result of deterioration. A stability indicating method is a quantitative analytical technique that has been approved for use in determining how changes in the stability of drug ingredients and drug products occur over time. On a Denali C18 column (150 mm 4.6 mm, 5 m), the chromatographic separation was carried out using mobile phase Methanol: Phosphate buffer (pH 4.0). All peaks were overplayed after various concentrations of DOL (15-45 g/ml) and RIL (2.5-7.5 g/ml) were synthesised and injected individually. The findings demonstrated a linear connection between peak area and DOL (15-45 g/ml) and RIL (2.5-7.5 g/ml) concentrations. It was crucial to check the Rt time for a specific medication at every concentration. The results show that Rt was achieved for DOL between 7.08 and 1.10 minutes, whereas RIL was acquired between 3.19 and 3.19 minutes across all five concentration ranges. RSD is less than 2% for both drugs combined. This demonstrates the precision of the suggested method. The value of Recovery shows that the suggested approach is reliable. It was discovered that LOD and LOQ yield the lowest concentration for a given drug that the suggested method can quantify as well as the lowest amount of drug that can be identified but not necessarily quantified. LOD for DOL and RIL were discovered to be 1.046 and 0.809 g/ml, respectively. So starting from the LOD concentration that has been obtained, the suggested approach can detect drugs. For DOL and RIL, the LOQ was discovered to be 3.234 and 2.241 g/ml, respectively. The development of diverse degradation products was shown by the acid, alkali, neutral, dry heat, UV, and photo-degradation experiments. The suggested analytical approach was shown to be appropriate for the routine simultaneous examination of both medication formulations for tablets and in bulk.

Keywords: Rilpivirine, Dolutegravir, Stability study, Simultaneous, High-performance liquid chromatography, Method validation, etc.

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Introduction

Chemical stability is a major concern for pharmaceutical molecules since it directly

affects the drug's efficacy and safety. Stress testing is meant to determine the expected degradation products, according to the ICH

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RILPIVIRINE HYDROCHLORIDE DEGRADATION PATHWAY BY VALIDATED STABILITY INDICATING UP-LC TECHNIQUE

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Abstract: Rilpivirine hydrochloride has been quantified using a specific stability-indicating ultraperformance liquid chromatography (UPLC) method that has been developed and validated. Reverse phase liquid chromatography is used to establish the degradation pathway for rilpivirine hydrochloride in accordance with ICH recommendations. Acid, base, oxidation, thermal, and photolytic stresses are applied to rilpivirine hydrochloride. Under acid and basic stress, significant deterioration is seen. By using LC-MS and spectral analysis, six contaminants are examined, and the main degradant (RRT around 0.53) is found. The devised LC technique is validated for impurities and degradant determination in terms of specificity, linearity & range, accuracy, precision, and robustness.

Keywords: Degradation pathway, Rilpivirine Hydrochloride, UPLC, Stability indicating method, etc.

Introduction

For the treatment of HIV-1 infections in people who have not received medication, rilpivirine (RIL) is a non-nucleoside reverse transcriptase inhibitor (NNRTI) ^[1]. It belongs to the class of compounds known as diary pyrimidine derivatives, which are similar to the DNA's pyrimidine nucleotides. Chemically speaking, rilpivirine is known as 4- [[4- [4- [(E)-2- cyanoethenyl]-2, 6-dimethylanilino] pyrimidin-2-yl] amino] benzonitrile. A non-nucleoside reverse transcriptase inhibitor (NNRTI) is a category of antiretroviral medication that includes rilpivirine and is used to treat HIV-1 infections ^[2]. When compared to other NNRTIs, rilpivirine interaction binding site is particularly resistant and plastic, giving it a very high efficacy ^[3].

Human immunodeficiency virus type 1's EDURANT (rilpivirine) is a non-nucleoside reverse transcriptase inhibitor (NNRTI) (HIV-1). It belongs to a class of compounds called diary pyrimidines, which are similar to the pyrimidine nucleotides present in DNA. Rilpivirine chemical flexibility makes it less likely than other NNRTIs to cause resistance to grow. 20 May 2011 saw FDA approval. Treatment of HIV-1 infections in patients who are treatment-naive using HIV-1 RNA concentrations of less than 100,000 copies/mL in conjunction with at least two other antiretroviral drugs. Each tablet has a dosage of 27.5 mg of rilpivirine hydrochloride, which is the

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Review Article

Bioanalytical Method Development And Validation For The Estimation Of Active Pharmaceuticals In Dosage Forms

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ABSTRACT

In this review article, bioanalytical techniques are often employed to quantify pharmaceuticals and their metabolites in plasma matrices, and the techniques should be used in both human clinical investigations and nonhuman research. A key component of estimate and interpretation of bioequivalence, pharmacokinetic, and toxicokinetic investigations is the use of the bioanalytical technique for the quantitative measurement of medicines and their metabolites in biological medium. Method creation, method validation, and sample analysis are the three main responsibilities of bioanalysis. To determine the amount to which environment, matrix, or procedural factors might affect the estimation of analyte in the matrix from the time of set up to the time of analysis, each step in the technique must be examined. Techniques such as high-pressure liquid chromatography (HPLC) and liquid chromatography coupled with double mass spectrometry (LCMS-MS) can be used for the bioanalysis of drugs in body. Each of the instruments has its own merits and demerits. Chromatographic methods are HPLC and gas chromatography have been mainly used for the bioanalysis of small/ large molecules, with LC/MS/MS. Linearity, accuracy, precision, selectivity, sensitivity, reproducibility, and stability are some of the regularly used parameters. In this review article, we are proposed to add some points regarding bioanalytical method development and validation parameter, beneficial to quality assurance to determine the drug, concentration and its metabolite.

INTRODUCTION

For the study of bioavailability, bioequivalence (BE), pharmacokinetics (PK), quantitative evaluation of drugs, concentration and their

metabolites, new drug development, basic biomedical and pharmaceutical sciences research, therapeutic drug monitoring, etc.,

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Comparative in Vitro Equivalency Test Assessment of Some Commercially Available Nebivolol Hydrochloride Tablets

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Pravara Rural Education Society, College of Pharmacy for Women, Chincholi, Nashik

Submitted: 26-05-2022 Revised: 03-06-2022 Accepted: 06-06-2022

ABSTRACT

Nebivolol hydrochloride is a poorly water soluble drug falls under class II biopharmaceutical classification system, which is \$1 receptor antagonist that leads to vasodilatation, decreased peripheral vascular resistance, lowers blood pressure and heart rate. The selection of correct brand of drug by health professionals and patients is difficult day by bay, due to the availability of large number of generic brands in market. The aim of present study was to conduct various quality control tests for different marketed brands of nebivolol tablet available in India as per IP, in order to improve the safety, efficacy and to avoid health risk factors of the people. Four brands of Nebivolol hydrochloride tablets (10 mg) marketed in India, were evaluated for various quality control tests including physical appearance, crown diameter, thickness, uniformity of weight, percentage drug content, hardness, friability, disintegration test, and dissolution test.

KEYWORDS: Nebivolol Hydrochloride, quality control tests, dissolution profile

I. INTRODUCTION

Hypertension is one of the major causes of morbidity, mortality and needs lifelong treatment. It is a major risk factor for cardiovascular disease. "Worldwide nearly 1 billion adults (more than a quarter of world's population) had hypertension in 2010 and this is predicted to increase 1.56 billion by 2025". Hypertension is fast gaining the status of a potential epidemic in India. " Prevalence of hypertension in India is reported to vary from 17 -21%. The situation is more alarming as hypertension attributes for nearly 10% of all deaths" [1, 2, 3]. "Nebivolol hydrochloride is a highly cardio-selective β1-adrenergic blocking agent which is need for therapeutic management of hypertension and cardiovascular disease. Nebivolol hydrochloride is a drug with low water solubility and high membrane permeability included in class 2 of the Biopharmaceutical Drug Classification System. The drawbacks associated with this drug are poor solubility which leads

bioavailability of drug [4, 5]. Nebivolol tablets of different brands may have different types and/or amount of diluents, disintegrants, lubricants, or other excipients. They may be also subjected to different compression forces which affect the hardness, friability, disintegration and dissolution rate of a formulation. The variation in results of these tests may also affect the bioavailability of formulation. Also a common truth is, not "all the manufacturers are equally accepted to the consumers. In a general sense most of the consumers choose the popular brands of medicines though they are not really concerned about the potency and overall quality of the drugs. Hence in the present study various quality control tests were performed for different marketed brands of nebivolol tablet accessible in India as per Indian Pharmacopoeia 2018, in order to improve the safety, efficacy and to avoid health risk factors of the people[6].

II. MATERIALS AND METHODS Material

- Four brands of Nebivolol hydrochloride tablets (10 mg) were purchased from local market.
 Following instruments and equipment's were used.
- Dissolution Test Apparatus: USP type II apparatus (Paddle), Electrolab Tablet Dissolution Tester USP TDT-06
- UV Visible Spectrophotometer:Shimadzu UV-1560
- Monsanto Hardness Tester
- Disintegration Test Apparatus: Electrolab tablet disintegration tester USP

Method

Analytical method development by UV spectroscopy

UV spectroscopy Primary stock solution of 1.0 mg/ml Nebivolol Hydrochloride was prepared by dissolving 10.0 mg of drug in 10.0 ml of methanol. From this, a solution of strength 10.0 μg/ml was prepared by serial dilutions. This solution was

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Review Article

Erectile Disfunction: A Comprehensive Review on Recent Advancement

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ABSTRACT

In the world today, erectile dysfunction (ED) is a serious health problem that significantly lowers both the quality of life and the level of happiness of both the affected person and his spouse. The male sexual health treatment paradigm for ED has recently evolved from a psychosexual model to a new model that includes oral and intracavernosal injection pharmacotherapy, vacuum constriction devices, and penile prostheses. This evolution has been made possible by recent advances in basic sciences. This development has occurred at the same time that our awareness of male sexual health issues has grown. Epidemiological evidence demonstrates the pervasiveness of these issues and identifies the significant morbidity they cause, both for individuals and relationships. In this study, we looked into the most recent ED studies and revised treatments.

INTRODUCTION

According to epidemiological research, erectile dysfunction, or ED, is a highly frequent disorder in males between the ages of 40 and 70. ED is the chronic inability to create or maintain a penile erection that is stiff enough to achieve a fulfilling sexual intercourse. Up to 52% of them are impacted by this issue, which lowers their quality of life. [1] The hydraulic effect of blood entering and staying in the sponge-like bodies within the

penis causes a penile erection. Diabetes, cardiovascular illness, brain disorders (such as the trauma from prostatectomy surgery), hormonal issues (hypogonadism), and pharmacological side effects are the most significant organic aetiologies. Erectile dysfunction can be linked to relationship issues and negative perceptions of men in general, which has serious psychological repercussions [2].

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Review on - general awareness about system of medicine (Allopathic, Ayurvedic, Homeopathic, Homeremedies)

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Affiliation:- Pravara Rural Education Society's College Of Pharmacy (For Womens) Chincholi, Sinnar,

Nashik

Submitted: 01-04-2023 Accepted: 08-04-2023

ABSTRACT:

The use of natural remedies is becoming more and more popular around the world. The steady rise in demand for these drugs serves as evidence of this. This is demonstrated by the steadily increasing traffic in these medications. Frustrating side effects and modern treatments' lack of therapeutic value are two common causes of this tilt. In contrast to a modern medical system, earlier systems heavily rely on herbal remedies (allopathic). The current study evaluates the general public's familiarity and knowledge of conventional (Ayurvedic, Allopathic, Homeopathic, and natural medicines), as well as their overall preference for the system and their choice for the system in the event of a medical emergency or common sickness. Their perspectives of the pharmacist's roles in encouraging the usage of these drugs are also evaluated by the study. The survey form's 100 responses are shown by bars. local residents. Semistructured face-to-face administered surveys were used to acquire the data. 100 people in all were questioned. Depending on the type of response, the responses (100 total) on the questionnaire page have been displayed as bar charts, pie charts, etc.

I. INTRODUCTION:

There is a global "herbal renaissance" taking place as herbs make a comeback. In contrast to synthetics, which are viewed as being hazardous to both humans and the environment, herbal products today stand for safety(1-3). Although herbs have been valued for their therapeutic, flavouring, and aromatic properties for millennia, the modern era's synthetic products temporarily overshadowed their significance. The mindless reliance on synthetics has ended, though, and people are going back to natural products in the hopes of finding safety and security(4-5). For their health, more than 75 percent of the world.

population mostly uses plants and plant extracts. The global market for pharmaceuticals made from plants is thought to be worth roughly Rs. 2,000 billion(6). Indian contributions currently total less than 2000 crores of rupees.Raw drug exports from India increased by 26% to Rs. 165 crores in 1994-95 from Rs. 130 crores in 1991-92(7-9). The annual production of raw materials from aromatic and medicinal plants is estimated to be worth 200 crores of rupees(10). This is anticipated to reach \$1150 USD by the year 2000 and \$5 trillion USD by the year 2050(11). Almost 80,000 of the 2, 50,000 higher plant species that exist on Earth are used medicinally(12). India, home to more than 45000 different plant species, is one of the world's 12 biodiversity hotspots(13). With 16 different agro-climatic zones, 10 different vegetation zones, 25 biotic provinces, and 426 different biomes, India has an unrivalled diversity (habitats of specific species). Between 15 000- 20 000 of these plants have considerable therapeutic value. Yet, traditional communities only use 7000-7500 species for their therapeutic benefits. Herbal remedies have long been a part of traditional medical practises in India, including Unani and Ayurveda. Over 700 species are used in the Avurvedic system of medicine, along with 700 in Unani, 600 in Siddha, 600 in Amchi, and 30 in modern medicine(14-15). In Ayurveda, some 8,000 herbal treatments have been standardised. The Atharvaveda (4500-2500 BC) recorded 290 species, the Charak Samhita (700 BC), and the Sushrut Samhita (200 BC) described properties and uses of 1100 and 1270 species, respectively, in compounding drugs. These are still used in the traditional formulations in the Ayurvedic system of medicine. The Rigveda (5000 BC) recorded 67 medicinal plants(16). Ayurveda, Yoga, Unani, Siddha, Homeopathy, and Naturopathy are some of the legally acknowledged ee of Pharman ternative medical systems that have been

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"Review - on Versatility of Tinospora cordifolia"

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Accepted: 28-03-2023 Submitted: 16-03-2023

ABSTRACT :-

Traditional medical practises have employed Tinospora cordifolia (Gulvel) for a seemingly endless array of ailments. It frequently occurs alone or in conjunction with other chemicals. Its significant function in immune -modulation in diseases including diabetes mellitus, obstructive jaundice, and hepatic and splenic damage is supported by evidence from pharmacological trials. Additionally supported by data are its anti-oxidant, radioprotective, anti-hyperglycemic, inflammatory, anti-ulcer, antispasmodic, and ability to dissolve urinary calculi qualities. It may be an antidepressant and improves thinking and memory. Benefits in infections, joint inflammation, and allergies are probably explained by immunemodulation, limiting oxidative damage, and reducing inflammation. The combination of several actions contributes to its antitubercular, cytotoxic, and toxin-protective properties. It is useful for enhancing the effects of other chemicals in the form of easy extraction The formulations, the applicability of supporting data, potential mechanisms of action, and hopes for the future are all covered in this review.

KEYWORDS:-Gudachi, phytochemistry, Menispermaveae, Tinospora cordifolia, pharmacological activities

INTRODUCTION:-

The tall, deciduous climbing shrub Tinospora cordifolia, also known as "Guduchu" in Sanskrit, is hi a member of the "menispermaveae" family and can be found at higher elevations[1-3]. It is also known as Cocculus cordifolius Dec, Menispermum cordifolium Wild, and Tinospora glabra (N.Brum)Mere. It is a climber that is fleshy, robust, and deciduous that grows with the support of mango or beech trees[4]. The leaves have a heartshaped form. The milky white to grey tint of the India and is also known to be found in the Far East mainly in rain forests. It produces long, slength see of Pharmaco.

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aerial roots. It has a light grey papery bark on a stem that is about 6 cm in diameter. The leaves are widely oval or orbicular, 7.5-14 cm long, and 9-17 cm wide, with a deep heart-shaped base. Racemes of tiny greenish yellow flowers are seen. The outer layer of the 3+3 sepals in 7 blooms is modest, while the inner layer is huge. Six stamens are clearly visible [5] Its Hindi name, giloya, alludes to a divine elixir used to delay ageing and maintain youth indefinitely. Rejuvenator or adaptogen is described as one that protects the body from ailments by the Sanskrit nameguduchi [6]. The blossoming period extends throughout both the summer and the winter, a wide range of biologically active plant compounds, including alkaloids, steroids, diterpenoid lactones, aliphatics, and glycosides[7]. have been isolated from the root, stem, and entire plant, among other plant body parts [8]. This essay explores the medicinal implications of several guduchi (Tinospora cordifoila) formulations. The root, stem, and leaf of guduchi are the primary components used in formulations. The pharmacological activities of a medicine change and produce varied outcomes depending on the media employed to prepare these formulations, such as water in hima, kwatha, taila, and ghrita in sneh kalpanas, etc[9]. It can be found in North Africa, West Africa, South Africa, Myanmar, Sri Lanka, Thailand, the Philippines, Indonesia, Malaysia, Borneo, Vietnam, and Bangladesh. Maharashtra, Gujarat, Madhya Pradesh, Himachal Pradesh, and a few more states in North and South India are among the states in India where it is in great abundance [10,11,12,13]. The safety of T. cordifolia is recognised.because it has no impact on bone marrow, blood lymphocytes, or DNA integrity, a feed supplement [14]. In the context of chicken production, medicinal plants and their extracts are also noteworthy since they help animals' overall health and growth[15]. In Indian

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An review on Breast Cancer

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Submitted: 15-04-2023 Accepted: 25-04-2023

ABSTRACT:

Breast cancer is the most frequent malignancy in women worldwide and is curable in ~70-80% of patients with early-stage, non-metastatic disease. Advanced breast cancer with distant organ metastases is considered incurable with currently available therapies. On the molecular level, breast cancer is a heterogeneous disease; molecular features include activation of human epidermal growth factor receptor 2 (HER2, encoded by ERBB2), activation of hormone receptors (oestrogen receptor and progesterone receptor) and/or BRCA mutations. Treatment strategies according to molecular Management of breast cancer is multidisciplinary; it includes locoregional(surgery and radiation therapy) and systemic therapy approaches. Systemic therapies include endocrine therapy for hormone receptor-positive disease, chemotherapy, anti-HER2 therapy for HER2-positive disease, bone stabilizing agents, poly (ADP-ribose) polymerase inhibitors for BRCA mutation carriers and, quite recently, immunotherapy. Future therapeutic concepts in breast cancer aim at individualization of therapy as well as at treatment de-escalation and escalation based on tumor biology and early therapy response. Next to further treatment innovations, equal worldwide access to therapeutic advances remains the global challenge in breast cancer care for the future.

Keyword: cancer, breast cancer, breast cancer screening techniques, artificial intelligences techniques women, medical images processing prevalence, gene

I. INTRODUCTION:

Breast cancer (BC) is the commonest malignancy among women globally. It has now increased to the lung cancer as the leading cause of global cancer incidence in 2020, with an estimated 2.3 million new cases, representing 11.7% of all cancer cases. Epidemiological studies have shownthat the global burden of BC is expected to

cross almost 2 million by the year 2030. In India, the incidence has increased significantly, almost by 50%, between 1965 and 1985[1]. Epidemiological studies have shown that the global burden of BC is expected to cross almost 2million by the year 2030.In India, the incidence has increased significantly, almost by 50%, between 1965 and 1985. The estimated number of incident cases in India in 2016 was 118000(95% uncertainty interval, 107000 to 130000), 98.1% of which were females, and the prevalent cases were 526000 (474000 to 574000). Over the last 26 years, the age-standardizedincidence rate of BC in females increased by 39.1% (95% uncertainty interval, 5.1 to 85.5) from 1990 to2016, with the increase observed in every state of the country[1].Breast cancers were categorized into 4 tumor shapes: 34% of tumors were discoidal, 29%segmental, 19% spherical and 18% irregular[4]. The structure of female breast is complex -Including fat, glandular and connective tissue, as well as lobes, lobules, ducts, lymph nodes, blood vessels and ligaments. Non-cancer breast tumors are abnormal growths, but they do notspread outside of the breast. They are not life threatening, but some types of benign breast lumps can increase a woman's risk of getting breast cancer. Any breast lump or change needs to be checked by a health care professional to find out if it is benign or malignant (cancer) and if it might affect your future cancer risk. Breast cancer is the abnormal growth of cells or the tumor. Thein of cancer cells may form mass malignant tumor . Non cancer cells that form a mass are termed benign tumor [5]. Just like any cancer, breast cancer results from DNA mutations that instruct your cells to grow out of control. IN this in, it targets cells in the breast tissue, and there's no single thing that causes these DNA mutations. Breast cancer is the most frequent malignancy in women and is heterogeneous disease on themolecular level. The breast is made up of different tissues, ranging from very fatty tissue to very dense tissue. Within this tissue is a network of lobes. Each lobe is made up

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ANTI-ARTHRITIC POTENTIAL OF BIOPOLYMERIC FRACTION OF SEEDS COMBINATION WITH TRIGONELLA FOENUM GRACEUM ALONE AND ITS GLYCYRRHIZIN AS A BIO-ENHANCERS IN ARTHRITIC RATS

Santosh Ghule *1, Praveen Sharma 2, Kiran B. Kotade 3 and Tanvirsing Rajput 4

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Keywords:

Rheumatoid arthritis, Dexamethasone, Polysaccharides, Glycyrrhizin

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ABSTRACT: Rheumatoid arthritis (RA) is a common chronic and systemic autoimmune disorder. It is characterized by inflammation of the synovial joints and concomitant destruction of cartilage and bone. However, rheumatoid arthritis is typically a progressive illness that has potential to cause joint destruction and functional disability. In the present research, GSH content were significantly decreased in arthritic control group when compared to normal control group. Treatment with TGF polysaccharides and TGF polysaccharides + glycyrrhizin, causes increase in GSH content, which was comparable with standard drug Dexamethasone. Change in body weight is in response to the incidence and severity of arthritis and used to assess disease onset. Weight loss is associated with increased production of proinflammatory cytokines such as tumor necrosis factor-alpha and interleukin-1. Adjuvant arthritis is characterized by reduced body weight. The body weight of arthritic control rats decreased compared to the normal control group due to FCA administration. Treatment with TGF polysaccharides and TGF polysaccharides + glycyrrhizin, recovered the body weights, significantly which was comparable with standard drug Dexamethasone.

INTRODUCTION: Rheumatoid arthritis (RA) is a chronic, autoimmune disease that is considered a foremost health setback worldwide because approximately about 0.75% in India and 1% adult population in the world are exaggerated with this disease 1. RA is most commonly seen in male population as compared to females, while the disease onset can occur between the ages of 30 and 55.

Some of the symptoms of RA involve extreme joint pain, mostly due to joint inflammation and proliferation of synovial, which eventually leads to the disability of joints. However, other problems such as gastrointestinal tract disorders, immune deficiency, hormonal disturbances complications associated with the cardiovascular system has previously been reported 2.



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The mechanism of RA for joint destruction includes increased expression of cytokines and transcription factors. Interleukins, namely IL-6, tumour necrosis factor (TNF)-a, IL-1b and IL-1 are the cytokines involved in progression of arthritis. IL-6 stimulates the growth in blood vessels, which inflammation. TNF-a, promotes amplifies pharmal asymation viastimulation synovial

International Journal of Pharmaceutical Sciences and Research LI

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A Complete Review on Self Nanoemulsifying Drug Delevery System

Pratibha Bhalerao, Prof. Dr. Sachin Somvanshi

Department of Pharmaceutics, Pravara Rural Education Society's College of Pharmacy for Womens, Chincholi, Nashik-422102

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Abstract:- The Self Nanoemulsifying Drug Delivery System (SNEDDS) is a novel drug delivery system that improves the water solubility of drugs that aren't easily dissolved in water. It is an isotropic mixture of oil, surfactant, and cosurfactant particles, as well as a codissolvable atom. Its drug delivery system is both thermodynamically and actively stable. Under gentle fomentation, the drug conveyance framework is trailed by weakening of watery medium, such as GI liquid, and it can come from stable O/W Nanoemulsion. Globules with a diameter of less than 100nm. It is an important type of drug delivery system for maintaining the substance's solidity as well as dissolvability. The Self Nanoemulsifying Drug Delivery System (SNEDDS) is a significant application on BCS Class II and Class IV drugs for upgrading ineffectively water soluble drugs.

Keywords:- Nanoemulsion, Mini-Emulsion, Submicron Emulsion, Surfactant, Self-Emulsifying System and Pseudoternary Phase.

I. INTRODUCTION

The Self-nanoemulsifying Drug Delivery Framework (SNEDDS) is an isotropic mixture of natural or designed oil, surfactants, and co-surfactants with a remarkable ability to shape fine oil-in-water (O/W) nano-emulsions in the presence of mild agitation. 1 Self-Nano emulsifying Drug Delivery System with globule sizes ≤ 100nm under water scattering[2]. Self-Nano emulsifying Drug Delivery System (SNEDDS), self-microemulsifying Drug Delivery System (SMEDDS), and self-emulsifying drug conveyance frameworks (SEDDS) have all been used in recent years to boost the watery solubility of ineffectively water-solvent drugs[2]. The use of medium chain tri glycerides oils and non-ionic surfactant in the formulation of a self-nano-emulsifying Drug Delivery framework is important for oral consumption. The drug was exposed to a dissolution rate that limited assimilation, and the medicine was under SNEDDS, which is important for rate improvement, as well as the reproducibility of the plasma profile of medication concentration[4]. One of the Stables is the SNEDDS. Nano emulsion is required to provide a large interfacial zone for pharmaceutical parcelling between the oil and fluid stages. Increasing the bioavailability of drug formulations by increasing the rate of medication Thermodynamically disintegration[5]. stable Nanoemulsifying Drug Conveyance Framework Transparent or Translucent Non-ionized Dispersion of (o/w) and (w/o) Surfactant and Co-surfactant Molecule[6] were expanded to balance out the nano emulsion. Nanoemulsion, Mini emulsion, ultrafine emulsion, and Submicron emulsion are all terms used to describe the Self Nanoemulsifying Drug Delivery System. Figure No.16 shows the o/w nanoemulsion of the Self Nanoemulsifying Drug Conveyance Framework (SNEDDS) after moderate fomentation and watery media to shape a stable o/w nanoemulsion.

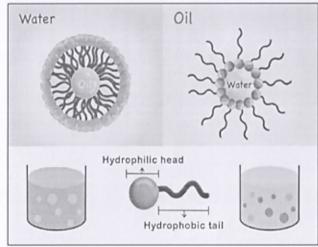


Fig 1: Formulation of o/w Nano Emulsion

Comparison between Self-Emulsifying Drug Delivery System (SEDDS) and Self-Micro Emulsifying Drug Delivery System (SMEDDS)

For better comprehension of the idea of self emulsification (SEDDS) and Self Microemulsification (SMEDDS) was plainly separates and the separation was accounted for in Table No.1 [7, 8]

Table No. 1: Differences between SEDDS and SMEdds

Sr. No	SEDDS	SMEDDS	Referenc
1	It is a mix. drug, oil, surfactant	It is a mix. drug, oil, surfactant, co-surfactant	7
2	Droplet size was 100-300nm	Droplet size was Less than 50 nm	8
3	turbid appearance	Transparent appearance	7
4	Thermodynamica lly not stable	Thermodynamica lly stable	8
5	Ternary phase diagram is required to optimize the SEDDS	Psedoternary phase diagram is required to optimize SMEDDS	7



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"Psychological Impact of the Covid-19 Pandemic on Students"

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Submitted: 28-03-2023 Accepted: 05-04-2023

ABSTRACT:

COVID-19, the most severe public health problem to occur in the past 10 years, has greatly impacted people's mental health. Colleges in China have reopened, and how to prevent college students from suffering secondary damage due to school reopening remains elusive. This cross-sectional study was aimed to evaluate the psychological impact of COVID-19 after school reopening and explore via machine learning the factors that influence anxiety and depression among students. Among the 478 valid online questionnaires collected between September 14th and September 20th, 74 (15.5%) showed symptoms of anxiety (by the Self-Rating Anxiety Scale), and 155 (32.4%) showed symptoms of depression (by Patient Health Questionnaire-9). Descriptive analysis of basic personal characteristics indicated that students at a higher grade, having relatives or friends who have been infected. fearing being infected, and having a pessimistic attitude to COVID-19 easily experience anxiety or depression. The Synthetic Minority Oversampling Technique (SMOTE) was utilized to counteract the imbalance of retrieved data. The Akaike Information Criterion (AIC) and multivariate logistic regression were performed to explore significant influence factors. The results indicate that exercise frequency, alcohol use, school reopening, having relatives or friends who have been infected, self-quarantine, quarantine of classmates, taking temperature routinely, wearing masks routinely, sleep quality, retaining holiday, availability of package delivery. take-out availability, lockdown restriction, several areas in school closed due to COVID-19, living conditions in the school, taking the final examinations after school reopening, and the degree to which family economic status is influenced by COVID-19 are the primary influence factors for anxiety or depression. To evaluate the effect of our model, we used 5-fold cross-validation, and the average area under the curve (AUC) values of the receiver operating characteristic (ROC) curves of anxiety and depression on the test set reached 0.885 and 0.806,

respectively. To conclude, we examined the presence of anxiety and depression symptoms among Chinese college students after school reopening and explored many factors influencing students' mental health, providing reasonable school management suggestions.

I. INTRODUCTION:

COVID- 19 is a largely contagious respiratory complaint caused by severe acute respiratory pattern coronavirus 2(SARS- COV- 2). It was first linked in Wuhan City, Hubei Province, China in December 2019 and declared by WHO a global epidemic in March 2020. SARS- COV- 2 is transmitted through respiratory driblets, close contact, and asymptomatic carriers. Symptoms appear after an incubation period between 2 - 14 days post-exposure and range from asymptomatic to severe pneumonia. Some of the clinical instantiations include dry cough, fever, dyspnea, muscle pangs, etc. Other studies portray those cases with underpinning medical conditions similar as cardiovascular conditions, diabetes, chronic respiratory conditions, cancer, and old- age people are more likely to witness severe morbidity. As of 25th July 2021, there were over 194 million verified cases and 4.15 million verified deaths encyclopedically. In sweats to check the spread of the contagion, the government and public health commissions have enforced infection control measures which included movement restrictions, confinement to homes, check of seminaries, insulation, counterblockade, wearing of masks, social distancing, and particular hygiene which includes washing of hands and the use of sanitizers. Although these measures have been effective in precluding the transmission of COVID- 19, concerns have arisen about the internal impact insulation and counterblockade have individualities.

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Premenopause: The Change in the Lifestyle of Women

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Accepted: 30-03-2023 Submitted: 20-03-2023

ABSTRACT: Premenopause, often known as the menopausal transition, is characterised by significant hormonal and reproductive changes. These alterations have been well documented, along with the accompanying symptoms. Thanks to the execution of numerous long-term, longitudinal cohort studies that have looked at various facets of women's biology and psychology throughout this stage of life, the pattern of menopausal symptom emergence and their natural history have become increasingly obvious. Menopausal symptoms are very common; they are so irritating that approximately 90% of women ask their doctor for assistance on how to cope with them. 1 Most women have hot flashes, which are a common menopausal symptom and are moderately to severely bothersome for roughly one-third of women. There are significant hormonal and reproductive changes that occur during the menopausal transition, or premenopause. Concomitant symptoms have been noted alongside these alterations, which have been welldocumented. Thanks to the execution of several lengthy, longitudinal cohort studies that have looked at various facets of women's biology and psychology throughout this stage of life, the pattern of menopausal symptom presentation and their natural history have become increasingly obvious. Menopausal symptoms are very common, and over 90% of women consult their doctor for assistance on how to manage with them because they are so annoying. 1 Most women have hot flashes, the hallmark menopause symptom, and about one-third of them find them moderately to highly bothersome. Even though the majority of women will encounter. These typical symptoms frequently interact with one another, so sad women frequently have worse hot flashes and poorer sleep. Vaginal dryness and dyspareunia, which affect roughly onethird of the population, also become more prevalent when women enter the latter phases of the transition. Vaginal symptoms, in contrast to hot flashes, mood swings, and sleep problems, do not go away on their own. Hormone treatment is

frequently used in clinical approaches to these issues, and it can be administered to the majority of perimenopausal women temporarily and safely. There are various behavioural and nonhormonal therapeutic approaches that can be used.

KEYWORDS: Mensural cycle, stages, menopause, pathophysiology, symptoms, premenopause, causes, treatment.

INTRODUCTION:

The regular passage of blood and mucosal tissue from the uterus' inner lining via the vagina is known as menstruation. Hormone fluctuations that occur during the menstrual cycle are distinctive. Falling progesterone levels cause menstruation, which is a sign that pregnancy has not yet taken

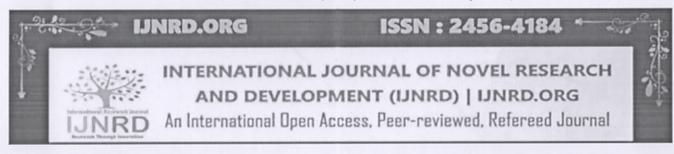
place. Menarche, the start of the first menstruation, often occurs between the ages of 12 and 15 Even at the age of 8, menstruation would still be regarded as natural. In general, the first period's average age is higher in the industrialised world and lower in the developing world. In young women, the usual interval between the first day of one period and the first day of the following is 21 to 45 days. In adults, the range is 21 to 31 days, with 28 days being the norm. Bleeding often lasts between two and seven days. Periods cease during pregnancy and normally don't start up again during the first several months of breastfeeding. During menopause, which typically occurs between the ages of 45 and 55, menstruation ceases to occur. Up to 80% of women report having no issues severe enough to interfere with everyday activities either during menstruation or in the days preceding menstruation. Premenstrual syndrome is the term for symptoms that do interfere with daily living prior to menstruation. 3 to 8% of women who have PMS endure severe symptoms, which affect 20 to 30% of women. Symptoms include mood swings, irritability, fatigue, sore breasts, and bloating.

There are various ways that menstruation has an impact on a woman's health. The of Phasingresultural factor demonstrates the influence of

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"TO STUDY THE EFFECT OF pH ON ENZYME **ACTIVITY**"

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ABTRACT :-

This experiment was performed in order to find a better understanding of whether or not pH will affect the enzyme activity. To test this, we had a different time frame to mix together substances with different pHs in order to test whether or not that specific pH was ideal for the tube. The results were as predicted, the pH increased the reaction rate if the solution was more neutral, whereas the pH that was more acidic or basic caused the reaction rate to decrease almost completely. All enzymes have an ideal pH value, which is called optimal pH. Under the optimum pH conditions, each enzyme showed the maximum activity. When the pH value deviates from the ideal conditions, the activity of the enzyme slows down and then stops. The enzyme has an active site at the substrate binding site, and the shape of the active site will change with the change of pH value. When the pH value of the reaction medium changes, the shape and structure of the enzyme will change. Depending on the extreme extent of the enzyme and pH changes, these changes may permanently destroy the enzyme, or once the conditions return to the desired range of the enzyme, the enzyme will return to normal. My hypothesis, pH affects enzyme activity because enzymes are proteins that get their molecular structure via interactions between the charges of the amino acids that form the protein chains. These interactions are in the form of a hydrogen bond which is affected by the pH level.

KEYWORDS: pH, Enzyme, Enzyme Activity, Enzyme Extract, Effect.

1. INTRODUTION:-

"Enzymes may be defined as biocatalysts synthesized by living cells. They are protein in nature (exception - RNA acting as ribosome), colloidal and thermolabile in character, and specific in their action."[3]

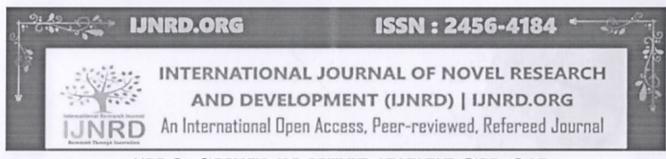
> Factors Affecting Enzyme Activity:-

- 1. Contact between Enzyme and Substrate
- Concentration of Enzyme
- 3. Concentration of substrate
- 4. Order of reaction
- 5. Effect of temperature
- 6. Effect of product concentration
- 7. Coenzyme and Activators
- 8. Effect of time
- 9. Effect of Radiation
- 10. Oxidation
- 11. Water effect[3,4,5]
- 12. Effect of Ph on enzyme action

Effect of pH on enzyme action

- Each enzyme works within quite a small pH range. There is a pH at which its activity is greatest (the optimal pH).
- This is because changes in pH can make and break intra- and intermolecular bonds, changing the shape of the enzyme and, therefore, its effectiveness.
- Most enzymes have optimum pH in the range of 4 to 9.

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"TO STUDY THE EFFECT OF TEMPERATURE ON ENZYME ACTIVITY"

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ABSTRACT:-

The current study was carried out to determine the effect of temperature on enzyme activity. The activity of the enzyme was measured after incubating the crude enzyme preparation under assay conditions at temperatures ranging from 10 to 60 °C, as well as at room temperature. Foods like potatoes, soybean seeds, ginger, apples as well as saliva, are sources of the enzyme beta-amylase, which is employed in industry. These sources were used to isolate, purify, and characterised beta amylase. DNS reagent, 5% Starch, 0.5% NaCl, 0.5M NaOH, and pH 4.6 Acetate buffer were used to complete this process. Using a photocolorimeter (ESICO) and UV-Visible Spectrophotometer (SHIMADZU), the effect of temperature (absorbance) was determined. To assess the impact of temperature, we used several extracts of beta amylase in the current investigation. The majority of enzyme extracts demonstrated that, up until a maximum, the speed of an enzyme reaction increases with an increase in temperature before decreasing. Temperature coefficient, or Q10, is defined as the increase in enzyme velocity when the temperature is raised by 10°C and is typically observed as a bellshaped curve. For a Q10 is 2 for the vast majority of enzymes between 0°C and 40°C. Most enzymes work best at a temperature of 35 to 40°C, However there are a few enzymes. The natural (tertiary) structure of the enzymes is typically destabilised when they are exposed to temperatures above 50 °C due to denaturation. At temperatures above 70°C, the majority of enzymes become inactive. We draw the conclusion that the majority of the enzyme exhibits maximum activity at the optimum temperature and then becomes denaturized as temperature is increased based on a literature review and experimental data. Therefore the activity of each of our enzyme extracts was in accordance with the mentioned catalyst for enzyme function. Temperature increases do have an impact on enzymes. The temperature at which an enzyme starts to function and the temperature at which a protein starts to break down are therefore the two factors that dictate the range of an enzyme activity.

KEY WORDS:- β-amylase, Denaturation, Enzyme activity, Optimum Temperature.

1.INTRODUCTION:-

"Enzymes may be defined as biocatalysts synthesized by living cells. They are protein in nature (exception-RNA acting as ribozyme), colloidal and thermolabile in character, and specific in their action"[3].

- Factors Affecting enzyme activity:-
- Contact between enzyme and substrate.
- Concentration of enzyme.
- Concentration of substrate.
- Order of reaction.
- Effect of temperature.
- Hydrogen ion concentration or pH.
- Effect of product concentration
- Coenzymes and activators.
- Effect of time.
- Effect of Radiation.
- Oxidation.
- Water effect[3,4,5]





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Review on Cardiological Activity

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Submitted: 01-04-2023 Accepted: 08-04-2023

ABSTRACT:

To study the heart it's function related disorders and therapies.

Cardiology is a branch of medicine that deals with disorders of the heart and the cardiovascular system. The field includes medical diagnosis and treatment of congenital heart defects, coronary artery disease, Heart failure, valvular heart disease and electrophysiology.[2]

William Harvey, English physician who was the first to recognize the full circulation of the blood in the Human body and to provide experiments and arguments to support this idea. Harvey's greatest Achievement was to recognize that the blood flows rapidly around the human body, being pumped Through a single system of arteries and veins, and to support this hypothesis with experiments and Arguments.[12]

Best known for: William Harvey was the first person to correctly describe blood's circulation in the body. He showed that arteries and veins form a complete circuit that starts at the heart and leads back to the Heart. [7]

Key words:

1.Heart

2.Blood

3.Disease

4. Veins

I. INTRODUCTION:

To study the heart it's function related disorders and therapies.

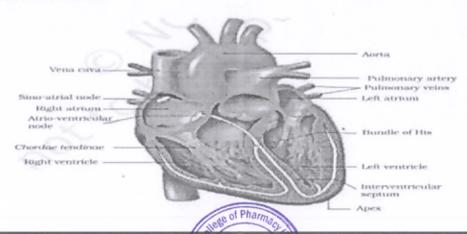
Cardiology is a branch of medicine that deals with disorders of the heart and the cardiovascular System. The field includes medical diagnosis and treatment of congenital heart defects, coronary Artery disease, heart failure, valvular heart disease and electrophysiology.[2]

Do you know how the nutrients and oxygen are supplied to every part of the body?

You know that even a small cut on the body causes bleeding. After sometime blood clots and Prevents excessive loss of blood. Blood transports all nutrients and oxygen to every cell. The System in which blood is circulated throughoutthe body is called circulatory system. Closed Circulatory discovered by William Harvey (1628).[1]

In this review you will study the structure and function of different organs of circulatory system. In addition to this you will also study how the dysfunction of the circulation causes various Disorders.

Internal structure of Heart:



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A Review On: Herbal Mouthwash an Effective Way For Oral Care

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Submitted: 01-06-2023 Accepted: 10-06-2023

ABSTRACT

The mouth is said to be home of various bacterial organisms. But some of these organisms are harmless and there are certain organisms that are harmful which may cause oral plaque, bad breath and mouth disease. Thus maintaining a good oral hygiene is essential for healthy mouth and body. Herbal mouthwash preparations are the type's mouthwash which is prepared from the herbs extract .Herbal mouthwash has major advantage over the chemically prepared mouthwash due to their non-irritating, non-staining properties which do not content alcohol. In this preparations the herbs extract are obtained from the leaves, fruit, flower, bark, and root of various plants. In this review we have highlighted different herbal drugs which can be used effectively in mouthwash formulation with minimal side-effects.

KEYWORDS: Herbal, Mouthwash, Oral cavity, Plaque

I. INTRODUCTION

Mouthwashes are liquids with antiinflammatory, antimicrobial, and analgesic properties. Mouthwash is a remedy that is frequently used for its antiseptic, deodorizing, and refreshing qualities as well as for plaque control. It must include ingredients like glycerin, artificial sweeteners, surface-active agents, flavorings, and colors [1, 2]. Numerous studies have been conducted on the versatility of these rinses to affect plaque formation and alter the progression of gingival inflammation [3]. Over 50% of the fad drugs come from natural sources, and naturally occurring substances play a really significant role in drug development. The advantages of herbal mouthwash versus chemical mouthwash will be thoroughly covered in this review. It is believed that the first artistic drawings with emphasis description back to the ancient Egyptians. The significance

cleanliness and beauty. An unclean body was considered impure. Pedanius, Dioscorides was a Greek surgeon and physician who lived between 40 and 90 AD using a mouthwash mixture of the following was advised in the textbook to treat bad breath. There are two types of mouthwash chemical and herbal. Herbal mouthwash contains natural ingredients called phytochemicals that contains desired anti-microbial and anti-inflammatory effects. Herbal mouthwash becomes more popular they work without alcohol, artificial preservatives, flavours and colors. As it contains natural herbs that have natural cleansing and healing property to teeth and gums. Many herbal mouthwashes contain herbs with anti-microbial property such as neem, yavani satva, nagavali, gandhapurataila, pilu, bibhitaka, ocimum, Echinacea, chameli leaves, etc. some of the herbs that are used in mouthwashes are clove, which is traditionally used for oral health because of their antiseptic, antibacterial and antiviral property, peppermint which gives cooling effect to the mouth. Natural Herbs such as Triphala, Tulsi, Neem, Clove oil, Pudina and many others are used as single or in combination have been Scientifically Proven to be Safe and Effective Medicine against Oral Health Problems such as Bleeding Gums, Mouth Ulcers, and Preventing Tooth Decay without side effects [4].

HISTORY OF MOUTH WASH

- The importance of mouth and teeth cleanliness has been recognized from the earliest days of civilization to the 21st century.
- As far as we have come in creating dental solutions that are effectively treat and prevent various types of oral diseases, the mouthwash rinses our ancestor used to maintain a healthy smile were just as widely used as some of the around today.

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Review Article

Overview and Treatments of Schizophrenia: A Recent Update

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Prefrontal cortex

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ABSTRACT

A mental illness called schizophrenia is characterised by disturbances in cognition, perception, emotional responsiveness, and social relations. Around 24 million individuals, or 1 in 300 persons (0.32%), worldwide suffer from schizophrenia. For men, this incidence is 1 in 222 (0.4%). Here, a person's capacity for thought, emotion, and behaviour is impacted. Memory loss and attention problems could also be present. According to neurological theory, imbalance of certain neurotransmitters, including: Gamma-aminobutyric acid (GABA) expression levels in the prefrontal cortex, an excess of dopamine, decreased glutamate levels in the cerebrospinal fluid, or decreased serotonin levels Schizophrenia is thus the most prevalent mental disease of our time, causing severe disruptions for those who have it and consuming a sizable percentage of the health system's limited resources. In this essay, the most current research on introduction, etiology, symptoms, and remedies is reviewed. Researching this disease ran into some methodological issues, which are addressed. The results of therapies available for this condition have improved, but whether a patient gets these treatments may rely on the services that the local community is willing to provide.

INTRODUCTION

Schizophrenia as a notion is fading. After being tormented by psychology for years, it now appears that psychiatry, the very field that once supported it, has killed it. Its demise won't be lamented. Today, receiving a diagnosis of schizophrenia is linked to a nearly two-decade decrease in life expectancy. Only one in seven individuals, according to some standards, heal. Surprisingly,

despite widely publicised improvements in therapies, the percentage of patients who heal hasn't grown over time. There is a serious problem. It comes out that the idea of schizophrenia itself is a part of the issue. The case for schizophrenia being a separate illness has been "fatally undermined." Psychosis (typically characterised by disturbing hallucinations, delusions, and

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Review Article

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A REVIEW ON CARPAL TUNNEL SYNDROME

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*Corresponding Author Prof. Sangita Bhandare PRES'S College of Pharmacy (For women), Chincholi, Nashik.

ABSTRACT

Carpal tunnel syndrome is caused by pressure on the median nerve. The carpal tunnel is a narrow passage surrounded by bones and ligaments in the palm of the hand. When the median nerve is compressed, symptoms can include numbness, tingling, and weakness in the hand and arm. The risk factors for CTS include rotundity, monotonous wrist exertion, gestation, inheritable heredity, and rheumatoid inflammation. The opinion of CTS is conducted through medical assessments and electrophysiological testing, although idiopathic CTS is the most typical system of opinion for cases

suffering from these symptoms. The pathophysiology of CTS involves a combination of mechanical trauma, increased pressure, and ischemic damage to the median whim-whams within the carpal lair. The opinion of CTS cases requires the separate medical professional to develop a case history associated with the characteristic signs of CTS. During the opinion of CTS, it's essential to note that other conditions may also give analogous symptoms to CTS, therefore taking vigorous opinion to assert the medical condition of the cases. Croakers use bothnon-surgical and surgical treatments when addressing CTS. Non-surgical treatments include wrist splinting, change of working position, specifics, and the use of indispensablenon-vibrating outfit at work. On the other hand, surgical styles include open release and endoscopic surgeries. This review of literature has handed an overview of CTS with an emphasis on deconstruction, epidemiology, threat factors, pathophysiology, opinion, and operation options.

Anatomy: The carpal tunnel is a thin, fibrous tube located on the volar side of the wrist, deep in the flexor sphincter. The floor of the carpal tunnel is made of carpal bones, hence the name. The carpal tunnel acts as a passageway for the structure that runs between the forearm and the hand. It transmits the median nerves and tendons of the flexor pollicis

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"Review- on Herbal Sanitizer"

PranaliBodake, Sangita Bhandare

Department of Pharmacology

Affillation: -Pravara Rural Education Society College of Pharmacy (for women)chincholi, sinnar, Nashik.

Submitted: 20-03-2023 Accepted: 30-03-2023

ABSTRACT:

The first point of contact for bacteria and diseases is hands. A crucial idea and practice in the protection, management, and reduction of infections is hand hygiene. The covid pandemic has raised the need for hand sanitizer, which leaves hands feeling less dry. Novel Corona Virus has spread to 188 nations, leaving those who contract it with a mild respiratory illness.

The frequent use of hand sanitizers is currently one of the main tactics to combat COVID19 and decrease community transmission of infections. However, the greater cost prevents a sizable portion of the general populace from purchasing them. Therefore, a method for making less expensive sanitizers using readily available herbal ingredients, such as Aloe Vera gel, boiled water, surgical spirit, and glycerine, has been provided here. 100 ml of sanitizer were made for an estimated expense of 16 rupees. When this sanitizer is produced in big quantities, it can be very effective for widespread use by regular people.

KEYWORDS:- Razor spines, Aeruginosa, Propionibacteria, Corynebacteria

I. INTRODUCTION:-

Therefore, the best way to prevent the spread of infectious pathogens and nosocomial infections is to practice good hand cleanliness. Eczema (atopic dermatitis), warts, acne, hives, psoriasis, allergies, etc. are among the most prevalent skin conditions. To shield the skin from damaging microbes and stop the development of numerous skin infections Absolutely, hand cleansing is a crucial safety measure. The purpose of the current study is to prepare and physically assess a herbal hand sanitizer using an extract from widely accessible plants. In addition to washing your hands with detergent and water, hand sanitizer also acts as an antiseptic.

Hand sanitizer comes in a variety of formulations, including gel, foam, liquid solution, and others. In the current mechanized lifestyle environment, a customer will always favor readymade herbal hand sanitizer formulations over hand washing. Traditional healers have long used plants to treat/prevent infectious illnesses. In vitro research has revealed that certain plant secondary metabolites, including tannins, terpenoids, alkaloids, and flavonoids, have antimicrobial qualities. [1,2]

Background Study :-

Aloe vera is highly effective against herpes simplex virus types 1 and 2, influenza virus, pseudorabies virus, etc., according to D. Sawai's analysis of the plant. Researchers looked into the biochemical aspects and uses of aloe vera and came to the conclusion that it has antibacterial properties. Aloe vera components, different extraction processes, and handling techniques V.K. demonstrated by Chandegara alMandankumund et al. compared the effectiveness of alcohol-based and non-alcohol-based sanitizers and found that alcohol-based disinfectant is more effective. A formulated Guava hand sanitizer gel's bactericidal ability was investigated by E. M. Yaun and colleagues. Information on COVID 19 illness signs, transmission, epidemiology, pathogenesis, and corona virus phylogenetic analysis was studied by H.A. Rothan et al. He also provided some guidance on how to stop the infection from spreading. To help the public identify and deal with the SARS-COV 2, Lischeng Wang et al. explained the background of SARS-COV2 spreading, the genetic makeup of the corona virus, the mode of transmission, the diagnosis and treatment of SARS COV2, and COVID 19 prevention. A.R. Sahin et al. reviewed the methods for treating and preventing COVID 19 in its early stages and outlined the sources and methods of transmission as well as the pathogenesis of the corona virus. [32]

Need of Herbal Sanitizer :-

To halt or slow the spread of the coronavirus, people are currently using alcohol-based hand sanitizers on a massive scale. The majority of commercial hand sanitizers consist of

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An Review On Theraputic Effect Of Amla

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Name of institution: Prayara Rural Education Society's College of Pharmacy, Cincholi, Nashik.

Submitted: 20-03-2023 Accepted: 30-03-2023

Par. Dist.N

ABSTACT

One of the most significant therapeutic plants in Indian traditional systems of medicine is Emblica Linn. Phyllanthus EmblicaofficinalisGaertn., also known as Indian gooseberry or Amla (Ayurveda, Unani and Siddha). It is common knowledge that all components of amla can be used to cure a variety of illnesses. Fruit is the most significant component of all. In the Hindu system of medicine, amla fruit is frequently used as a diuretic, laxative, liver tonic, refrigerant, stomachic, restorative, anti-pyretic, hair tonic, ulcer preventative, and for common colds and fevers, either alone or in conjunction with other plants. Major chemical components of amla that have been identified through phytochemical include tannins, investigations polyphenols, vitamins, and minerals. It has been discovered that ascorbic acid, gallic acid, ellagic acid, emblicanin A and B, phyllembein, and quercetin are all biologically beneficial. The anti-atherogenic, anti-tussive, adaptogenic, cardio, gastro, nephro, neuroprotective, chemo preventative, radio and chemo modulatory, and anti-cancer characteristics of amla are shown in research papers. Amla is also said to have powerful anti-inflammatory, antimutagenic, anti-inflammatory, antioxidant, and immunomodulatory properties that make it effective in preventing and treating a wide range of illnesses, including cancer, atherosclerosis, diabetes, liver, and heart conditions. . In this article, we go through the nutritional benefits, biochemical components, traditional applications, therapeutic benefits, and home remedy uses of amla. Based on recent research reports, we also highlighted the processes underlying the pharmacological actions, and we attempted to summarise the findings of the research conducted over the last five years with appropriate details on the possibilities for the future from a pharmacological perspective.

Keywords: Amla, traditional uses, chemical constituents, pharmacological activities, mechanisms, therapeutic application.

I. INTRODUCTION

Mother Nature has given us amazing medicinal herbs that can help us have healthy, disease-free lives. There are many therapeutic plants available in the traditional Indian medical systems of India (such as Ayurveda, Unani, and Siddha), but the most popular one is Indian gooseberry, also known as Amla or Phyllanthus Emblica Linn. (Syn. EmblicaofficinalisGaertn.) is a member of the Euphorbiaceae family and an essential therapeutic herb in the Ayurvedic and Unani medical systems. It is often used as a tonic to replenish the body's lost vitality and energy. Amla is a small to medium-sized deciduous tree that can be found in China, Malaysia, South East Asia, Pakistan, Uzbekistan, Sri Lanka, and South. Its height ranges from 8 to 18 metres, and its thin, light grey bark, simple, light green, sub-sessile leaves, closely spaced along the branchlets, and greenish yellow flowers, fruits, and seeds are all



Image. 1. (Phyllanthus Emblica)

In three crustaceous cocci with two seeds, there are furrows containing six trigonous seeds. Amla is very nutrient-dense and one of the best sources of vitamin C, minerals, and amino acids[2]. It also includes a number of chemical components, including tannins, alkaloids, and phenols[3]. Emblicanin A and B, gallic acid, and ellagic acid

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Formulation and Evaluation of Herbal Immunity Booster Tablets

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ABSTRACT

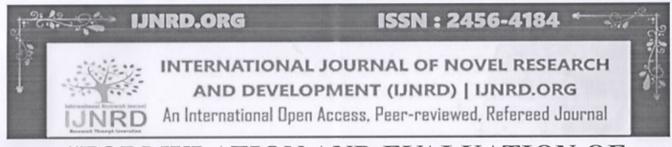
The immune system defends the host against pathogenic organisms including bacteria, viruses, fungus, etc. There are two kind of immunity or bodily defence mechanisms: natural and specialised. This study was planned to investigate the immunomodulatory effect of Immunity Booster Tablets. Immunity Booster have many herbs like Giloy, Turmeric, Tulsi, Black pepper, Liquorice, etc. which are used for immunomodulatory effects. Various research has been done in the past as well as are going on presently for immunity enhancing. Present invention of Herbal Immunity booster tablet triturates were developed by using well documented medicinal plants like Tinosporacordifolia, Pepper Nigrum, the dried rhizome of Curcuma longa Linn., Tulsi consists of the fresh and dried leaves of Ocimum species like Ocimum sanctum L. and Ocimumbasilicum L and Liquorice consists of peeled and unpeeled roots, stolons, stem of Glycyrrhizaglabralinn. It is also crucial to ingest immune-boosting supplements, such as zinc, vitamin B-complex, vitamin A, C, D, and E, which will help your body fight pathogens. The formulation and evaluation of herbal immune booster tablets triturates made from selected plants and dried plant extract with acacia gum as a binder are the topics of the current article.

Keywords: Herbal tablet, Tinosporacordifolia, Immunity

1. INTRODUCTION

Immunity is defined as the capacity of the body to resist pathogenic agents. The immune system acts to protect the host from infectious agents like bacteria, virus, fungi etc. There are two categories of immunity, or the body's defence mechanism: natural and specific. Before being exposed to pathogens, innate immunity is already present and works to stop infectious organisms from entering the body. Physical barriers, soluble components, and phagocytic cells are all part of it. On the other hand, acquired immunity refers to the body's ability to fight off certain foreign substances like bacteria, viruses, poisons, vaccinations, or transplanted tissues. Immunology is a branch of biomedical science that covers the study of all aspects of the immune response in all other organ-isms. Ayurvedic system of medicine not only deals with treating the diseases but also aims to prevention and fight against the disease. Immunity boosters have become essential these days to keep your body strong. These Immunity boosters are not just needed in changing seasons and fluctuating temperature but are great throughout the year to stay fit healthy. Many people face difficulty in having immunity boosters because of the taste of herbal ingredients. However, you can solved this problem by going for immunity booster tablets that can be chewed or swallowed. To help you go for some good immunity booster tablets that are meant for all age groups. Natural products and herbal medicine have a long track record in treating respiratory infections and many have been approved as drugs or over-the-counter food Additives Furthermore, people in the community and Researchers are trying to find the best way to cure or Prevent the disease, including using herbal medicine. Since the immune system of plays an essential role during infection, herbal medicine which has an Immunomodulatory effect could have the potential as a Preventive measure and even therapeutic agent for with COVID-19 infection.A recent trend in The community is the consumption of herbal medicines Containing certain compounds, which have Antimicrobial or antiviral, anti-inflammatory and Immune- stimulatory activities such as and Curcumin . Black pepper ,Guduchi , Tulsi Turmeric are Reported effective treatment to check the viral loads. Turmeric has been used Traditionally by many countries in Asia as a drug or Supplement because of its antioxidant, anti-Inflammatory, anti-mutagenic, anti-cancer, and anti-Microbial effects. Many herbal products contain an Active compound, which acts as an antiviral and Immuno- stimulator. Antiviral activities against such viruses have been demonstrated by medicinal plants and their Isolated components. Suppression of viral replication is mainly the mechanism of action . Ayurvedic herbs are used locally and help enhance the immunity of the body and also safe guard by preventing infection since the immune system plays an essential and primary role in the defence against this novel viral infection. Several medicinal plants are used as potential therapeutic agents against various ailments. Indian Ayurveda practitioners suggest a few important plants which supply strong immunity in the body . Some important herbal plants are Turmeric, Tulsi, Black pepper ,Guduchi, Liquorice .





"FORMULATION AND EVALUATION OF HERBAL MOUTHWASH"

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Abstract

Herbal mouthwashes are mouthwashes which are prepared from natural plant extracts. The use of Herbal mouthwash has grown advantage over chemical mouthwashes due to their non-irritant and Non-staining properties and it does not contain alcohol. The natural extracts present in these Herbal mouthwashes are obtained from various plant leaves, fruits, seeds and various tree oils.

They have very minimal or no side effects and they are less harmful. Phytotherapeutic plant extracts and essential oils are used to create and produce herbal mouthwashes, which contain a variety of active ingredients such catechins, tannins, and sterols. Herbal mouthwash is used to promote better oral hygiene. It aids in reducing tooth plaque. It is applicable to gum diseases. Used to eliminate bacteria in the mouth.

Keywords:- Herbal mouthwash, natural extracts, plaque maintanence.

INTRODUCTION

Mouthwash, an aqueous solution usually used to remove plaque, is held in the mouth and swished about by the perioral muscle to get rid of oral infections. An active approach is taken by herbal medicine. Since there haven't been any side effects related with their use documented to date, this natural herb's main benefit is that. Other than this, there is no sugar or alcohol in any herbal mouthwash. These items pose a problem because the bacteria that cause halitosis and bad breath like to feed on them and create the byproducts that lead to halitosis. Using herbal

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mouthwash to avoid hazardous elements is there of Pharm (1)

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Formulation and Evaluation of Herbal Laxative Tablet from Flaxseeds

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ABSTRACT

Constipation is one of the most widespread chronic gastrointestinal diseases in the world and is managed or treated using a variety of techniques. Chronic or acute constipation is treated or managed using laxatives. However, herbal meals should be taken into account as an alternative to these laxatives as a result of the negative side effects they are associated with. The laxative potential of plant-based medications used to treat constipation is explored in this article. Numerous factors, including a person's diet, lifestyle, stage of pregnancy, and even some medications, can contribute to constipation. Constipation that is chronic is linked to a number of health problems. To treat or control constipation, pharmacological and non-pharmacological approaches are used.(1). The present invention relates to an herbal laxative formulation containing flaxseeds and method of preparation for 500 mg tablet for treating constipation by administrating the formulation of the present invention. The formulation having laxative properties is gentle, safe and effective, free of undesirable side effects and capable of relieving severe constipation. Along with flaxseeds other excipients are also added like binder- gum acacia, talc- glidant, starch- disintegrant, magnesium stearate - lubricant, MCC- compressible vehicle to formulate a tablet. Flaxseed has been used over the years as a home remedy over the problems related to digestive tract. Flaxseeds when having as a whole seed there is a chance that it may passed through intestine undigested which means we won't get all the benefits. On the other hand, ground flaxseeds are easier to digest with all benefits. Flaxseeds shows both the properties ,laxative and antidiarrheal. For granule formulation , dry granulation technique is used further compression of tablet is done by using hand processing tablet compression instrument. Evaluation of granules and tablet is done to give satisfactory results.

Keywords: - Constipation Gastrointestinal, Laxative, Excipients

Introduction

Constipation is a frequent functional gastrointestinal condition affecting people of all ages. (1-10). Constipation can cause unpleasant defecation, infrequent stools, difficult stool transit, or both, as well as discomfort and stiffness. (1-20). Acute constipation can induce intestinal closure, which may necessitate surgery. (10-25). They might require to spend longer in the toilet as passing stools gets more difficult. Some persons have the sensation of an incomplete bowel movement and an obstruction. When the stools are overly firm, the rectum muscles are put under extra tension. As a result, the patient's history and physical examination can be regarded as the primary initial procedures for identifying constipation. (1-33). Long-term constipation is a challenging illness that affects the elderly and is characterised by poor stool transit. (1-30). Constipation is significantly more difficult to digest. Constipation episodes may even occur as a side effect of taking certain medications. Some people experience constipation when they travel or are away from their homes. Since these happen infrequently, and these episodes do not pose a serious problem. When constipation starts to occur regularly, then it is a matter of concern. Any person constipated for more than three days a week, then a doctor is likely to diagnose that person is suffering from chronic constipation. Constipation causing toxins in the colon should not be taken lightly as purgatives. These toxins can have detrimental effects not just the colon but on a few other organs.) Occasional spells of constipation can also develop as a result of eating difficult-to-digest foods.prevalent in elderly persons than in youngsters (1-35). The most common causes of constipation in the elderly include a lack of normal bowel movements or ageing, a poor diet, low-fibre food consumption, a lack of adequate fluid intake, a lack of sufficient physical activity, an illness, or drug use. (1-38). Furthermore, elderly females have far more constipation than males. (1-25). Occasional episodes of constipation can also be occurred due to consumption of food that is Constipation bouts can potentially develop as a side effect of some drugs. When people travel or are away from their homes, they may have constipation.

Flaxseeds are also known as linseed. Flaxseeds are also popularly known as Alsi, Jawas Aksebija in Indian languages. Flax is a dried, flat, seeds from Linum usitassimum belonging to the family Lineaceae. Linum usitassimum is blue flowering annual herb that produces small flat seeds varying from golden to reddish brown color. Flaxseed measures about 2.5 * 5.0 * 1.5 mm.

Humans have been consuming flaxseeds since ancient times. It has been cultivated for fibres and other medicinal purposes and as nutrirional product, [39].

Composition

Nutrients



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REVIEW ARTICLE

A Review on Development of Stability Indicating Analytical Methods for drugs in Bulk and Pharmaceutical Dosage Form

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ABSTRACT:

High performance liquid chromatography (HPLC) is an important analytical tool in analyzing drug stability. HPLC methods should be able to separate, detect, and quantify the various drug-related degradants. Forced degradation studies (chemical and physical stress testing) of new chemical entities and drug products are essential to help develop and demonstrate the specificity of such stability-indicating methods. In addition to demonstrating specificity, forced degradation studies can be used to determine the degradation pathways and degradation products of the APIs that could form during storage, and facilitate formulation development, manufacturing, and packaging. ICH guidelines demonstrate certain degradation conditions like light, oxidation, dry heat, acidic, basic, hydrolysis etc. ICH Q1A, QIB and Q2B exemplify the forced degradation studies. This review overviews the approaches and trends that are used in forced degradation studies.

KEYWORDS: High Performance Liquid Chromatography (HPLC), Degradation, Drug substance, Stability, Testing, ICH guidelines.

INTRODUCTION:

Forced degradation is a technique where different stress conditions are applied over drug substances and which in turn different degradation products are produced. These studies are also called as stress testing or stress degradation studies. These methods are mainly used for the determination of stability of molecule under accelerated conditions. It is known that regulatory documentation process, selection of proper storage and package conditions, and selection of formulation are dependent on the stability of molecules. In forced degradation process, general conditions such as light, heat, humidity, and oxidation are accelerated

individually or in combination with automated stress to accelerate the degradation of the molecule by physical or chemical means.4,5 As per the International Committee for Harmonization (ICH) guidelines, the stability of the molecule, different degradative pathways, and validation of the developed stability procedures are studied using forced decomposition studies. The details of drug molecules that undergoes degradation and the different products that are formed with respect to time changes under the impact of different environmental parameters and understanding of stability data are well explained using the Food and Drug Administration (FDA) and ICH guidelines.6,7 Degradation studies are important to determine the degradation routes and stability of pharmaceuticals under various stress conditions. Characterization of the degradants produced is usually carried out according to ICH guidelines. Different analytical equipment are employed to determine the stability studies. For instance, high-performance liquid chromatography-ultraviolet (HPLC-UV) and HPLC-

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REVIEW ARTICLE

A Review on Psoriasis

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ABSTRACT:

Psoriasis is a chronic inflammatory skin disease that affects 2% to 4% of the population. Inflammatory arthritis develops in approximately 30% of patients with psoriasis and can have a major effect on activities of daily living and quality of life. Peripheral joint involvement in patients with psoriatic arthritis can be oligo articular or poly articular and can cause joint destruction. Several medications are used to treat psoriatic arthritis, and the choice of agent and the timing of administration in the course of the disease depend on disease manifestations, their severity, and prognostic factors. Therapy typically involves the sequential use of nonsteroidal anti-inflammatory drugs. Psoriasis is a chronic inflammatory disease of the skin and joints, autoimmune, and is associated with several comorbidities. The eating pattern can influence both in the prevention, treatment or its cause. This integrative review sought to understand the relation between food and psoriasis, as well as the influence and interaction of certain nutrients with it. A scientific literature survey was carried out regarding the evidence of studies on the reduction or increase in the severity of psoriasis influenced by food. It can be observed that some foods have a triggering action, such as pepper and gluten, and others collaborate for a clinical improvement, such as fish and olive oil, foods present in a Mediterranean diet. Thus, individualized nutritional care for psoriatic patients is important, so that the best nutritional management strategy can be adopted.

KEYWORDS: Psoriasis, Inflammatory cascade, Immunity, Diet, treatment.

INTRODUCTION:

Psoriasis is a known chronic inflammatory condition of the skin as well as joints and is accompanied by emotional and social complications that lead to significant disabilities with profound impaired quality of life.

It is a common skin conditions that causes skin redness, irritation, dryness. Psoriasis having thick, red skin with flaky and silver-white patches on the skin Psoriasis is a disease known in medical text from Greek times, and these patients were cast out from societies. The main reason for this was a misconception, as people feared that psoriasis was an infectious disease. In addition to this misconception, medical practitioners of previous eras failed to recognize psoriasis as a non-infectious chronic dermatological disease. ¹

Psoriatic patients on biologics show greater improvement than do patients on topical, phototherapy, or conventional systemic agents, and both patients and their dermatologists express greater satisfaction with these biological therapies.²

Causesof Psoriasis:-

- a) The psoriasis is cause due to little sunlight on infected skin.
- b) It also cause due to too much sunlight.
- c) Drinking alcohol.
- d) psoriasis is caused due to bacteria or viral infections, including strep throat and upper respiratory infections.
- e) psoriasis is cause due to very dry skin.
- f) It cause due to injury to the skin.
- g) It is also cause due to lesser immune system.



Review on Car-T Cell Therapy for Cancer Treatment

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ABSTRACT

A set of illnesses known as cancer involve abnormal cell proliferation and have the ability to invade or spread to different bodily regions. These stand in contrast to benign tumours, which remain stationary. A lump, unusual bleeding, a persistent cough, unexplained weight loss, and a change in bowel habits are all potential warning signs and symptoms. Chimeric antigen receptors (CARs), often referred to as chimeric immunoreceptors or artificial T cell receptors, are receptor proteins that have been modified so that T cells now have the ability to target a particular antigen. Because they integrate antigen-binding and T cell activation functions into a single receptor, the receptors are chimeric. CAR T cell treatment is a form of treatment in which the patient's immune cells, called T cells, are altered in a lab so that they will adhere to and kill cancer cells. An apheresis machine receives blood from a vein in the patient's arm through a tube, filters out all white blood cells-including T cells-and returns remaining blood back to the patient.

The T cells are then genetically modified in the lab to contain the gene for a unique receptor known as a chimeric antigen receptor (CAR). The CAR T cel ls are multiplied in a lab before being infused into t he patient in large numbers. In order to destroy can cer cells, the CAR T cells can connect to an antigen on the cancer cells.

Keywords

CAR - Chimeric antigen receptor

TCR - T cell receptor

MHC - Major histocompatibility complex

TAG - Tumor-associated glycoprotein

IL2 - Interleukin 2

INTRODUCTION

Therapy with chimeric antigen receptor (CAR)-T cells has been revolutionary since it has led to surprisingly positive and long-lasting therapeutic outcomes. CARs are created synthetic receptors that drive lymphocytes-most often T cells-to

identify and destroy cells that are overexpressing a particular target antigen. Strong T cell activation and potent anti-tumor responses are brought about by CAR binding to target antigens produced on the surface of cells, which occurs independently of the MHC receptor. There are significant drawbacks to CAR-T cell therapy, though, that still need to be resolved. These drawbacks include potentially fatal side effects linked to CAR-T cells, a lack of effectiveness against solid tumours, inhibition and resistance in B cell malignancies, antigen emigration, poor persistence, poor trafficking and tumour infiltration, and the immunosuppressive microenvironment. [1,2,3]

Car structure

CARs are modular synthetic receptors that consist of Four main components:

(1)Binding domain-

The part of the CAR that imparts target an tigen specificity is the antigen binding domain. the variable heavy (VH) and light (VL) chains of mon oclonal anti-bodies were used to create the antigenbinding domains. These chains were then joined by a flexible linker to create a single chain variable fr agment[4].

(2) a hinge region-

The extracellular structural area known as the "hinge" or "spacer region" is what extends the b inding units from the transmembrane domain. The antigenbinding domain needs access to the targeted epitope, therefore the hinge contributes to length a nd serves to offer flexibility to overcome steric hin drance. The chosen hinge is significant because var iations in the length and makeup of the hinge regio n can impact flexibility, CAR expression, signallin g, epitope recognition, strength of activation output s, and epitope recognition. [5,

(3) a transmembrane Domain-

The transmembrane domain of CARs is pr esumably the region with the least amount of chara cterization. The transmembrane domain's primary j ob is to hold the CAR to the T cell membrane, but t

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A Review on CRISPR Techniques used in Alzheimer's Disease.

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Submitted: 15-05-2023 - Accepted: 30-05-2023

ABSTRACT:

Amyloid-beta (Ab) plaques and neurofibrillary which are composed hyperphosphorylated tau, are two features of the chronic, irreversible neurodegenerative disorder known as Alzheimer's disease (AD). At least 50 million individuals are believed to be living with AD at this time, and the number of AD patients is rapidly rising. It is known that the pathophysiology of AD is correlated with mutations or changes in the genes encoding the amyloid-b precursor protein (APP), presenilin-1 (PSEN1), or presenilin-2 (PSEN2) proteins. A cure for AD remain unclear, and numerous clinical trials with gene-targeted therapies have fallen short of the expected levels of efficacy. The genome-editing technique CRISPR-Cas9, which is currently widely used in the study of AD, has been developing as a potent tool to fix abnormal genetic functioning. This straight forward yet effective method of gene editing demonstrated tremendous potential for reversing undesirable mutations in genes linked to AD, including APP, PSEN1, and PSEN2. The complexity of the neurological system may now be studied using a variety of cell types (in vitro) and animals, opening up new avenues for the creation of empirical AD models, diagnostic techniques, and treatment lines (in vivo). To better understand the associated mechanisms and potential uses of CRISPR-Cas9 as a potent therapeutic tool for treating AD, a review of the subject was conducted. While viral vectors are effective at delivering CRISPR/Cas9, they may cause catastrophic side effects and immune responses. Non-viral vectors may be promising for in vivo delivery of CRISPR/Cas9 therapies due to their improved safety profile, cost-effectiveness, and adaptability. Other prospective non-viral vectors for genome editing in Alzheimer's disease, such as nanoparticles, nanoclews, and microvesicles, are also addressed.

Keywords: CRISPR-Cas9; Clinical trial; Alzheimer's disease (AD); Genome editing; Mutations.

Key Summery Points:

Globally, there are currently more than 50 million people living with dementia; by 2050, this number will rise to 131 million, with a cost of over US\$818 billion. pathophysiology of AD is known to be influenced by mutations or changes in the genes for presenilin-1 (PSEN1), presenilin-2 (PSEN2), or the amyloid-b precursor protein (APP). However, there are currently no safe and effective therapy approaches for AD, and clinical trial failure rates for AD are the highest of any other condition (99.5%). CRISPR-Cas9, a method for editing the human genome, is now widely used in the research of AD. It has been developing as a potent technology to fix abnormal genetic functioning. Gene transport to the target areas of cells may be ineffective because offtarget mutations are one of the main obstacles that might compromise the functionality of altered cells. Non-viral vectors (nanocomplexes, nanoclews, and gold nanoparticles) outperform viral vectors in terms of efficacy and safety.

INTRODUCTION:

As an adaptive defensive mechanism that gives resistance to foreign genetic material, the CRISPR (Clustered regularly interspaced short palindromic repeats) system was first discovered in archaea. Later, the CRISPR-Cas9 system was developed into a flexible gene-editing tool that allows manipulation of downstream DNA bearing the protospacer adjacent motif (PAM). With the development of CRISPR-Cas9, genome editing is now possible in almost any organism, including human cells, rodents, mice, zebrafish, bacteria, fruit flies, yeast, nematodes, and more.

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A Formulation of Skin Rejuveniating Serum.

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Submitted: 15-05-2023 Accepted: 30-05-2023

ABSTRACT

Serum is a concentrated substance that is commonly used in Aesthetics. In professional cosmetology, the name is derived from itself. The cosmetic serum is equally rich in water or oil as any other cream.'Successful ageing' challenges the conventional view of ageing as a disease, and is increasingly associated with reducing age indications on the skin, face, and body. Acne is a widespread chronic skin condition that affects around 85% of adults and 50% of individuals aged 20 and over. The serum was created by combining multiple ingredients in varying concentrations such as salicylic acid, L-ascorbic acid (Vit C), and propylene glycol. The formula was created and physically characterised in terms of colour, homogenicity, pH. For over 2000 years, salicylic acid has been utilised as a topical medication in the treatment of a wide range of skin disorders. It is also used for its comedolytic properties and because it is easily absorbed via the skin. We created a novel formulation of salicylic acid in polyethylene glycol. Salicylic in polyethylene glycol topical treatment changes photodamaged skin without systemic absorption. The literature on vitamin C for skin benefits is more extensive, demonstrating evidence for this ingredient's favourable effect on dermal matrix formation, UVinduced harm to the skin, and oxidative stress, indicating that vitamin C may be of relevance to target skin ageing, photoprotection. It increases the elasticity of the skin by promoting collagen formation, resulting in less fine lines and wrinkles. The nutrient vitamin C is a strong antioxidant. It is also beneficial for the treatment of discoloration. Vitamin C has been used widely as a depigmenting agent in dermatology, poses anti-inflammatory properties that are appraisal in the treatment of acne. Acne conditions improve following the use of a new facial serum combination containing salicylic acid (SA) The several uses and

mechanism of action of vitamin C and salicylic acid will be studied and discussed in this article **Keywords:** Salicylic acid, L-ascorbic acid, skin aging, discoloration, photoprotection.

I. INTRODUCTION:

Serum has a quick absorption and ability to penetrate deep layers of the skin, as well as anon-oily finish and a deep formula with a very high amount of active ingredients.Based onthese properties, the purpose of this work was to make serum using salicylic acid andascorbic acid as main ingredients. Rising global cost of living has led to an increase indemand for cosmetic products. The value of cosmetics has increased as more and morepeople want to stay young and attractive. Serum is a skin care product that contains a gel orlightweight lotion or moisturizer and has the ability to penetrate deep to bring the activeingredients to the skin. A good skin serum may give your skin firmness, a smooth texture, make the pores appear smaller and increase moisture levels. A skin serum is not amoisturizer, like a lotion or cream, says Dr. Abigail Waldman, instructor of dermatologyat Harvard Medical School. Rather, they are highly concentrated formulations that are designed to sink into the skin quickly, delivering an intensive dose of ingredients thatcan address common skin complaints. "I definitely recommend serums for anyone whois concerned about aging. It's a really good way to get extra anti-aging effects, morethan your typical moisturizer and sunscreen," says Dr. Waldman. Cosmeceuticals areskincare products that combine cosmetics with medications. "Cosmetic Product" accordingto a description from the Guide to the Control of Cosmetic Products, SciencesAuthorities, revised 2014, is any product intended to be integrated with various externalbody parts, such as the epidermis, hair system, nails, lips, eyes, teeth, and oral mucosaand external genitals

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Ehretia laevis Roxb - A magic remedy

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Submitted: 01-05-2023 Accepted: 08-05-2023

ABSTRACT

The EhretialaevisRoxb is rare Indian medicinal plant and member of Boraginaceaefamily .Local people of vidharbha India using EhretialaevisRoxb. Commonly known as (Khandu-chakka) plant .People uses paste of leaves for wound healing problems like infections, old age stress, diabetes, chemotherapy drug ,obesity, alcohol consumption, smoking ,malnutrion . Khandu-chakka plant use in covid-19.EhertialaevisRoxb commonly known as :ovate- leaved invory wood, Gujarati: Vadhavaradi ,Hindi: Bhairi, chamror ,Marathi :Datrangi (As it colours teeth in red) .Ajanyruksha (SantDnyaneshwar from AlandiMaharastra India took Samadhi near base of this plant and considered as very spiritual plat) .It act as antimicrobial ,the antibacterial activity of leavesof this plant against gram +ve and gram -ve organisms responsible for wound infection. It is cheap conventional and alternative medicine .Both traditional and alternative medicine are inexpensive. In the states of Maharashtra, the EhretialaevisRoxb is a highly prized medicinal plant that is becoming scarce. Hindus value it for religious reasons. Secondary metabolites, which are usually organic molecules with distinctive and complicated structures, can be biosynthesized by plants to a greater extent. There are numerous secondary metabolites that have interesting pharmacological and therapeutic properties and are used in products like pharmaceuticals, insecticides, dyes, colours, and sweeteners in cosmetic flavours and fragrances. This plant's various therapeutic uses extend to all of its sections.

KEYWORDS: Ehretialaevis Roxb. KHANDUCHA KKA, Phytochemisrty, Pharmacogical effects.

I. INTRODUCTION



Ajanvruksha, a plant regarded to be extremely spiritual and where Santa Dnyaneshwar of Alandi, Maharashtra, India, took his Samadhi. A rare member of the Borginaceae family, EhretialaevisRoxb is used medicinally in India.For HINDUS, it has religious significance. This plant contains strong ethanobotanical characteristics and a lot of compounds that are valuable for medicine. For wound healing, ulcer treatment, and blister treatment, locals in Vidharbha use a paste made from the leaves of Ehretialaevis.

It is one of the herbal plant from Wardha district Maharashtra was found to be very effective in wound healing. It is commonly used by tribal for wound management with surprising output. In Ayurvedicliterature, uses of this plant are for Prameha (Diabetes) and Vishaghna (Anti-venom).

This is possibly because of amino acids Cystein 3-4 and Di-n octyl phthalate 5-6. Ehretialaevis is a plant genus that has significant medicinal value and is used in traditional medicine as a remedy for the treatment of stomach venereal disease, toothache, bodyaches, diarrhoea, and cough syphilis. It is also used as an antidote to vegetable poison. A large variety of chemically active substances are present in plants used in traditional medicine, and these substances can be used to treat acute, chronic, and infectious disorders. Ehretialaevis Roxb is one of such plant which being used in Indian traditional medicine for the cure of liver ailmrnts. This beneficial plant has

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Review Article

Herbal Bio-Actives : A Key for Bioavailability Enhancement of Drugs

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Abstract - Background: In recent years, there has been a major interest and medical need for the enhancement of the bioavailability of several drugs which are poorly bioavailable. Poorly bioavailable drugs remain sub-therapeutic because a considerable portion of a dose never enters the plasma or exerts its pharmacological action unless and until very large doses are delivered, bioenhancers play a key role in raising the bioavailability and efficacy of a variety of pharmacological drugs at minimal doses.

Main Body: The present work's main goal is to review bioenhancers, their modes of action, characteristics, classification, overview, and formulation in the market of bioenhancers. Importance of Fulvic Acid, Gelucire, Naringin, Esters of gallic acid, Cumin, Ginger, Caraway, Piperine, Sinomenine, Genistein, Lysergol, Cow urine distillate, Nitrile glycoside, Glycyrrhizin, Capmul, Gokhru and, Aloe vera gel as bioenhancers.

Conclusion: The various bioenhancers, emphasizing their distinct modes of actions, applications, and their safe dose and drugs bio-enhanced by them. It also focuses on the most recent breakthrough notion of using bio-enhancers to improve the bioavailability/bio-efficacy of low-bioavailability medications, metals, nutraceuticals, and vitamins through various techniques. Therefore, Extensive research on these bio-enhancers should be carried out so that they can be utilized in drug formulations.

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Keywords - Bioenhancer, Bioavailability, Bio-efficacy, Herbal, Bio-actives.

1. Introduction

Bioenhancers are natural or chemical moieties that enhance or promote the rate of a drug's bioavailability when used with them but do not have a synergistic action with the drug. They work through several processes that can affect the drug's metabolism, absorption, and target action.1 The current focus of researchers in the lower therapy expenses, will make treatment more feasible for those who are financially challenged. Because India is a developing country, therapy expenses for new allopathic drugs are a major concern. Innovative approaches for lowering drug costs are urgently required as, internationally, billions of dollars are being spent annually due to drugs that are poorly bioavailable.2,3 For example, The invention of piperine as a bioenhancer in 1979 introduced a new notion into research, with the administration of piperine dramatically increasing the blood levels of propranolol, rifampicin, phenytoin, sparteine, sulfadiazine, theophylline, and tetracycline in humans.4 Taxol is used to treat breast cancer. This drug is extracted from the Yew, a slowest growing tree in the

world, and to obtain taxol for one patient, six trees of 25–100 years are needed to be chopped. But instead, combining a bioenhancer with taxol means that lesser trees will be chopped lead which will come out as a benefit for the ecology. ⁴ Along with this, the research on expensive, poisonous, scarce, and poorly bioavailable drugs necessitates the application of an ideal bioenhancer that is safe, effective, affordable, easy to obtain, non-addictive, and so on. Comprehensive research on these bioenhancers is critically needed so that they can be utilized in drug formulations in the future.²

2. What is Bioavailability

Bioavailability refers to the pace and extent to which a bioactive drug enters the systemic circulation and therefore becomes available at the desired site of action. Drug absorption is inconsistent and partial on oral administration. Before reaching the bloodstream, the first pass effect destroys a considerable part of the pharmacologically active



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Herbs for Derma Care

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Submitted: 25-02-2023 Accepted: 06-03-2023

ABSTRACT: As old as mankind and civilization, the idea of beauty and cosmetics exists. Women are preoccupied with maintaining their beauty. To seem attractive and youthful, they employ a variety of herbal-infused beauty products. The use of Indian plants is well known internationally. A priceless gift from nature, herbal cosmetics are in increasing demand on the global market. Natural cosmetics are risk-free to use when compared to other beauty products. Since ancient times, medicinal and cosmetic uses for herbal plants have existed. They have a well-known ability to soothe, cure, and improve a variety of skin conditions. Due of their widespread availability and milder side effects, herbal compounds are preferable to artificial ones. Cosmetics cannot adequately care for skin and other body parts on their own. Like humanity and civilization itself, the idea of beauty and cosmetics is very old. Beauty is a major obsession among women. In order to look attractive and youthful, people employ a variety of beauty products that contain herbs. Worldwide acclaim is enjoyed by Indian plants and their significance. A natural gift of immeasurable value, herbal cosmetics are in increasing demand on the global market. Natural cosmetics are risk-free to use in comparison to other cosmetics. For millennia, medicinal and cosmetic uses of herbal plants have been made. It is well known that they can relieve pain and improve the appearance of the skin in addition to treating numerous skin conditions. Due of their accessibility and lack of negative side effects, herbal components are chosen over chemical ones. It is impossible to care for skin and other body parts with just cosmetics.

KEYWORDS:Herbs, Herbal cosmetics, Advantages, Treatment- Anti-ageing, Anti-oxidant, Anti-inflammatory, Anti-bacterial, Marketed products, future perspective.

I. INTRODUCTION:

The word "cosmetic" comes from the Greek word "kosmtikos," which signifies strength organisation, and decorating ability. As cosmetics develop throughout the history of man, a consistent narrative about their beginnings emerges. In prehistoric times (3000 BC), man utilised colour for ornamentation to entice the prey he wished to hunt. He also painted his skin to protect himself from hostile attack (be it man or animal). The development of cosmetics was influenced by religion, superstition, warfare, and subsequently, medicine. Due to its improved experiences, the usage of natural herb ingredients in personal and health care products has come to the forefront.

Herbs are more potent, gentle, and calming, according to recent studies. Despite being useful, potent synthetic preparations and chemicals are hazardous to the human body. Effective herbal cosmetics are made using herbal cosmetics, often known as products made from diverse natural herbal elements. Herbs don't provide quick fixes. They provide a means of realigning the body with nature.

Because of their compatibility with skin types and lack of adverse effects, herbal treatments are becoming more and more popular. The nicest part about herbal cosmetics is that there are no side effects because they are manufactured entirely from herbs and shrubs. The herbs' all-natural components don't have any negative effects on the body; rather, they give it nutrition and other beneficial minerals.

The ayurvedic knowledge of nature was the only thing on which they could rely. The ayurvedic science had used a variety of plants and herbs to create cosmetics for protection against the elements and attractiveness. The natural components of the botanicals do not have any negative effects on the human body; rather, they enrich it with vitamins, minerals, and other beneficial substances. The Drugs and Cosmetics Act defines cosmetics as substances that are meant to be rubbed, poured, sprinkled, sprayed, injected into, or otherwise applied to the human body or any ortion of it for washing, beautifying, increasing

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A New Era for the Treatment of the Parkinson disease

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Accepted: 30-03-2023 Submitted: 20-03-2023

ABSTRACT: The parkinson is a disease in which there is imbalance between dopamine and acetylcholine level. It is chronic progressive neurodegenerative disorder like movement problems such as rigidity, slowness, and tremor. More than 6 million individuals worldwide have Parkinson disease. Risk factors include age, male gender and some environmental factors. Parkinson disease is the second-most neurodegenerative disorder that affects 2-3% of the population≥ 65 years of age. Neuronal loss in the substantia nigra, which causes striatal dopamine deficiency, and intracellular inclusions containing aggregates of α-synuclein are the neuropathological hallmarks of Parkinson disease. Multiple other cell types throughout the central and peripheral autonomic nervous system are also involved, probably from early disease onwards. In this review we will provide overall information of disease and Novel drug delivery systems to treat Parkinson disease. Since PD is not cure but there are lots of new technologies in future like deep Brain Stimulation, Stem cell therapy, Biomarkers which help in the treatment of PD.

KEYWORDS: Parkinson Disease, Cells, Neuron, Dopamine, Acetylcholine

I. INTRODUCTION

Bradykinesia (bradykinesia), stiffness, postural instability, and tremor are all symptoms of Parkinson's disease neurodegeneration with Lewy bodies-neuronal inclusions made of -synuclein-is thought to be the classic pathologic correlate of Parkinson's disease (PD)1.Even though tremor at rest, bradykinesia, increased tone, and loss of postural reflexes are recognised as the cardinal signs of Parkinson's disease, making the diagnosis can be difficult. The treatment and prognosis for idiopathic Parkinson's disease must be separated from those for other types of parkinsonism2.

James Parkinson initially described Parkinson's disease (PD) in 1017. The appearance of person of neurons in the submaning diseases by pharmacological degenerative ailment that primarily affects of persons in the submaning diseases involves excluding symptoms that might Parkinson's disease (PD) in 1817. It is a progressive

nigra pars compacta (SN-PC) and the nigrostriatal (dopaminergic) tract is the most common lesion in Parkinson's disease (PD). As a result of lack of dopamine (DA), which regulates muscle tone and coordinates movement, in the striatum. The motor dysfunction results from an imbalance between the dopaminergic (inhibitory) and cholinergic (excitatory) systems in the striatum. Even if the cholinergic system is not directly affected, its inhibition (by anticholinergics) often leads to a return to equilibrium3.Although the exact cause of the nigrostriatal neurones' selective degeneration is unknown, it appears to be complex. oxidative free radical production, ageing, genetic susceptibility, N-methyl-4-phenyl tetrahydropyridine Environmental poisons that resemble (MPTP) and excitotoxic neuronal death brought on by Ca2+ overload mediated by NMDA-receptors (excitatory glutamate receptors) have all been implicated. Neuroleptics, such as metoclopramide (a dopaminergic blocker), are currently very prevalent causes of drug-induced reversible parkinsonism, although reserpine (a DA depleter) is a historical cause3.

II. SYMPTOMS

1). The motor symptoms of the Parkinson disease:- Before the cardinal motor characteristics of Parkinson's disease (PD) begin to manifest, it is thought that up to 80% of the dopaminergic cells in the nigro-striatal pathway are destroyed. The disease can typically be identified by its initial motor signs. An additional symptom, such as muscle rigidity, resting tremor, or postural instability, is required for the diagnosis of bradykinesia, which is characterised by a slowness of start of voluntary movements and a progressive reduction in speed and amplitude of repeating motions. he diagnosis involves determining at least three supportive criteria for Parkinson's disease (PD), such as unilateral onset of symptoms, persistent asymmetry of clinical symptoms, a good response to levodopa treatment, and induction of

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Microballons

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ABSTACT

The purpose of writing this review on micro balloons is to accumulate the recent literature with a special focus on novel technological advancements in floating drug delivery system to achieve gastric retention. Microballoons promises to be a potential approach for gastric retention. Microballoons drug-delivery systems are based on no effervescent system containing empty particles of spherical shape without core ideally having a size less than 200 micrometer. Microballoons drug delivery systems have shown to be of Micro balloons becomes novel technology in pharmaceutical Microballoons are spherical empty vesicles without core and that can remain buoyant in gastric region for prolong period of time without irritation in gastrointestinal tract. Particles having a low-density system that can efficiently prolong the gastric retention time of the drugs, thus enhanced bioavailability and thus improve the dosing frequency. These are less soluble at higher pH environment. As microballoons delivery systems provide longer retention in gastric pH and enhance the solubility of drugs that are less soluble in high Ph environment.

I. INTRODUCTION

Conventional oral dosage forms such as tablets, capsules provide a specific drug concentration in systemic circulation which do not release at the constant rate for prolonged period of time. Microballoons are the gastro retentive drug delivery system and it is based on the no effervescent approach. Generally, microballoons are in spherical shape without core. These microballoons are free flowing powder which consists of protein and synthetic polymers and these microballoons size ranges from 200 µm.

Gastro Retentive Drug Delivery System

The gastro-retentive drug delivery system (GRDDS) has recently gained tremendous popularity in the oral drug delivery field. It is a commonly used solution to retaining the dosage type in the stomach for a prolonged period of time and slowly releasing the medication that can tackle many problems associated with traditional oral delivery, including poor bioavailability.

MICROBALLOON

Microballoons are gastro retentive drug-delivery systems with non-effervescent approach. Microballoons (Hollow microsphere) are in strict sense, empty particles of spherical shape without core. These microspheres are characteristically free flowing powders comprising of proteins or synthetic polymers, ideally having a size less than 200 micrometer. Microballoons are considered as one of the most favourable buoyant systems with the unique advantages of multiple unit systems as well as better floating properties, because of central hollow space inside the microsphere. unique advantages of multiple unit systems as well as better floating properties, because of central hollow space inside the microsphere.

MECHANISM OF MICROBALLOONS

Microballoons are low-density systems that have sufficient buoyancy to float over gastric fluid and remain instomach for prolonged period of time. As the system floats over gastric fluid, the drug is released slowly atdesiredMicroballoons. rate resulting in increased gastric retention with reduced fluctuations in plasma drugconcentration. When microballoons come in contact with gastric fluid, the gel forms and polymers hydrate toform a colloidal gel barrier that controls the rate of fluid.

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Formulation and Evaluation of Herbal Face Scrub

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ABSTRACT-

The study's goal was to develop an herbal face cleanser. The skin on the face is frequently in contact with dirt, pollution, and other pollutants. The scrub contains natural ingredients that are safe to use and have anti-depilation, antibacterial, anti-infective, antioxidant, and anti-aging qualities. The primary goal of this study was to create an herbal facial scrub utilizing natural ingredients to prevent and fight against numerous skin problems, as well as to control oil secretion on the skin's surface. To treat all of these issues and de-tan the face, use a scrub made entirely of natural substances that improves washing, softening, moisturizing, and skin fairness, as well as removing excessive facial hair. Herbal products are the product that improve the function of skin. The objective of this work to formulate and evaluate herbal face scrub for skin exfoliation & glowing skin by using natural ingredients with the varying concentrations, four different formulations containing orange peel, Lemon peel, Turmeric, Tulasi, Neem, Red lentils and Multani mitti used as ingredient and incorporated into the herbal scrub along with Charcoal powder into the formulation. All prepared formulations were evaluated by different parameter such as organoleptic properties, physico-chemical parameters and stability along with irritancy test and microbial load. All formulation was found to be good in physical parameters, free from skin irritation and maintained its consistency even after stability storage conditions and also having microbiological stability.

Keywords: Scrub, Natural, Herbal, Formulation, Evaluation

Introduction

Some people are born attractive, while others are created to look beautiful. Those of herbal products has expanded dramatically in the current circumstances. Demands for herbal products are increasing day by day due to the great health benefits of synthetic components, which contribute to environmental destruction. Individuals' confidence can be increased by using skin care products. Women were supposed to be the main consumers of skin care products, but males are now just as concerned about their appearance. A balanced diet should be consumed to keep the skin healthy and supple. Environmental variables such as UV radiation, pollution, dust, and climatic fluctuations will exacerbate skin problems. Herbal products come in a variety of forms, each with its unique function on the skin. Skin gets dull and lacks luster due to a variety of factors, which can be efficiently addressed with the use of scrubs. On the skin, there are two types of scrubs: facial scrub and body scrub. It exfoliates the skin and eliminates dead skin cells. Scrub can be use on any skin type.

Ideal Properties of Scrub

An ideal scrub is accepted to possess the following properties.

It should be-

- Non toxic
- · Possess small gritty particles
- Mild abrasive
- Non irritating
- Non sticky
- · Able to remove dead skin cells

Benefits Of Scrubbing Skin

1. For A Squeaky-Clean Skin:



Alzheimer's Disease: A Potential Threat in Future

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Submitted: 12-01-2023 Accepted: 25-01-2023

ABSTRACT

Alzheimer's Disease (AD) is a neurological condition that worsens over time. The primary use of dementia is a condition that results in deterioration of brain cells. The World Health Organization (WHO) reports that 5% of men and over 60 years old are afflicted with dementia of the Alzheimer's type globally. The mainstay of treatments for these conditions currently include inhibitors acetylcholinesterase (Rivastigmine, galantamine, donepezil) and N-methyl-D-aspartate receptor antagonists (Memantine) Alzheimer's condition. In order to create effective treatments that can slow or alter the progression of AD, research is currently concentrating understanding the pathology of AD by focusing on several mechanisms, including abnormal tau protein metabolism, beta-amyloid, inflammatory response, and cholinergic and free radical damage. The key to putting this notion to the test in clinical trails is the development of earlier positron emission tomography neuroimaging techniques. This review examines the currently available medications as well as potential treatments for AD, including chaperones, and disease-modifying therapies like aducanumab, gantenerumab, lithium, masitinib, posiphen etc and also vacuolar sorting protein 35 (VPS35). Additionally, it contains molecules that block or modulate the secretases, which target amyloid plaques, as well as compounds that speed up the destruction of amyloid plaques.

Keywords: neurodegenerative disorder, betaamyloid, tau protein, anticholinesterases, diagnosis

INTRODUCTION

The most frequent form of dementia, Alzheimer's disease (AD), named after the German psychiatrist Alois Alzheimer, is defined clinically by a progression from episodic memory issues to a gradual decline in cognitive function[1]. As a result of the accumulation of amyloid-beta peptide (Aβ) in the brain's most affected region, the medial temporal lobe and neocortical structures, it can also described as a slowly progressing neurodegenerative disease that is marked by

neuritic plaques and neurofibrillary tangles[2]. When Alois Alzheimer examined the brain of his first patient, who experienced memory loss and a change in personality before passing away, he found the existence of amyloid plaques and a tremendous loss of neurons. He defined the illness as a terrible disease of the cerebral cortex[3]. There are currently about 50 million AD sufferers globally, and it is predicted that this s number will double every five years to reach 152 million by

The pathology of AD is characterised by a complex interplay of several biochemical changes, such as modifications in the metabolism of amyloid precursor proteins, oxidative stress, diminished energetics, mitochondrial dysfunction, inflammation, membrane lipid dysregulation, and disruption of neurotransmitter pathways[4]. The majority of these clinical characteristics are directly related to metabolic abnormalities, and it is now understood that metabolic dysfunction plays a significant role in AD[5]. For instance, decreased cerebral glucose absorption, an unchanging aspect of AD, develops decades before the start of cognitive loss^[6]. Alzheimer's disease can be brought on by a number of reasons, including substance abuse, infections, abnormalities of the pulmonary and circulatory systems that reduce the amount of oxygen delivered to the brain, dietary deficiencies, vitamin B12 deficiencies, tumors, and others[7,8].

The five drugs (N-methyl-D-aspartate and four cholinesterase inhibitors) often prescribed, and their usage has been recommended by numerous reputable organisations. There are no known alternatives to these drugs as of this writing. These medications do not seem to change the course of the disease; rather, they are supportive or palliative, as opposed to curative or disease modifying therapy[9].

Dementia can be affect a person in different ways, and progression of the disease depends upon the impact of the disease itself and the person's personality and state of health.

Dementia can be divided in three stages:

Early stage - first year or two .

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An Overview on Transungual Drug Delivery System

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Submitted: 16-03-2023 Accepted: 28-03-2023

ABSRTACT:

experience with nail diseases Patients psychological distress as well as quality of life issues. Despite the fact that nail problems are not life threatening, they can become a bothersome issue that takes a long time to get back to normal if left untreated. Antifungals used orally to treat nail disorders can have systemic negative effects on the liver and bioavailability due to first pass metabolism and medication interactions. As a result, transungual medication delivery technology, also known as topical drug delivery through nails, was developed. Transungual drug delivery refers to the administration of medications through the nails to treat nail conditions. Trans means "through," and unguis means "nail" in the "TRANSUNGUAL" system. Yet it faced its own difficulties. Due to their inability to carry an adequate amount of antifungal medication to the target locations to remove the protection, existing topical therapies have a limited capacity for therapeutic success. Mechanical, physical, and chemical solutions-including complex methods like Iontophoresis, Ultra Violet light treatment, and Photodynamic therapy-have been researched to address these issues. Poor transnail absorption is primarily caused by a number of factors, including formulation deficiencies and factors related to the physicochemical qualities of the medications. The barrier qualities of the nail plate, the brief residence period of topical formulations, and the substantial drug binding to the nail keratin can all be overcome by a number of modern methods. There are several products on the market now that can be used to treat nail conditions.

Keywords: Transungual drug delivery system, psoriasis, tinea unguis, Iontophoresis

I. INTRODUCTION:

1.Anatomy of nail:

Similar to the claws of other mammals the human nail is a significant organ of the human of Pharmac,

body. It is a horny structure that guards the tips of the fingers and toes from harm. It makes discriminative touch more pleasant and makes it possible to pick up and useobjects^[1]. Additionally, the nail serves as a cosmetic tool, a means of grooming, and occasionally a means of social status communication^[2].

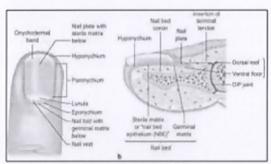


fig 1: Anatomy of nail

The chemical makeup of a human nail is entirely distinct from that of other bodily membranes. The nail plate is made up of keratin molecules with low quantities of linked lipids and many disulphide connections. Hydrogel is more probable than lipophilic membrane to form^[3]. The human nail consists of the following components

- a. Nail matrix or nail root: It is the portion of the nail that is posterior or proximal and is located beneath a skin fold^[4].
- b. Eponychium: The eponychium, which is vital for cuticle protection, is the area just under the proximal nail fold.
- e. Paronychium: The skin that covers the nail plate on its sides is known as the paronychium.
- d. Hyponychium: The nail unit's furthest or most distal edge is known as the hyponychium. The hyponychium, which creates a shared barrier at the physiological point when the nail emerges from the bed.

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Ramsay Hunt Syndrome: An Overview on Unwelcomed Disease.

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ABSTRACT

Acute Herpes Zoster is a form that includes Ramsay Hunt Syndrome (RHS), includes peripheral facial palsy (FP). The Cranial Nerves in the head and neck region are severely affected. It is an extremely uncommon neurological condition.

J. Ramsay Hunt discusses the different clinical facial manifestations of face paralysis, as well as rashes, hearing loss, nausea, vomiting, and excruciating pain on one side of the face.

The Ramsay Hunt Syndrome is a virus brought on by the varicella zoster virus (VZV). Compared to Bell's Palsy, a patient with Ramsay Hunt Syndrome, a severe form of paralysis, has very little chance of fully recovering (Facial paralysis without rash).

In the treatment of Ramsay Hunt Syndrome two main drugs are considered important.Prednisone and Acyclovir are these two drugs which can improve the outcomes. If the medications are started within 72hours of Ramsay Hunt Syndrome Diagnosis, it results in either totally recovered facial palsyor with only slight consequences in over 80% of the affected area. Approximately 15-20% of patient had their blisters in certain hidden places i.e., ear canal or mouth.

In the treatment of Ramsay Hunt Syndrome use of different combinations of drugs are preferred. They contain some of theanti-viral agents and steroids, which is recommendedby experts. Additionally, early diagnosis of the Ramsay Hunt Syndrome is a vital factor which is use to improve nerve response which are damaged in Ramsav Hunt Syndrome, which initiates treatment to be recovered as soon as possible.

Keywords: Facial Paralysis, Herpes Zoster, Herpes Zoster Oticus, Ramsay Hunt Syndrome, Varicella Zoster Virus (VZV)

INTRODUCTION:

James Ramsay Hunt, an American neurosurgeon, founded it for the first time in 1907. A vesicular rash on the external ear and the ipsilateral two-thirds of the tongue are among the self-described constellation of symptoms that are associated with VIIth cranial nerve paralysis[1].A condition known as Ramsay Hunt Syndrome (RHS) causes cranial nerve peripheral facial palsy. This area contains the VIIIth cranial nerve. There are also head and neck herpes blisters are present. Here, all the nerves that connect with the face nerves are involved including,

-the cervical nerves C2, C3, and C4 and -the cranial nerves V, VIII, IX, and X [2]

Reactivation of varicella-Zoster virus (VZV) rise to Ramsay give Syndrome(RHS). And also, the cranial neuropathy which includes many additional cranial nerves (CN's)i.e., III, XI, XII are excluded from the original definition of the Ramsay Hunt Syndrome.



Fig.1: Ramsay Hunt Syndrome

There were 178 incidences of Ramsay Hunt Syndrome among the 3015 people with facial palsy (FP). Regarding the time of the association between blisters and facial palsy, there are three primary possibilities in the clinical picture of RHS. Ramsay Hunt Syndrome can be easily recognised if the blisters appear early or concurrently with the palsy. Blisters soon disappear and are easy for inspectors to miss^[3,4,5].

Vesicles may occur after the onset of phantire ogical symptoms; however, pain is typically

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"Review - on Versatility of Tinospora cordifolia"

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Accepted: 28-03-2023 Submitted: 16-03-2023

ABSTRACT :-

Traditional médical practises have employed Tinospora cordifolia (Gulvel) for a seemingly endless array of ailments. It frequently occurs alone or in conjunction with other chemicals. Its significant function in immune -modulation in diseases including diabetes mellitus, obstructive jaundice, and hepatic and splenic damage is supported by evidence from pharmacological trials. Additionally supported by data are its anti-oxidant, radioprotective. anti-hyperglycemic, inflammatory, anti-ulcer, antispasmodic, and ability to dissolve urinary calculi qualities. It may be an antidepressant and improves thinking and memory. Benefits in infections, joint inflammation, and allergies are probably explained by immunemodulation, limiting oxidative damage, and reducing inflammation. The combination of several actions contributes to its antitubercular, cytotoxic, and toxin-protective properties. It is useful for enhancing the effects of other chemicals in the form of easy extraction The formulations, the applicability of supporting data, potential mechanisms of action, and hopes for the future are all covered in this review.

KEYWORDS:-Gudachi, phytochemistry, Menispermaveae, Tinospora cordifolia, pharmacological activities

INTRODUCTION:-

The tall, deciduous climbing shrub Tinospora cordifolia, also known as "Guduchu" in Sanskrit, is hi a member of the "menispermaveae" family and can be found at higher elevations[1-3]. It is also known as Cocculus cordifolius Dec, Menispermum cordifolium Wild, and Tinospora glabra (N.Brum)Mere. It is a climber that is fleshy, robust, and deciduous that grows with the support of mango or beech trees[4]. The leaves have a heartshaped form. The milky white to grey tint of the succulent bark is speckled with lenticles and has deep clefts. It often is an indigenous plant from India and is also known to be found in the Far East, mainly in rain forests. It produces long, slender

aerial roots. It has a light grey papery bark on a stem that is about 6 cm in diameter. The leaves are widely oval or orbicular, 7.5-14 cm long, and 9-17 cm wide, with a deep heart-shaped base. Racemes of tiny greenish yellow flowers are seen. The outer layer of the 3+3 sepals in 7 blooms is modest, while the inner layer is huge. Six stamens are clearly visible [5] Its Hindi name, giloya, alludes to a divine elixir used to delay ageing and maintain youth indefinitely. Rejuvenator or adaptogen is described as one that protects the body from ailments by the Sanskrit nameguduchi [6]. The blossoming period extends throughout both the summer and the winter, a wide range of biologically active plant compounds, including alkaloids, steroids, diterpenoid lactones, aliphatics, and glycosides[7]. have been isolated from the root, stem, and entire plant, among other plant body parts [8]. This essay explores the medicinal implications of several guduchi (Tinospora cordifoila) formulations. The root, stem, and leaf of guduchi are the primary components used in formulations. The pharmacological activities of a medicine change and produce varied outcomes depending on the media employed to prepare these formulations, such as water in hima, kwatha, taila, and ghrita in sneh kalpanas, etc[9]. It can be found in North Africa, West Africa, South Africa, Myanmar, Sri Lanka, Thailand, the Philippines, Indonesia, Malaysia, Borneo, Vietnam, and Bangladesh. Maharashtra, Gujarat, Madhya Pradesh, Himachal Pradesh, and a few more states in North and South India are among the states in India where it is in great abundance [10,11,12,13]. The safety of T. cordifolia is recognised.because it has no impact on bone marrow, blood lymphocytes, or DNA integrity, a feed supplement [14]. In the context of chicken production, medicinal plants and their extracts are also noteworthy since they help animals' overall health and growth [15]. In Indian Ayurvedic medicine, T.cardifolia has a wellestablished track record of efficacy in the treatment of metabolic diseases and diabetes[16].

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Therapeutic application of aloe vera

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Accepted: 05-04-2023 Submitted: 28-03-2023

ABSRTACT:

Herbal medicine has a long history of use in many cultures around the world for the treatment of many infectious diseases. One crucial element of conventional medicine is aloe vera. Since ancient times, people have known and used the aloe vera plant for its benefits to health, beauty, healing, and skin care. Aloe, which has more than 300 species, primarily grows in arid regions of Africa, Asia, Europe, and America. Aloe Vera is a characteristic product that is currently frequently used in the cosmetology industry. The leaves of this amazing medicinal plant are rich in many bioactive chemicals that have emollient, purgative, antiinflammatory, antioxidant, antibacterial, antihelmenthic, antifungal, aphrodisiac, antiseptic, and other beneficial properties. aesthetic. Due to its healing and nourishing qualities, this plant is widely used in the beauty industry.

Key word Aloe vera: antibacterial, bioactive substance, and ethanol-based plant.

INTRODUCTION:

The Arabic word alloeh, which means a dazzling bitter material, is the source of the English term aloe[1] .Aloe Barbadensis miller is the name of the plant that produces aloe vera. It is a perennial, xerophytica, shrubby or arborescent, succulent colony that is a member of the Liliaceae family. Africa, Asia, Europe, and America's dry climates are where it primarily grows. Rajasthan, Andhra Pradesh, Gujarat, Maharashtra, and Tamil Nadu are among the Indian states that have it [2]. Aloe vera is a very potent and significant herbal plant that has a wide range of medical applications and pharmacological effects on both humans and animals[3]. Aloe vera is a resilient, drought-resistant, tropical, perennial plant. Aleo vera has produced a significant traditional function in indigenous medical systems like the Siddha, Homeopathy,
Ayurveda, and Unani^[4]. The Aloe vera leaf
contains about 75 nutrients, 200 chemically active pnarmac, in tall and spread via offsets. It may also have substances, including 20 minerals, 18 amino and second in the state of the stat

and 12 vitamins, and it slows down the ageing process of the skin. Aloe vera evewash shields the eves from UV radiation when exposed to sunshine. Today, it is frequently found in cosmetics, juices, drinks, and pharmaceuticals. Coriander leaves were also examined for antibacterial activity. Food preservatives have been used for a long time to lengthen the shelf life of foods. Some methods include high salinity, high molasses systemic acid, alcohol, smoking, submersion in water, and underground storage. Chemical preservatives are widely utilised in the food processing industry as a result of industrial progress. . But, as the food business has grown and people's awareness of food safety has increased, there is a greater demand for food preservation techniques and a push to find safer, more effective preservatives. The fruit of coriander has been extensively researched and reported on both domestically and internationally. There are relatively few research reports about the physiological functions of stems and leaves, including antibacterial effectiveness, and their essential oil is primarily derived from their fruits. As a natural food preservative, it has a good chance of success^[5]. The Aloe barbadensis plant has two distinct sections, each of which produces compounds with entirely different chemical makesups and medicinal benefits. The parenchymal tissue, which makes up the inner portion of aloe leaves, is what creates the clear, thin, flavourless substance known as aloe vera gel (or mucilage). By separating the gel from the inner cellular waste, this tissue can be extracted from the leaf. The pericyclic tubules, a collection of specialised cellsfound immediately below the leaf's outer green rind, make up the other component of the plant. These cells secrete an exudate that has potent laxative-like effects and is composed of a bitter yellow latex[2].

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Bombay Blood Group

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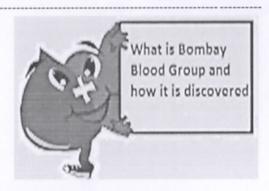
Submitted: 28-03-2023

ABSTRACT: Most of us are not aware about such blood group's existence on planet. Bombay blood group is named so because the first case was found in Bombay (now Mumbai) the financial capital of India. Bombay blood group is very few people who not have antigen H in their blood and have antigen H as well as do not have B antigen. Bombay phenotype is found in log 10,000 individual in India. People with this blood type can receive blood only from other donors who are as long H Deficient. There is a serum grouping called reverse grouping for accurate test of person ABO group, if this test conducted then we can detect the presence of H antibody which indicate Bombay blood group.

KEYWORDS:Bombay Blood group, Antigen, Antibody, phenotype, ABO group.

I. INTRODUCTION

Blood, a connective tissue is inevitable for human existence. Normally it is believe that the rare blood group is O negative, which is very difficult to get because of it was found to be in only some selected people on earth. But rather than the O negative blood group there is also one of the most rarest blood group which exist on the earth . This blood group was found in only in one of the million people, and it's name as bombay blood group. The bombay blood group is rare blood group, phenotype of this blood group which has lacking of the H antigen on the surface of red blood cell membrane and have antigen H in the serum. This types of the blood group is rarest blood group so the main fact is that there is proper blood grouping and proper cross matching is required for safe blood transfusion in the individuals.



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II. DEFINITION

The Bombay blood group is a rare blood group, phenotypes of this group lacking H antigen on the red cell membrane and have anti-H in the serum.

III. DISCOVERY

Bombay blood group phenotype was first discovered by the croaker YM Bhende in the time of 1952. This is called Bombay Blood because of because of it was first set up in the some people of Bombay. This type of rarest blood type set up in only in the world of 0.0004 percent of the population. It occurs due to the point mutation of the H gene if the case carries two mutant gene,(H Gene) also it'll be a result in Bombay or Oh phenotype. Bombay blood group is a rare blood type. People with this blood type always show up as type O On a blood test. But they can have hidden DNA for other blood types, which they may pass on to a child. This veritably rare blood type is most " common " in southeast Asia. For illustration, around 1 Person in,000 has this blood type in India. It's important rarer in other corridor of the world. It's literally A 1- in-a-million event in people with European strain! It's so rare that people with this blood Type can't reliably get a blood transfusion. The Bombay blood group is a veritably rare blood group. That's generally present in about 0.0004(about 4 million) of the population, although mortal

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Anti-Inflammatory Activity of Herbal plants

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Accepted: 05-04-2023 Submitted: 28-03-2023

ABSTRACT: Inflammation is the part of sophisticated natural retort of vascular tissue to the damage cell or irritant. It is characterized by redness, joint pain, swallow join, and some time cause loss of functions. The conventional drugs are available which is used to treat inflammation which causes various side effects like blood clot which results in heart attacks and strokes. To overcome from this there is need of drug which cause less side effect or no effect. Natural products are rich source for the discovery of new drug from medicinal plant play an important role to cure many disease associated with inflammation. There are various plant use traditionally for the treatment of inflammation. The present review includes some traditionally used herbal plant for the treatment of inflammation.

KEYWORDS: Inflammation , Anti-inflammatory activity , Herbal medicine ,Phytoconstituent , Treatment

INTRODUCTION T.

The word inflammation derived from the Latin word inflammare is a complex natural process include several chemical intercessors which are convinced by vascular tissue of the body, when it comes in contact with several dangerous stimulants like pollens, annoyances, pathogens, and damaged cells. It give a defensive comeback that helps in curing of tissue . Inflammations is characterized by certain regular events similar as redness, swelling, heat, pain, and at certain times lead to exudation and loss of function. The process of inflammation involves several events and intercessors which are potent chemical substances set up in the body tissue, similar as prostaglandins, leukotrienes, prostacyclin, lymphokines, These intercessors produce several chemical pathways and events to elicit a reciprocal response against external stimulants. Studies show that in a very rare cases, inflammations are tolerable; but in nearly 99% of cases, inflammations feel to be severe and intolerable, and if not treated adequately must of Pharmanunation body contineously

initial first aid along with proper opinion and medicine remedy, they may lead to loss of life. Examples of some conditions where inflammations dangerous include asthma, are relatively arthritis, vasculitis. rheumatoid glomerulonephritis. Synthetic medicines have been used extensively to treat inflammations and related disorder in a fast rack way. But according to several clinical studies, these synthetic motes are no longer safer. Reports suggest nearly 90% of the medicines used against inflammation produce medicine related venom, iatrogenic responses, and adverse effects complicating the treatment process. Hence, a shift in the area of anti-inflammatory treatment has been observed from the use of synthetic to natural remedy. Hence, proper representative measures are to be taken against it.

Types of Inflammation -

- 1. Acute Inflammation
- 2. Chronic Inflammation

Acute Inflammation -

Acute Inflammation is an immediate adaptive response with limited particularity cause by several stimulants similar as infection and tissue damage. Acute inflammation is the good kind because it helps us to heal. When your body identifies a dangerous raider, similar as a bacteria or virus, it initiates a whole-body immune response to fight it off. White blood cells spark the release of several seditious chemicals. This type of acute inflammation causes you to feel sick and exhausted as your body puts all of its energy toward fighting off infection.

Symptoms - Fever, Nausea, Lethargy, Headache and loss of mobility.

Examples - Acute bronchitis, Tonsillitis.

Chronic Inflammation -

Chronic Inflammation is also referred to as slow, long- term inflammation lasting for dragged ages of several months to years . In chronic transferring

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Review on Generic and Branded drug's-Comparative Analysis of Generic and Branded drugs

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Accepted: 08-04-2023 Submitted: 01-04-2023

ABSTRACT: The use of generic or branded drug is a great matter of discussion in recent times globally. The government in different countries is also strictly promoting the use of generic drugs in place of branded ones. A generic drug consists of same active ingredient/ingredients as its branded counterpart and found to be equally efficient therapeutically. The cost of generic drugs are much lesser than the branded drugs as they do not need to go through the robust and costly pre-clinical or clinical studies as done in branded ones. The present review enlightens the effectiveness of generic drugs as compared to branded drugs. An attempt is also made to highlight the cost comparison between both classes. Branded drugs are protected by a patent for a particular number of years, generic drugs are not. Generic drugs only have to meet the same bio-equivalence requirement as their branded counterparts. Also, Branded drugs take a lot of time to get approved while generic drugs take a much lesser time. Due to the time taken for the Branded drugs to get approved, the costs used in the development of the drug, branded drugs then to get very expensive in the market while generic drugs are cheaper.

KEYWORDS:

- Generic drugs
- Branded drugs
- Bio-Equivalence
- Cost comparison
- Global prevalence

INTRODUCTION:

According to estimates from the World Health Organization (WHO), about 30% of the world's population lacks access to basic medications, and in some African and Asian countries, that number will exceed 50%. The primary barrier to access to medications is the expense of pharmaceuticals, and governments in

developing nations appear to be doing relatively little to address this issue.

India's predicament is not all that dissimilar from that of other emerging countries. Both as measured in actual terms and as a percentage of the GDP, healthcare spending in India has been increasing (GDP). It is the line item in healthcare budgets that is expanding the quickest globally, ranging from 20 to 60% in different healthcare budgets of nations. The prescription medicine industry in the United States is anticipated to reach USD 700 billion (B) by 2020, while the market in China will reach USD 260 B. The age-old discussion over how to strike a balance between the cost of innovation in drug research and universal access to the results of that research will be reignited by the rise of the pharmaceutical business globally and its rising role in total healthcare spending. Drugs are any biological or chemical substance, except food, that when eaten alters how the body functions physiologically. It can also be described as a chemical that is used to treat, prevent, mitigate, and cure diseases. These drugs can be classified as:

- Prescription drugs
- Over the counter drugs

Prescription medications: Prescription medications are those that a doctor has prescribed. They are often bought at a pharmacy, prescribed for only one individual, and are only to be used for that one person. Abacavir, Anthralin, Quinapril, and other prescription medications are a few examples.

Over-the-counter medications: Medicines that are typically sold over the counter without a doctor's prescription are also known as non-prescription Analgesics, pharmaceuticals. decongestants, antacids, anti-fungal medications, cough suppressants (such as expectorants and antitussives), anti-acne medications, and some topical antibiotics (often sold as creams, ointments, powders, sprays, etc.) are examples of over-theof peoupler medications.

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Facial Serum: Its Formulation, Usage, Special Ingredients, Various Types and Benefits

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Accepted: 30-03-2023 Submitted: 20-03-2023

ABSTRACT: These days, the demand for skin care products and treatments has increased to a larger extend. Having a proper appearance and a beauty standard has gotten a lot of importance. As a result people and just companies in general are leaning more and more towards taking care of their skin. A typical skin care routine consists of a cleanser, a serum, a moisturizer and a sunscreen. Among these, it has been seen that the serums are the new go to when it comes to building an excellent skin routine. Serums come in various types of formulation be it for oily, dry or anything in between type of skin. The goal of this literature review is to highlight various benefits of using the correct serum formulation for numerous skin and what results majority of the people can expect. It also contains information regarding very many skin healing and brightening ingredients that are being used in the serums these days and how these ingredients work on the skin giving it a specific glow which otherwise might not be possible. Although currently no effective processes are available for slowing down the skin aging conditions, serums may up of various concentrated vitamins and acids have shown miraculous effects.

KEYWORDS: History of facial serums, formulation, types, selection, application, marketed products.

INTRODUCTION: T.

Study of human skin represents an important area of research and development in dermatology, toxicology, pharmacology, and cosmetology, in order to assess the effects of exogenous agents, their interaction, their absorption mechanism, and/or their toxicity towards the different cutaneous structures.[11] The importance of beautification to the mankind has been known since the prehistoric time and the desire to look beautiful Pharm and healthy has been developing in the society. Cosmetic is a Greek word which means to 'adorn' (addition of something decorative to a person or a thing). Cosmetology is the study and application of beauty treatment.It's an art or science of beautifying and improving the skin, nails and hair and the study of cosmetics and their application. A skin care formulation must be able to deliver the powerful agent into the skin to fulfil the intended objective. Face serum is the answer to deliver the precious active ingredient into the skin thus eliminating the use of hazardous chemicals in giving instant results.[2]

Serum is a concentrated product which is widely used in Cosmetology. The name comes from itself in professional cosmetology. The cosmetic serum is as concentrated in water or oil as any other cream. Serums are defined as concentrated product that contains ten times more organic matter than cream. Therefore, deals with the cosmetic problem quickly and effectively.[3] Face serum is a highly concentrated emulsion which is available in water based and oil based. Serums or defined a concentrate, contain approximately ten times more of biologically active substances than creams, therefore allows better skin problems treatment. [5] Incorporating a few drops of face serum with daily skin care routine will deliver noticeable results within a month or less. This is because face serums are made of very small molecules that help it to penetrate deep into the skin quickly. Serum is packed with a bunch of beneficiary active components and nutrients such as antioxidants, ceramides, amino acids and others. This explains why face serum always being the costliest item in a skin care set.[2]

Weather it is moisturizer, anti-wrinkle or anti-aging product or skin serum, all these products should contain antioxidants, cell-communicating ingredients and skin-identical ingredients. All skin

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An Review On Therapeutic Application Of Eucalyptus Oil

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Name of institution: Pravara Rural Education Society's College Of Pharmacy, Chincholi, Nashik.

Submitted: 15-05-2023 Accepted: 30-05-2023

ABSTRACT:

Eucalyptus globulus a broadly located plant has a superb latent in time period of medicinal uses.Eucalyptus is an evergreen flowering tree and shrub. Eucalyptus globulus a plant from family Myrataceae, usually known as blue gum develops properly in Nilgiries, Annamalai, Palani and hills. It wealthy resources of phytochemical constituents which include flavonoids, alkaloids, tannins and propanoides. Which might be found in leafs, stems and roots of the plant. Different components of this plant are nutritionally very critical and therapeutically fairly precious due to unique chemical composition as its important oil contain esters, ethers, carboxylic acid, ketones, aldehydes, alcohols and hydrocarbons at the side of monoterpenes and sesquiterpenes. Phytochemical evaluation of this plant has found out that leaf oil include 1,eight-cineole, alphapinene, p-cymene, cryptone and and spathulenol. In comparison, vital oil extracted from buds, branches culmination constituents alpha-thujene, 1,eight-cineole and aromadendrene determined to be potential anti-microbial, anti-fungal, analgesic and anti-oxidant agent of nature.

Keywords: Eucalyptus, phytochemical, therapeutics application

I. INTRODUCTION:

Eucalyptus grows quickly and many species grow quite tall. Eucalyptus is a large evergreen tree or shrub belonging to the Myrtaceae family. Although native to Australia and Tasmania, it has spread widely to other countries [1]. Nature

has been a source of medicine for thousands of years. Plants have been used to treat disease for centuries, before the use of newer clinical drugs.

There are approximately 500 species of eucalyptus that produce essential oils. The demand for herbal products for therapeutic use has increased over the past decades. Aromatic herbs are used in primary health care in many countries around the world, especially in rural areas [2], and 80% of the population in developing countries use these traditional resources [3]. It is mainly grown in subtropical and Mediterranean regions [4]. and in Nigeria.

E.globulus has various local names (eucalyptus in Bengali and Hindi; blue gum in English and karpuramaram in Tamil[5]) and is widely used in the pulp industry as well as in the production of eucalyptus oil, eucalyptus oil is extracted on a commercial scale in many countries and used in perfumery, cosmetics, food, beverages, [aromatherapy and phytotherapy [6]. About 100 species of plants have been tested in India at various times and some of them have been cultivated [7]. This plant grows in the pits of the Nilgiris (5,000 to 8,300 feet), Annamalai and Palani hills in Himachal Pradesh, and Indian skinks [8].

Eucalyptus blueus has rich medicinal value and has a long history of popular use. The plant is said to have powerful antiseptic, astringent, deodorant, diaphoretic, expectorant, inhalant, anthelmintic, sedative and supportive effects [9,10]. Traditionally, eucalyptus leaves have been used to treat wounds and fungal infections.

1.1Scientific Classification:[34]

kingdom	Plantae	
Subkingdom	Tracheobionta	
Super division	Spermatophyta	
Division	Magnoliophyta	
Class	Dicotyledons	
Subclass	Rosidae	
Order	Wayrtales ac	

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Formulation and Evaluation of Herbal Hair Pack

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Submitted: 25-05-2023 Accepted: 05-06-2023

ABSTRACT

Hair masks are a solution to hair problems such as dandruff, frizziness, brittleness, premature graying. Beard products are gaining popularity among people because of their many benefits. With so many types of hair masks on the market, it can be confusing to choose the one that suits hair lines and has fewer side effects. The ingredients in the hair mask are added according to what is known to be good for the hair. The purpose of using a hair mask is to remove dirt and dandruff, strengthen the hair and darken the hair color.

The mask is completely chemical free. It contains only natural ingredients that will not harm your hair. Hair root is the most important organ in animals, it determines the external appearance, makes gender discrimination, provides thermal protection and plays a role in defense. Young people are starting to face serious hair problems due to many lifestyle changes such as fatigue, stress, poor diet and different hair coloring techniques. Alopecia is non-temporary hair loss in most cases.

Strengthening hair follicles is important for improving hair growth and preventing hair loss. Hair is the most fragile part of the body. That's why we've created a hair mask recipe to properly care for them. The substances in the hair are added knowing the benefits that can strengthen and darken the hair.

Keywords: curry leaves, Jatamansi, anti dandruff, hair growth herbal hair mask

I. INTRODUCTION:

Hair is one of the best gifts a person has. It is important to keep the hair nice and beautiful. Human hair requires special care and maintenance. Hot and cold weather, improper use of heat appliances (such as hair dryers, straighteners, and curling irons), exposure to UV rays from the sun, excessive use of alcohol and detergents, use of medical treatments, too much styling, and some causes hair damage from stress. Therefore, the hair will be dry and dull.

Split ends, rough texture, and itchy scalp

are also signs of damaged hair. Under these conditions, the demand for outsourced products has increased over time. Hair Mask is a hair treatment for men and women that leaves hair shinier, smoother, nourished and moisturized. Usually in paste form, it strengthens the roots, moisturizes the scalp, heals damage and gives good results for dandruff-free hair. A beard is essential for dry, damaged, curly or very long or thin hair.

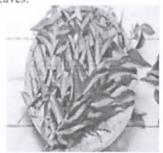
Gray hair is now common among young and old. This is because there are many pollutants that damage human hair, damaging the scalp and hair [2]. Yeasts such as

Malassezia feed on oil from the scalp of most adults, and dry skin sensitive to hair care products or other skin conditions such as contact dermatitis, psoriasis, and eczema also cause dandruff^[1].

Important studies on the preparation and evaluation of herbal hair masks. Unlike drugs, hair masks provide recovery treatment by penetrating deep into the hair shaft and solving the problem, while the latter leaves the hair softer and more manageable.

The hair mask should be used once or twice a week, depending on the condition of the hair, after shampooing and before the conditioner. Hair masks can be used for hair growth, dandruff, dry and frizzy hair, hair loss, damaged hair and many more.

Uses of herbal plants:-1.Curry leaves:



Most of the population relies upon herbal

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Research Article

Formulation and Evaluation of Herbal Hair Conditioner

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ABSTRACT

An essential component of the human body, hair shields the scalp. Following a shampoo, hair conditioner is a hair care product that is applied to the hair and hair tips to condition the hair before being rinsed out. Hair conditioner is used to make hair easier to manage and to give it a shiny appearance. Main focus to lessen friction between the hairs. Strands to make brushing and combing simpler. The main goal is to create the best hair care product that people will use, and to assess the finished product to see whether it has the desired effect on the user. Three different kinds of hair conditioners were They are called Herbal Hair Conditioner, Synthetic Hair Conditioner, and Ayurvedic Hair Conditioner, respectively. Herbal hair conditioner contains Aloe vera and flaxseed are the primary constituents. Then, based on different organoleptic characteristics and physicochemical criteria like pH, the Dirt Dispersion Test, moisturising time, cleaning action, and stability testing, all of the hair conditioner formulations were assessed and analysed. Nowadays, shampoos and other conditioner products are popular among consumers. Flaxseeds can maintain hair conditioning and stop hair loss. The nutritional powerhouse flaxseeds may also aid with hair repair. Omega-3 fatty acids and vitamin E are abundant in flaxseed. Mucilage if they're utilised to strengthen and smooth hair. A succulent plant with an active component is aloe vera. And elements that help hair grow stronger. Dermatologists many a times encounter questions from patients and even colleagues asking about how to keep their hair looking clean, healthy and beautiful. Therefore, familiarity and a basic knowledge of the available hair care products will help them to guide their patients properly. A shampoo not only provides the cleaning of the scalp skin and hair as its primary function, but in addition also serves to condition and beautify hair and acts as an adjunct in the management of various scalp disorders. To achieve this, various ingredients in the correct proportion are mixed to provide a shampoo which is suitable for individuals having different hair types and hair need. Among the ingredients that go into the making of a shampoo are detergents, conditioners, thickeners, sequestering agents, pH adjusters, preservatives and specialty additives. Hair conditioners are designed to improve hair manageability, decrease hair static electricity and add luster.

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"Extraction, Characterization and Formulation of Carica Papaya Leaves Extract"

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ABSTRACT

The study was design for extraction of the carica papaya leaves, characterization and formulation of gel. Herbal plants are traditionally utilized to treat various illnesses. They contain phytochemicals that can be extracted using conventional methods. In the development of the science and technology has subsequently made it possible to provide evidence that this plant useful as an in the medication, which have led to its direct usage in professional health care systems. The demand for the natural as well as plant-based phytochemicals has been increased by incorporating into a modern medical practice. The impact of its use, a selection of effective extraction method has always a challenge, because the important assure that the phytochemicals that are present in low concentrations from the plants that should be remain preserved and able to be used for the formulations of herbal products. Hence, we performed accurate and economical method for extraction. The fresh papaya leaves were collected and extracted by maceration process using of two different solvents such as ethanol and methanol. Phytochemical evaluation has been performed and the presence of alkaloids, flavonoids, saponins and phenols were observed. Along with determination of the ash value, Rf value has been evaluated. The extract was analyzed by IR spectroscopy for identification of phytochemical compounds. Then the gel were prepared by using carica papaya leaves extract and other excipients. The PH of prepared gel is calculated by using PH meter. The swelling index is calculated by comparing herbal gel to a blank gel as well as the spreadability study of carica papaya gel is studied effectively.

Keywords- Carica Papaya, Extraction, Phytochemicals, IR Spectra, Papaya leaves extract

I. INTRODUCTION

Plants are primary source of all such as medicines, fiber, food, shelters and the everyday use items by humans which made up of with use of roots, stems, leaves, flowers, fruits and seeds which is providing food and health supplement for humans. Plants serve as an irreplacible constituent of daily human diet that supplying the body with minerals salts nutrients, vitamins and some of hormone precursors, in addition to protein and energy(7)

Carica papaya is belongs to the family of Caricaceae. The several other species which belongs to family Caricaceae have been used as remedy against a variety of diseases (2). Papaya is plant which means Carica papaya L. is widely found in Indonesia and a native of Mexico and northern South America, is now naturalized in the many parts of the worldwide like including tropical and subtropical regions., some of countries of asia such as India, Bangladesh, China etc.(3,4) beside this it still being high and the export volume decreased from 2009 to 2020. This is showing clearly that it indicate the preservation of this plant become decreases and that leads to a lesser in the productivity(8)

Almost all parts of the plant carica papaya can be used in the human for the food or for medicinal purposes (3,4) Its fruits, leaves and the flowers are edible. Its roots can be used as medicine for the treatment of renal and urinary bladder problem, and its seeds are also have anthelmintic activity(5), Hence there is need to investigate and evaluation of common plants which are easily available, cheap, nutritive and renewable source of material as feed supplements. Papaya is a powerhouse of lots of nutrients and vitamins and is available throughout the year. It is a high content source of threes effective and powerful antioxidant

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