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1	Post covid-19 Mucormycosis (black fungus): a cases report	Research Journal of Pharmacy and Technology	2023	0974-3618	Scopus
2	Evaluation of anti-diabetic and anti-hyperlipidemic activity of prunusdulcis seed extract in streptozotocin induced diabetic rat	Pakistan Heart Journal	2023	2227-9199	Scopus
3	A systematic review on anxiety and their treatment with herbal and non-herbal drug	European Chemical Bulletin	2023	2063-5346	Scopus
4	Emerging trends of artificial intelligence in drug development	European Chemical Bulletin	2023	2063-5346	Scopus
5	Neuroprotective effect of of gymnema sylvestre in alloxan induced diabetic neuropathic in albino rats	European Chemical Bulletin	2023	2063-5346	Scopus
6	Evaluation of anti-anxiety activity of the leaves of cyanthillium cinereum	NeuroQuantology	2023	1303-5150	Scopus
7	Preventive role of sapindus species in different neurological and metabolic disorders	EXCLI Journal	2022	1611-2156	Scopus
8	Ethnobotanical notes and pharmacological overview of traditional plant: adhatoda vasica	Dermatological Reviews	2022	2637-7489	Scopus
9	Biomedical applications of holarrhena antidysenterica: an updated review	Azerbaijan Medical Journal	2022	0005-2523	Scopus/WOS
10	Stability studies and its consideration in drug product design: an updated review	Azerbaijan Medical Journal	2022	0005-2523	Scopus
11	Formulation of oro-dispersible tablets of faxofenadine hydrochloride and its evaluation	NeuroQuantology	2022	1303-5150	Scopus
12	Formulation and characterization of ketoconazole based floating drug delivery system	NeuroQuantology	2022	1303-5150	Scopus
13	Inhibitory effect of phenolic and flavonoidal content of h.indicum root extract on 1,1-diphenyl-2-picrylhydrazyl radicals	Research Journal of Pharmacy and Technology	2021	0974-360X	Scopus

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14	Magic shotgun nature with scattergun approach of curcumin repurposing in obsessive-compulsive disorder: a novel metaphysician of drug discovery	CNS & Neurological Disorders - Drug Targets	2021	1996-3181	Scopus/WOS
15	Systematic review and pharmacological potential of hibiscus rosa-sinensis as antidiabetic drug	PEXACY International Journal of Pharmaceutical Science	2022	--	Non Indexing
16	Factorial design executed development of miconazole nitrate microemulsion based bioadhesive gel and its evaluation	International Journal of Research and Review	2022	2454-2237	Non Indexing
17	In-vitro anthelmintic activity of herbal formulation in comparison with vidangasava and albendazole	Journal of Pharma Research	2019	2319-5622	Non Indexing
18	Osteoporosis - an ignored and silent bone disorder in indian women	Journal of Pharma Research	2019	2319-5622	Non Indexing



RESEARCH ARTICLE

Post Covid-19 Mucormycosis (Black fungus): A Cases Report

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ABSTRACT:

Objectives: COVID-19 (Coronavirus Disease 2019) infections have been related to a variety of fungal and bacterial co-infections. This case report includes the case of a COVID-19-infected patient who acquired rhino-orbital mucormycosis after undergoing COVID-19 treatment. We have discussed a COVID-19-infected patient who developed rhino-orbital mucormycosis during treatment in this case report⁸. **Case Report:** A 32-year-old female patient was admitted for treatment after testing positive for SARS-CoV-2 by reverse transcriptase polymerase chain reaction (RT-PCR). She was later diagnosed with rhino-orbital mucormycosis. She received dexamethasone i.v BD and on Oxygen over the course of the admission; she developed symptoms of orbital cellulitis after few days. Soft tissue edoema was found in the left eye and paranasal sinuses on magnetic resonance imaging (MRI). A nasal biopsy revealed broad aseptate filamentous fungal hyphae, which led to the diagnosis of mucormycosis. **Conclusions:** The use of steroids and oxygen therapy often may result in the development or worsening of a fungal infection. Doctors should be concerned about the possibility of secondary invasive fungal infections in patients who already have COVID-19 infection.

KEYWORDS: Covid-19 (Coronavirus Disease 2019), Oxygen therapy, Fungal infection, Mucormycosis, Black fungus.

INTRODUCTION:

The novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) viruses cause the coronavirus disease 2019 (COVID-19). It has been associated with a wide range of illnesses, from minor to life-threatening pneumonia^{1,2}. Mucormycosis is an uncommon opportunistic fungal infection that is frequently linked to severe immunological dysfunction³.

A number of bacterial and fungal co-infections, such as ventilator-related pneumonia, can be associated to pre-existing comorbidity or develops as a hospital-acquired infection^{4,5}. Mucormycosis is the third most frequent invasive fungal infection, having an impact with immunosuppression, corticosteroid treatment, or metabolic derangement such as diabetes and higher amounts of accessible serum iron due to acidosis or desferoxamine use⁶. The fungus comes into contact with humans through a variety of channels which include rhino-orbital-cerebral, cutaneous, pulmonary, gastrointestinal, and disseminated forms. Among all mucormycosis instances, rhino-orbital-cerebral mucormycosis is quite rare. We have discussed a COVID 19-infected patient who developed rhino-orbital mucormycosis during treatment in this case report⁸.

EVALUATION OF ANTI-DIABETIC AND ANTI-HYPERLIPIDEMIC ACTIVITY OF PRUNUS DULCIS SEED EXTRACT IN STREPTOZOTOCIN INDUCED DIABETIC RAT

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ABSTRACT

Amygdaline is naturally occurring chemical compound, it also known as laetrile or vitamin B17. Best known for being falsely promoted as a cancer cure. Amygdaline is a bitter substance and most found in the seed of apples, apricots, peaches, bitter almond and plums. In Indian cultural system of medicine the herbal remedies are prescribed for the treatment of various diseases including diabetes mellitus. In recent year plant are being effectively tried in a variety of pathophysiological state, Bitter Almond is one of them. PDWA extract is prepared by soxhlet extraction process with 50% of ethanol and characterized by High Performance Thin Layer Chromatography and Infra Red Spectroscopy. Non insulin dependent diabetes mellitus was induced in Wistar albino rats by intraperitoneal administration of streptozotocin (60mg/kg). At the end of experiment period of 21 days reduction in the fasting blood glucose level, serum insulin, serum lipid parameter and renal function biomarker were estimated in the controlled and treated rats. Histopathological examination of liver, kidney, and pancreas were also carried out. PDWA extract were given (250mg/kg and 500mg/kg) orally for the duration of 21 days as per protocol of treatment. Blood glucose level and various biochemical parameters were measured by glucometer and respective diagnostic kit. Such as cholesterol, triglyceride, LDL, HDL, VLDL and antioxidant parameter by using diagnostic kits. On administration of PDWA seed extract, studied blood glucose level of animal showed a significant decrease ($P < 0.001$) in elevated blood glucose level along with biochemical parameter it shows significant antihyperlipidemic activity and Antioxidant effects. The result showed promising effect of PDWA seed extract treatment as compared to treatment with the standard drug Metformin for Antidiabetic.

Keywords: Antidiabetic, Antihyperlipidemic, Antioxidant, Amygdaline, PDWA.

1. INTRODUCTION

The term diabetes mellitus is impairment to structural and functional proteins due to which it fails to maintain blood glucose homeostasis. Many research work and evidence state that oxidative stress play a pivotal role as carrier of Diabetes mellitus and its related complications, also it effective for both insulin action and insulin secretion [1]. After cardiovascular and cancer the diabetes is third most life threaten disorder to mankind. Therefore it's necessary to go through various dependent complications in patient with type 2 diabetes.

Nowadays in the field of herbal treatment and nutraceuticals plants play a very effective role for treatment of hyperglycemic activity till now about 800 plants are found to be helpful in diabetes mellitus [2]. Among this Bitter Almond is found to be miraculous to hyperglycemic activity and may possess potential to antidiabetic the presence of Amygdaline or vitamin B17 as a main constituent is a reason for supporting this plant as boom for antidiabetic activity. Bitter almond contains cynogenic glycoside. [3], [4] There are many fruit which contain cynogenic glycoside and on chewing, digestion there is release of hydrogen cyanide [5].

In some families of plant mostly cynogenic glycoside are found, such as Rosaceae, fabaceae, leguminosae, linaceae, and compositae and also it is mostly useful tool for informative taxonomic markers. There are about 25 known cynogenic glycoside which are mainly found in various edible part of plant such as Almond, plums, cherries, bamboo shoot, chick peas, cashew, cassava etc. Amygdaline is naturally occurrence chemical compound. Mainly it present in plant such as bitter almond, apricot, plum, peaches, black cherry and Nanking cherry [6], [7].

It classified as cynogenic glycoside. It include nitrile group by the action of a beta glycosidase it can release pestilential cyanide anion [8]. Amygdalus plant belonging to family Roseaceae. It contain flavonoids, phenols, antioxidant properties, glycosides and many more phytochemical, vitamins, minerals, unsaturated fatty acid, fiber which help to reduce the risk of chronic disease [9], [10]. A study by much researcher state that it is milestone helpful in many disease and disorder. It poses as memory enhancer and promotes change in dementia, provide antioxidant properties to reduce oxidative stress and elevating free radical formation [11], [12], antiatherogenic, inhibition of renal

A SYSTEMATIC REVIEW ON ANXIETY AND THEIR TREATMENT WITH HERBAL AND NON-HERBAL DRUG



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Abstract

Anxiety is a common emotional response characterized by feelings of worry, dread, and unease. It can manifest physically as sweating, agitation, and a rapid heartbeat. Anxiety is often triggered by stress, past trauma, or certain medical conditions. A mental illness like anxiety can drastically change a person's way of life and make it very difficult for them to afford therapy. Your body may begin to perspire, you may feel agitated and anxious, and your heart rate may increase. The various types of anxiety in this article with their systems are "Obsessive- compulsive disorder (OCD), Post-traumatic stress disorder (PTSD), Social phobia or social anxiety disorder (SAD), Specific phobia (SP) and Generalized anxiety disorders (GAD)". The 14% populations are experiencing and 2.5% children also in 1 year. The amygdala is a part of the brain that is essential for processing and controlling fear and anxiety. It takes in sensory information from the environment and communicates with other brain regions to start the "fight or flight" response. The treatment for antianxiety drug including Azapirones, Benzo-diazepines, Monoamine Oxidase inhibitor. In this article used the 32 herbal plant with part of plant treatment, types of extract, dose and various animal model used with significance of result

Keyword: Anxiety, Obsessive compulsive disorder, Drug Treatment, Herbal treatment, Social phobia.

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EMERGING TRENDS OF ARTIFICIAL INTELLIGENCE IN DRUG DEVELOPMENT

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Abstract

Drug discovery is an extended and challenging procedure with four primary stages: (i) target selection and validation; (ii) compound screening and lead optimization; (iii) preclinical research; and (iv) clinical trials. The combination of artificial intelligence (AI) with new experimental technologies is intended to improve the search for novel drugs faster, cheaper, and more effective. AI is the term used to describe the intelligence produced by human-made machines. It is a broad field of study that encompasses languages, cybernetics, neuro-physiology, psychology, and computer science. The drug development company is attracted to Artificial Intelligence technologies because of their robotic nature, predictive powers, and the resulting anticipated gain in productivity. Using feature-finding strategies, unsupervised machine learning can provide outcomes such as disease target and illness subtype detection. A new AI diagnostic tool is aware of when to consult a doctor. The ability of a new artificial intelligence diagnostic system to acknowledge its own limitations and seeks the aid of a carbon-based lifeform that may be able to make a more accurate judgment. The pharmaceutical and medical industries are anticipated to undergo a revolution due to artificial intelligence, according to a forecast rise of 40 percent from 2017 to 2024. Global pharmaceutical industry is working with artificial intelligence organization to build not only vital healthcare tools and drug molecules for rare disease but also for market research.

Keywords: Artificial intelligence, unsupervised machine, diagnostic tool, medical industries, rare disease

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NEUROPROTECTIVE EFFECT OF OF GYMNEMA SYLVESTRE IN ALLOXAN INDUCED DIABETIC NEUROPATHIC IN ALBINO RATS

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Abstract: The object of the study was to inspect the potential effect of Gymnemasylvestre (Gs) in Albino rat. Diabetes was induced via a single intra peritoneal injection of alloxan (100 mg/kg). Treatment with Gs extract (50 or 100 mg/kg/day) began two weeks following the administration of alloxan and was continued for five weeks. Diabetic neuropathy is defined as the damage of nerve due to high blood glucose level. High blood glucose level leads to many disease such as renal failure, cataract etc. Alloxan can selectively damage insulin-producing cell. In conclusion amitriptyline leads to no body weight gain, causes increase in grip strength.

Keywords: Gymnemasylvestre, Diabetic neuropathy, Albino rats, Alloxan, Amitriptyline.

INTRODUCTION:

Peripheral neuropathy is a trouble with an individual suffering from diabetes leads to renal failure cataract. Peripheral neuropathy causes nerve damage. It affects several part of our body i.e. leg, hand, Heart, etc. In this study, Albino rats were induced with alloxan with the combination of Metformin, Amitriptyline.[2] These include major depressive disorder and anxiety disorder and less commonly attention deficit hyperactivity disorder and bipolar disorder.[2][3] Other uses include prevention of migraines, treatment of neuropathic as fibromylgia and postherpetic neuralgia, an less commonly insomnia.[2][4] It is in the tricyclic antidepressant (TCA) class and its exact mechanism of action is unclear. Amitriptyline is orally given.[2] Amitriptyline is used for a number of medical conditions.[11][12][13] Some evidence suggests amitriptyline may be more effective than other antidepressants,[14]including selective serotonin reuptake inhibitors (SSRIs),[15] although it is rarely used as a first-line antidepressant due to its higher toxicity in overdose and generally poorer tolerability.[12]It is TGA-labeled for migraine prevention, also in cases of neuropathic pain disorders,[12] fibromyalgia[4] and nocturnal enuresis.[12][16] Amitriptyline is a popular off-label treatment for irritable bowel syndrome (IBS),[17] although it is most frequently reserved for severe cases of abdominal pain in patients with IBS because it needs to be taken regularly to work and has a generally poor tolerability profile, although a firm evidence base supports its efficacy in this indication.[17] Amitriptyline can also be used as an anticholinergic drug in the treatment of early-stage Parkinson's disease if depression also needs to be treated [18]. Amitriptyline is the most widely researched agent for prevention of frequent tension headaches.[19].Amitriptyline acts primarily as a serotonin-norepinephrine reuptake inhibitor, with strong actions on the serotonin transporter and moderate effects on the norepinephrine transporter.[34][35] It has negligible influence on the dopamine transporter and therefore does not affect dopamine reuptake, being nearly 1,000 times weaker on it than on serotonin.[35] It is metabolised to nortriptyline—a more potent and selective norepinephrine reuptake inhibitor—which may complement its effects



Evaluation of anti-anxiety activity of the leaves of *Cyanthillium cinereum*

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Abstract

Anxiety is a mental disorder that alters a person's way of life and places a heavy burden on the patient's ability to afford therapy. You can start to perspire, become agitated and anxious, and have fast heartbeat. The object of present investigation was in order to ascertain whether *Cyanthillium cinereum* (L.) H. Rob's methanolic extract had any anti-anxiety effects on mice. The physiochemical, phytochemical, and anti-oxidant activity of *C. cinereum* was examined. Different significant parameters, including ash value, moisture content, fiber content, and extractive values for extract with methanol, extract with ethyl acetate, extract with chloroform, and extract with water, were reported by physiochemical assessment. The phytochemical investigation revealed that *C. cinereum* contain alkaloid, saponin, flavonoid, terpenoids and phenol. The outcome demonstrated that methanolic extract the better solvent for Enhancement of methanolic extraction by FTIR and LCMS analysis. The anxiety activity of methanolic extract was determined and result of antianxiety activity recorded that significantly ($p < 0.0001$) increase the effect of diazepam 2mg/kg and plant extract 400mg/kg as compared with plant extract 100mg/kg and 200mg/kg compared data with control group. Thus, the study proved that methanolic extract of *C. cinereum* had good potential as anti-oxidant, antianxiety activity and thus this plant can be utilized as natural source for CNS activity.

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Introduction

History is a detailed narrative of humankind's past. It offers a way to assess and evaluate the development of human affairs and historical events, putting them into context. Through historical awareness and the present is more fully disclosed, judged, and understood, and it

can be more successfully interpreted and described given how it has influenced and molded the past [1]. Man is not only able to live in the present more successfully as a result of this improved understanding of the past via assessment and interpretation of the present, but he is also more equipped to forecast the



Letter to the editor:**PREVENTIVE ROLE OF *SAPINDUS* SPECIES IN DIFFERENT NEUROLOGICAL AND METABOLIC DISORDERS**

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Ethnobotanical notes and pharmacological overview of traditional plant: *Adhatoda vasica*

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Abstract

Background: *Adhatoda vasica* (Nees.) of the Acanthaceae family has excellent medicinal properties. It is a crucial ingredient in a number of formulations that have been used for decades in India to treat a wide range of health-related difficulties, including fever, jaundice, headaches, colds, cough, whooping cough, asthma, dyspnea, phthisis, chronic bronchitis, and diarrhea. In our country (India) and other countries, the *A. vasica* plant has great medicinal importance. In the Ayurveda system of treatment, this plant is frequently employed.

Aim: The aim of this comprehensive study is to provide updated information on the phytochemical and pharmacological activity of *A. vasica*.

Objectives: The stated objectives are to collect systematic data on the botanical description, phytochemistry, pharmacology, and toxicity of *A. vasica*, as well as detailed information on the many formulations that have conventionally been available on the Indian market.

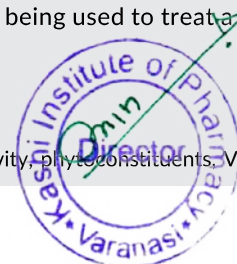
Method: The relevant information was obtained from a variety of peer-reviewed journals. Google Scholar, PubMed, ScienceDirect, and SciFinder were used to retrieve the journals.

Result: *A. vasica* is a rich source of therapeutic agents that may have the potential to treat a variety of illnesses, while a detailed investigation of pharmacological activity is needed to confirm the contributing mechanism.

Conclusion: *A. vasica* is an important medicinal shrub, abundantly found across India, and a rich source of several alkaloids, terpenoids, carbohydrates, and terpenoids that may be used therapeutically in the medical system for treating a range of illnesses. It is a key ingredient in several Ayurvedic and Unani preparations available on the Indian market that are being used to treat a variety of illnesses.

KEYWORDS

Adhatoda vasica, ethnobotanical uses, pharmacological activity, phytoconstituents, Vasaka



BIOMEDICAL APPLICATIONS OF *HOLARRHENA ANTIDYSENTERICA*: AN UPDATED REVIEW

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Keywords:

In vitro release test; yield stress;
comparability assessment; control
chart Studies on stability,
pharmaceuticals; dissolution.

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ABSTRACT

Background: Holarrhena antidysenterica is an herbal plant which found to be effective against several diseased conditions like anti-diabetic, anti-diarrhea, analgesic activity, anti-microbial, antihypertensive activity, anti-inflammatory, and anti-malarial, the whole plant of Holarrhena antidysenterica contains medicinal value like seeds, callus, stem, leaf and bark. It originates from the family Apocynaceae. It is used from ancient time and their traditional name was kada, kurchi or kutaj. Objectives: The goal of this study is to precise all pharmacological activities with therapeutic uses. Material and Methods: A bibliographic investigation from recognized scientific databases PubMed, ScienceDirect, Google scholar, etc. Clinical databases were also included in previous research papers from 1980 - 2022. Result: In this review, paper explores the knowledge about novthel use of Holarrhena antidysenterica which relates to their new pharmacological action and, harmacognostic studies (about stem, bark, leave, flower & root) including their toxicity studies. Conclusion: Holarrhena Antidysenterica is one the important plant for the treatment of various diseases like malaria, constipation, pile, diabetes, dysentery and other disease. This medicinal plant found very effect against worms from ancient time.



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Graphical Abstract



STABILITY STUDIES AND ITS CONSIDERATION IN DRUG PRODUCT DESIGN: AN UPDATED REVIEW

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Keywords:

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Abstract

The stability data package for a new drug substance or drug product that is required for an application for registration within the three regions of the EC, Japan, and the US is defined by the ICH Q1A guideline. It does not necessary aim to encompass testing for export or registration in other parts of the world. The guideline aims to provide an example of the essential stability data package for novel therapeutic substances and products, while also allowing for a wide range of possible practical situations that may arise due to particular scientific considerations and properties of the materials under evaluation. If there are reasons that can be supported by science, alternative methods can be applied.



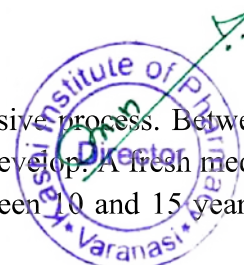
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Introduction

Stability Studies in New Drug Development

Drug life cycle

A fresh medicinal drug's development is a time-consuming and expensive process. Between 10 and 15 years may pass. A new drug would cost about \$500 million to develop. A fresh medicinal drug's development is a time-consuming and expensive process. Between 10 and 15 years may





Formulation of Oro-Dispersible Tablets Of Fexofenadine Hydrochloride And Its Evaluation.

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Abstract

The aim of this study was to design, formulate and physicochemically evaluate effervescent Fexofenadine hydrochloride tablets since they are easily administered while the elderly and children sometimes have difficulties in swallowing oral dosage forms. In present work we are used different acids and bases in different concentration. Effervescent Fexofenadine HCl tablets were prepared by direct compression methods. The powder blend and granule mixture were evaluated for various pre-compression characteristics, such as angle of repose, compressibility index, mean particle size and Hausner's ratio. The tablets were evaluated for post-compression features including weight variation, hardness, friability, drug content, dissolution time, carbon dioxide content, effervescence time, pH, content uniformity and water content. Effervescent systems with appropriate pre and post-compression qualities dissolved rapidly in water were selected as the best formulations. The results showed that the fexofenadine have high disintegration rate. In this study, citric acid, sodium bicarbonate and sweeteners (including mannitol and aspartame) were selected.

keywords: Effervescent tablet, Fexofenadine HCl, Direct compression method

INTRODUCTION

Oral delivery is the common mode of administering medication but having a disadvantage of lower bioavailability of the actives, which can be prevented by administering the active dosage form as a liquid, but most of the actives are unstable in solution form, hence by formulating the





Formulation and Characterization of Ketoconazole Based Floating Drug Delivery System

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Abstract

This study aims to develop a gastro-retentive Ketoconazole direct compression technology medication delivery system. Ketoconazole has 56 % bioavailability subsequently, immediately wiped out from blood course and required regular dosing. The ketoconazole stacked microspheres (F1-F9) of EC: HPMC were arranged utilizing different interaction factors like polymer proportion, drug focus, emulsifier fixation and blending speed. During *in vitro* buoyancy testing, the tablet axially and dramatically expanded. The tablet was seen to stay buoyant for 20–24 hours. The final formulation had a floating lag time of no more than 35 sec, and the tablet remained floatable throughout all experiments, releasing about 89.21% of the medication in 24 hours *in vitro*. When compared to formulations having HPMCK 4 M, it was discovered that the tablets containing HPMCK 15 M floated for a longer period of time. Ketoconazole was discovered to release in a way that resembled a synthesis of the zero order release, Hixson-Crowell, and Korsmeyer-Peppas models. The non-Fickian transport of the medication from tablets was confirmed, and the drug release from the tablets was sustained as intended.



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RESEARCH ARTICLE

Inhibitory effect of Phenolic and Flavonoidal content of *H.indicum* Root Extract on 1,1- diphenyl-2-picrylhydrazyl radicals

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ABSTRACT:

The present work was targeted to determine the total phenolic and flavonoidal content along with the determination of anti-oxidant behavior of methanolic root extract of *Heliotropium indicum* linn. The result reveals that 400 ± 7.31 mg Gallic acid equivalent of phenolic content and 540 ± 59.34 mg quercetin equivalents of flavonoidal content was present in per gram dry weight of plant extract. The antioxidant data obtained from the work reveal that as the concentration increases the radical scavenging activity also increased. At 1000 $\mu\text{g/ml}$ it has shown 91% inhibition. From this study, It was understood that anti-oxidant behavior of root extract is associated with total phenolic and flavonoidal content of extract.

KEYWORDS: *Heliotropium indicum*, total phenolic content, total flavonoidal content, anti-oxidant behavior, 1,1- diphenyl-2-picrylhydrazyl (DPPH) radicals.

INTRODUCTION:

Reactive oxygen species (ROS) are the responsible cause of oxidative stress. These species are formed as by-products in the cells of aerobic living body. This leads to conversion of target molecules into free radicals and damage resulted¹. ROS include family of oxygen-containing extremely reactive & free radicals. Examples are superoxide (O_2^-), hydroxyl radicals (OH^-), singlet oxygen, hydrogen peroxide (H_2O_2), and lipid peroxides². ROS are having very short $\frac{1}{2}$ lives. They cause damage to main components of cell like proteins, lipid and DNA. This damage resulted in a chronic disorder like atherosclerosis, neurodegenerative disease, cancer, inflammation, aging etc^{3,4,5}. ROS resulted in decrement of proliferation of cell and modulation of apoptosis and cell differentiation⁶. Epidemiological evidence pointed that aging and rise in ROS are possible cause of bone loss in humans as well as in animals⁷.

Under standard physiological circumstances, cells of our body can wrestle free radical or oxidative tension by its antioxidant defense mechanism. Many endogenous guards are present inside our body, like chelating proteins, glutathione peroxidase, antioxidant enzymes catalase & superoxide dismutase⁸. Exogenous antioxidants derive from food, available in fruits & vegetables. Phytoconstituents like carotinoids, lycopene, polyphenols & vitamin C and E are effective antioxidant⁹. When endogenous or exogenous antioxidants are not able to resist oxidative damage, DNA repair enzymes, transferase, protease and lipase came into play¹⁰. When antioxidants defeated in fight against oxidative stress, disorder related to oxidative stress grow, which may include cancer, cardiovascular disease, diabetes, osteoporosis and neurological diseases¹¹.

Heliotropium indicum linn. Belongs to family Boraginaceae. Hatishur is local name of *H. indicum*. It is an herb distributed throughout in India. In folklore systems and traditional medicine systems *Heliotropium indicum* was employed for treating a variety of diseases. *Heliotropium indicum* was used by traditional healers of Kancheepuram in Tamil Nadu for nervous disorders,

> CNS Neurol Disord Drug Targets. 2021;20(10):975-981. doi: 10.2174/1871527320666210506185510.

Magic Shotgun Nature with Scattergun Approach of Curcumin Repurposing in Obsessive-compulsive Disorder: A Novel Metaphysician of Drug Discovery

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Systematic Review and Pharmacological Potential of *Hibiscus Rosa-Sinensis* as Antidiabetic Drug

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Devi Ram Sagar Jha College of Pharmacy***

Abstract: The *Hibiscus Rosa-Sinensis* is a flower that has been used in traditional Chinese medicine for centuries. Recently, there has been renewed interest in the potential health benefits of this flower, particularly with regards to its Antidiabetic effects. A number of studies have shown that the extract from *Hibiscus Rosa-Sinensis* can help to lower blood sugar levels in people with diabetes mellitus, and it is thought that this may be due to the presence of certain compounds within the plant that have hypoglycemic activity. The exact mechanisms by which *Hibiscus Rosa-Sinensis* lowers blood sugar levels are not fully understood at present, but it is thought that it may work by stimulating insulin secretion from the pancreas or by improving glucose tolerance.

Keywords: *Hibiscus Rosa-Sinensis*, Antidiabetic Drug, Herbal Antidiabetic Drug, Traditional Medicines

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INTRODUCTION

Hibiscus rosa Sinensis is a species of hibiscus native to east Asia. It is known by many names, including China rose, shoe flower,

and Hawaiian hibiscus. It is a Malvaceae family member, including okra, cotton, mallows, and hollyhock. *Hibiscus Rosa Sinensis* is an evergreen shrub or small tree

Factorial Design Executed Development of Miconazole Nitrate Microemulsion Based Bioadhesive Gel and Its Evaluation

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ABSTRACT

Miconazole nitrate (MN) is a poorly aqueous soluble antifungal drug. The microemulsion (ME) based bioadhesive antifungal gel of MN was designed to improve the antifungal activity by increasing the bioadhesion potential. Based on the solubility results, components of ME were selected viz. rice bran oil: tween 80: propylene glycol and proceeded with pseudo-ternary phase diagram studies. 2³ factorial design was employed for the formulation of MEs employing water titration technique. The MEs was examined for further studies and was optimized using DESIGN EXPERT 12 software considering the responses like globule size, zeta potential and *in vitro* drug release. Tamarind seed polysaccharide (TSP) and carbopol 934 were used as gel bases for the formulation of microemulsion-based bioadhesive gels. The gels were examined for drug content, pH, spreadability, viscosity, bioadhesive strength, *ex vivo* drug permeation and *in vivo* skin irritation potential. The antifungal activity against *Candida albicans* and *Cryptococcus neoformans* of four formulations (MN-ME, MN-ME based TSP gel, MN- ME based carbopol gel and marketed miconazole gel (2% Miconazole gel) was evaluated using modified agar diffusion method. The results revealed that microemulsion based bioadhesive gel (MBG) of TSP and CP exhibited drug content of about 87.29% and 83.34% and *ex vivo* skin permeation of 84.21% and 73.94% at the end of 10 h. MBG of TSP showed better antifungal

activity and no skin irritation potential in comparison to the carbopol gel. Therefore, MBG of TSP has the ability to enhance the contact time owing to greater bioadhesion thereby providing a better therapeutic activity.

Key Words: Miconazole nitrate, Tamarind Gum, Topical delivery, Microemulsion based bioadhesive gel, fungal infection.

1. INTRODUCTION

Microbial invasion into the skin is the main reason for skin infections. Microbes generally remains in dormant state and feed off the dead skin cells. However, due to non hygienic habits, the fungi reproduce quickly, resulting in an infection. Candidiasis, Athlete's foot and ringworms are a few of the general skin conditions. Fungal conditions occurs more frequently in immuno suppressed patients with diabetics, HIV infected patients, individuals on steroids or cancer treatment, etc [1]. The incidence of fungal infections of skin is escalating throughout the world. Around 40 million people have been suffering from fungal infections. With the fungal infections immune system functioning will get hindered which makes a promising progression in the disease. Dermatophytes and candidal infections are the most frequent fungal infections affecting skin. Topical antifungal agents have been administered as antifungal

**Research Article****IN-VITRO ANTHELMINTIC ACTIVITY OF HERBAL FORMULATION IN COMPARISON WITH VIDANGASAVA AND ALBENDAZOLE**Vivek Keshri ^{1*}, Dr. K. Rajeshwar Dutt ²¹ Ph. D Research Scholar, Shri Jagdish Prasad Jhabarmal Tibrewala University, Jhunjhun, Rajasthan, INDIA.² Ph.D Research guide, Shri Jagdish Prasad Jhabarmal Tibrewala University, Jhunjhun, Rajasthan, INDIA.

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ABSTRACT

Herbal plants received great attention, when the world faces the problems like resistance against the drugs used for the treatment of Helminth and cost of treatment. Novel active compounds and metabolites are reported in various plants, which are now been recognized for its uses in treatment of various diseases. In the past, various plants were used for the treatment of many diseases but because of less data availability not came into the knowledge. In the present study, I developed herbal formulation of various concentration and evaluated for its In- vitro anthelmintic activity. This formulation was developed from two important plants *H. indicum* and *S. indicum*. Albendazole and vidangasava was taken as standard drugs (25, 50 and 100mg/ml). My result suggests that formulation at different concentration is having anthelmintic property. The property is because of the presence of a potent phytoconstituent known as tannin. Further I am looking forward to isolate the active constituent and in vivo study of the formulation.

KEYWORDS: *Heliotropium indicum*, *Sesamum indicum*, Albendazole, Vidangasava, Anthelmintic activity.**INTRODUCTION**

Global attention toward the herbal medicine is increasing because of its health related benefits and monetary aspect. Herbs are the source of many secondary metabolites. These metabolites are used as potent drugs in traditional and other medicine system from time immemorial. Cases of antibiotic resistance, adverse effect of synthetic medicine and various type of infection has been increased from past few decades. The improvement in phyto-chemistry and detection of novel bioactive components from herbs has changed the reputation of herbal medicines [1].

As per WHO, helminth infect more than 1.5 billion of people all around the earth. Anemia, pneumonia, eosinophilia, and malnutrition are the most important health issues related to these helminthic infections. There are around 350 species of helminths, of them *Ascaris lumbricoides* (round worm), *Pheritima posthuma* (intestinal round worm), *Ancylostoma duodenale* (hookworm), *Trichuris trichura* (whipworm), *Taenia solium* (tapeworm), and *Strongyloides stercoralis* (thread worm) are the main causative means of helminthiasis

transmitted through soil [2]. The largest part of human population is suffering from infection of helminths in developing and less developed countries. This infection creates a key challenge to public health and it is mainly faced by millions of school children. Helminths are worm-like organisms which lives and obtain food from the alive host and upset the absorption mechanism of nutrition. Undeveloped forms of the parasite invade human via the skin or GI tract and enlarge into healthy adult worms. Worms are mostly present in the GI tract but can also affect liver & other major organ. Infected person excrete eggs of helminth in faeces, which further contaminate soil. When other person are coming in contact with these eggs or larvae, are receiving infection. This infection has severe morbidity like filariasis, schistosomiasis etc [3].

Anthelmintics are the anti-parasitic medicines which locally act to eject worms out of gastrointestinal tract or systemically to eradicate adult helminths with no significant harm to the proprietor [4]. Most commonly used drugs are albendazole, mebendazole, livamisol praziquantel, diethyl carbamazine, and ivermectin. These drugs are acting by paralysing the worm, hurting the parasite such that our immune can eliminate it, or by altering its metabolic process. As the metabolic requirements vary from species to species, drugs which are highly efficient against one worm are useless against others. Since the prevalence of helminth infections is common, its treatment is of practical therapeutic importance although available synthetic drugs have some potential side effects [5]. The cost and limited accessibility of these medicines call for the explorer of other economical anthelmintic agents. Development of resistance to the majority of the commercially available anthelmintics drugs are turn into a brutal problem worldwide.

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**Review Article****OSTEOPOROSIS - AN IGNORED AND SILENT BONE DISORDER IN INDIAN WOMEN****Vivek Keshri ****Ph.D Research Scholar, Shri Jagdish Prasad Jhabarmal Tibrewala University, Jhunjhun, Rajasthan, INDIA.***Received on: 23-06-2019; Revised and Accepted on: 25-07-2019****ABSTRACT**

Osteoporosis is a silently appearing, multifactorial, metabolic condition of bone in India. Most of the Indian women are having symptoms of osteoporosis like less bone mass, corrosion of bone micro-architecture. These symptoms collectively results in fracture. Osteoporotic fractures are foremost cause of mortality and morbidity in Indian women. Women susceptibility towards osteoporosis is thrice more than that of men. Now days it has become a health challenge for India. The burden increased by this disease is yet not quantified because limited availability of the data. Major contributors of this disease in India are sex inequity, long life, menopause before time, genetic polymorphism, poor diagnostic facilities, diet with less calcium and vitamin D etc. Drugs used as first line treatment are bisphosphonate, vitamin D and calcium. Choice of other drugs depends upon its availability, costing to the patient. The choice of other drugs in India needs more evaluation. With review I found that early diagnosis, advance diagnostic technique, awareness, patient education and proper management can leads to reduction the burden by osteoporosis. More research needed in above said areas.

Key words: Osteoporosis, India, Epidemiology, Post- menopausal condition.

INTRODUCTION

About fifty percent of the world population is constituted by women. But with respect to status in society, they are always compromised. Men are getting more privileges than women in all respect. In western culture it is quite different; women are treated equally with respect to men. If we will have a look on Indian population, we will find unequal sex ratio. Even they are not given right to walk and work equally like men [1].

A time was there when women were supposed to be like goddess. Now we are running in the 21st century where women in India are not getting the position of goddess instead treated as slaves. They are deprived from their education, status and health. From these situations, Women empowerment concept developed. This cell gives women equality like men in all respect.

In India still the standard of this cell depend on location, standard of education, social aspects, age etc. The cell is present at national, state, and ground level of education, employment, participation in politics, health, equality in

property etc. But still practical situation is far from what it must be.

Being as a pharmacy professional, we reviewed the status of prevalence, diagnosis and treatment of Osteoporosis in Indian women. Osteoporosis is a silent metabolic disease having feature of low value of bone mass and disorganization in the architecture of bone, ultimately leading to increase in fragility and fracture of bones. Fractures may occur in association with pain, disability, suffering and even death of the subject. Osteoporosis is an asymptomatic disease [2].

Number of people of age group more than 60 has increased. The expected life of an individual in India is currently about 67 years. This value is expected that will rise to 71 upto 2025 and further upto 2050 it will be around 77 years. Nearly 10 percent of the total population of India belongs to an age group of more than 50 years. This is also expected to be increased upto 34 percent upto 2050. This will leads to hike in the number of person with Osteoporosis [3].

As we know that vitamin D is important to maintain bone health. Insufficiency of vitamin D has been found in all age in India, even India is having full exposure to sun light. Because of social and cultural reason, women are less exposed to sunlight. Even their diet provides only about 10% of total required amount of vitamin D. It was also reported that Asian are having higher activity of hydroxylase enzyme. These all constitute a condition called Hypovitaminosis D [4].

Calcium made its reservoir in bone upto 30 years. The deposition of calcium in bone depends upon nutritional intake

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