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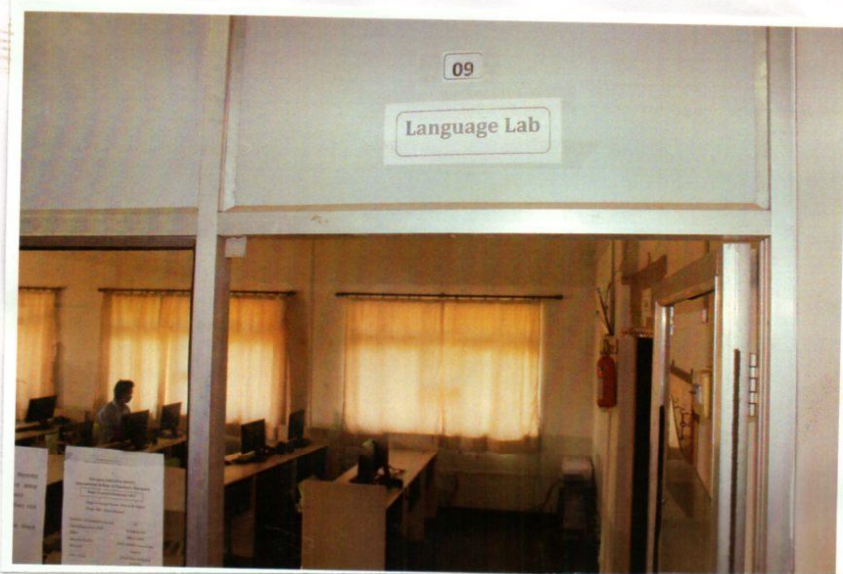
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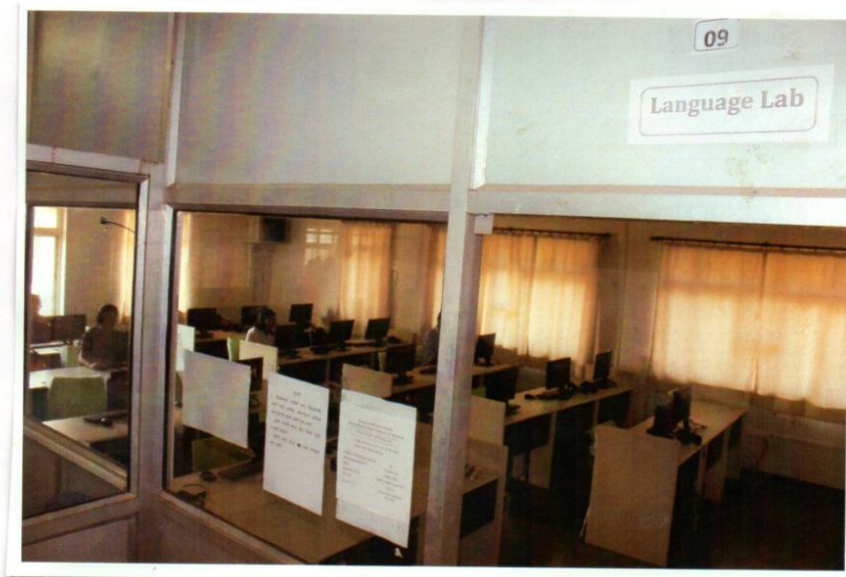


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LANGUAGE LAB



**KASEGAON EDUCATION SOCIETY'S  
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**List of Publications with B. Pharm students**

<b>Sr. No</b>	<b>List of Authors</b>	<b>Student Name with academic Year and Class</b>	<b>Guide Name</b>	<b>Publication Title</b>	<b>Publication Details (Journal Name, Publication Year, Issue No, Volume No, Page No)</b>
1.	Somnath Devidas Bhinge, Mangesh Anil Bhutkar, Dheeraj Suhas Randive, Ganesh Hindurao Wadkar, Tejashri Suresh Hasabe	Tejashri Suresh Hasabe, Final Year Student, 2015-16	Somnath Devidas Bhinge	In vitro hypoglycemic effects of unripe and ripe fruits of <i>Musa Sapientum</i>	Brazilian journal of Pharmaceutical Sciences, 2017;53(4):e00159, 1-6
2.	Somnath D. Bhinge, Mangesh A. Bhutkar, Dheeraj S. Randive, Ganesh H. Wadkar Sachin S. Todkar, Poonam Kakade, Pratiksha Kadam	Poonam Kakade, Pratiksha Kadam Final Year B. Pharm, 2016-17	Somnath Devidas Bhinge	Development and evaluation of antimicrobial polyherbal gel	Annales Pharmaceutiques Françaises– Elsevier 2017, 75(05), 349-358
3.	Somnath D Bhinge, Prachi Desai, Chandrakant S Magdum	Prachi Desai Final Year B. Pharm, 2014-15	Somnath D Bhinge	In vitro anthelmintic activity of leaves extract of adhatoda vasica nees. (acanthaceae) against eudrilus eugeniae	Dhaka Journal of Pharmaceutical Sciences, 2015, 14(02), 17-18
4.	Sahil Shah, Samadhan Shelke, Priyanka Annaso Patil* and Dr. C.S. Magdum	Sahil Shah, Samadhan Shelke, Final Year Student, 2014-15	Priyanka Annaso Patil	“A Study On Drug Utilization Pattern Of Antidiabetic Drugs In Rural Areas Of Islampur And Kasegaon At Maharashtra”,	International Journal Of Research In Pharmacy And Chemistry, 2017, 7(1), 60-62
5.	<b>Akshada N. Kakade,</b> Shrikant B. Deshmukh, Pankaj P. Chothe, Vishal V. Khot, Dr. Shrinivas K. Mohite, Dr. Chandrakant S. Magdum,	Shrikant b. Deshmukh, pankaj P. Chothe(2012)	Akshada kakade	A new simple method for determination of partition coefficient by normal phase thin layer chromatography (tlc).	Asian j. Research chem. (ajrc). 5(7): july, 2012; 922-924

6.	<b>Akshada kakade</b> , Yuvraj Dange, Pradip Patil, Sanjay Pawar, Swapnil Patil, C.S. Magdum and S.K. Mohite,	Pradip Patil(2014)	Akshada kakade	A review on <i>cissus quadrangularis</i> and evaluation of its <i>in- vitro</i> anthelmintic activity,	Cibtech journal of pharmaceutical sciences,2014; vol.3 (1) january-march, pp.1-5
7.	Mr.S.R.Pawar, <b>Mrs.A.N.Ka kade</b> ,Dr.C.S.magdum,Dr.S. K. mohite,	Mr.S.R.Pawar(2015)	Akshada kakade	Zebrafish as dynamic organism for regeneration of organ in parkinsonism,	International journal of universal pharmacy and bio sciences 4(2): march-april 2015,6-11
8.	<b>Akshada kakade</b> , Divya Yadav, Pranoti Bhonjale, Pallavi Velapure, Akshay Vedpathak and Prajyoti Hiware	Divya yadav, Pranoti Bhonjale, Pallavi Velapure, Akshay Vedpathak and Prajyoti Hiware(2016)	Akshada kakade	A new approach of , formulation and evaluation of herbal sindoor powder and stick from herbal ingredients.	Ejbbs, 2016, volume 3, issue 11, 251-253
9.	Indrayani. D. Raut, Devkar Swati R., Devkar Preeti R., , S. K. Mohite, C. S. Magdum,	Devkar Swati R., Final Year Student, 2012-13	Indrayani D. Raut	Comparative study of Glimepride tablets of various marketed formulation	International Journal of Pharmaceutical Research and Development Vol-04 (05), July 2012, 83-90
10.	Bhagyashree S. Patil, I.D. Raut, M.A. Bhutkar, S.K. Mohite	Bhagyashree S. Patil Final Year Student, 2013-14	Indrayani D. Raut	Evaluation of anthelmintic activity of leaves of <i>Tragia involucrata</i> Linn	Journal of Pharmacognosy and Phytochemistry 2015; 4(1): 155-159 E-ISSN: 2278-4136 P-ISSN: 2349-8234
11.	Raut Indrayani D ,Mane Pallavi , Mane Dipak, Mohite S.K, Magdum C.S.	Mane Pallavi , Mane Dipak,Final Year Students, 2014-15	Indrayani D. Raut	Design And Characterization Of Fast Dissolving Tablets Of Valsartan Using Synthetic And Natural Superdisintegrants	International Journal of Advanced Research (2015), Volume 3, Issue 3, 1207-1212 ISSN 2320-5407
12.	Indrayani D. Raut, Dipak S. Gumate, Tushar Chavan, Swati	Tushar Chavan, Swati Chavan Final Year B.	Indrayani D. Raut	Survey On Anti-Hypertensive Drugs	Indo American Journal Of Pharmaceutical Sciences

	Chavan	Pharm students, 2014-15			
13.	Indrayani D. Raut, Akshada N. Kakade , Jadhav Snehal, Jadhav Priyanka, Kabir Amruta	Jadhav Snehal, Jadhav Priyanka, Kabir Amruta Final Year B. Pharm students, 2015-16	Indrayani D. Raut	Survey on Antidiabetic Drugs	Research Journal of Pharmacology and Pharmacodynamics. 9(1): January -March, 2017 ISSN 0975-4407 (Print) 2321-5836 (Online)
14.	P. P. Honmane, P. S. Kore , Mahesh Wakshe*, Tanya Pawar, Shubhangi Thorat	Mahesh Wakshe*, Tanya Pawar, Shubhangi Thorat Third Year Student, 2017-18	P. P. Honmane	Niosomes: Advanced Drug Delivery System	International Journal Pharmacy & Pharmaceutical research , Review Article March 2018 Vol.:11, Issue:4
15.	Somnath D. Bhinge, Mangesh A. Bhutkar, Dheeraj S. Randive, Ganesh H. Sanjeeva Y. Kamble, Pooja D. Kalel, Sneha S. Kadam	Sanjeeva Y. Kamble, Pooja D. Kalel, Sneha S. Kadam Final Year Students 2015-16	Somnath D. Bhinge	Formulation development and evaluation of polyherbal gel containing extracts of <i>Azadirachta indica</i> , <i>Adhatoda vasica</i> , <i>Piper betle</i> , <i>Ocimum tenuiflorum</i> and <i>Pongamia pinnata</i>	Marmara Pharmaceutical Journal, 2019, 23(1), 44-54.
16.	Kajal N Patil, Prajkta S Patil, Trupti D Dudhgaonkar, Shriniwas K Mohite, Chandracanth S Magdum	Kajal N Patil, Prajkta S Patil Final Year Students 2015-16	Trupti D Dudhgaonkar	Ayurvedic and Allopathic Antidiabetic Formulations Available in Market	IJSRST, <b>2016</b> , 2(2), 232-242
17.	Omkar A Patil, Prajkta S Patil, Trupti D Dudhgaonkar, Shriniwas K Mohite, Chandracanth S Magdum	Omkar A Patil, Prajkta S Patil Final Year Students 2015-16	Trupti D Dudhgaonkar	A Review on Anticancer Drug from Marine	IJSRST, <b>2016</b> , 2(4), 243-253
18.	Sharmila T Patil, Ruchita A Patil, Trupti D Dudhgaonkar, Shrinivas K Mohite, Chandrakant S Magdum	Sharmila T Patil, Ruchita A Patil Final Year Students 2015-16	Trupti D Dudhgaonkar	Attention Deficit Hyperactivity Disorder	IJSRST, <b>2016</b> , 2(2), 243-253

19.	Prajakta S Patil, Trupti D Dudhgaonkar, Shrinivas K Mohite, Chandrakant S Magdum	Prajakta S Patil, Ruchita A Patil Final Year Students 2015-16	Trupti D Dudhgaonkar	A Review On : Phytochemicals As Nutraceuticals	IJSRST, <b>2016</b> , 2(2), 254-260
20.	Ruchita A Patil, Trupti D Dudhgaonkar, Shrinivas K Mohite, Chandrakant S Magdum	Ruchita A Patil Final Year Students 2015-16	Trupti D Dudhgaonkar	Microwave Assisted Synthesis, Characterization And Antibacterial Activity Of 2- Chloromethyl Benz Imidazole Derivatives	IJSRST, <b>2016</b> , 2(4), 243-249
21.	Shital. S. Shinde, Ashwini. G. Sonavane, T. D. Dudhgaonkar, A. R. Dhole, C. S. Magdum	Shital. S. Shinde, Ashwini. G. Sonavane Final Year Students 2015-16	Trupti D Dudhgaonkar	Comparative Standardization Study of Two Marketed Hingvashtak Churna Formulation	IJSRST, <b>2016</b> , 2(2), 269-274
22.	Kiran P Patil, Omkar A Patil, Trupti D Dudhgaonkar, Shrinivas K Mohite, Chandrakant S Magdum	Kiran P Patil, Omkar A Patil Final Year Students 2015-16	Trupti D Dudhgaonkar	A Review On : Herbal Anticancer Drug	IJSRST, <b>2016</b> , 2(2), 261-268



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ORIGINAL ARTICLE

## Formulation development and evaluation of antimicrobial polyherbal gel

*Développement et évaluation de la formulation d'un gel polyherbal antimicrobien*

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G.H. Wadkar, S.S. Todkar, P.M. Kakade, P.M. Kadam

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Received 13 February 2017; accepted 27 April 2017

### KEYWORDS

Polyherbal gel;  
Antibacterial  
Activity;  
Patch test

### Summary

**Objective.** – In the recent years, there has been a gradual revival of interest in the use of medicinal plants in developing countries because herbal medicines have been reported safe with minimal adverse side effect especially when compared with synthetic drugs.

**Method.** – In the present study we prepared gel formulations (formulations A and B) which comprised of ethanolic extract of *Azadirachta indica*, *Curcuma longa*, *Allium sativum*, *Ocimum sanctum*, *Cinnamomum zeylanicum* and *Tamarindus indica* in a concentration of 0.1 and 0.5%, respectively in a base. The base was prepared by using carbapol 940, propylene glycol-400, ethanol, methyl paraben, propylparaben, EDTA, triethanolamine and required amount of water in a quantity sufficient to prepare 50 g. The prepared formulations were screened for their antimicrobial activity by agar well diffusion technique against *S. aureus*, *B. subtilis*, *A. niger* and *E. coli* which are representative types of Gram positive and Gram negative organisms. The formulations were also evaluated for appearance and homogeneity, pH, viscosity and rheological studies, spreadability, drug content uniformity, skin irritation test (Patch test) and washability.

**Result.** – The results of the studies revealed that both formulation under study viz A and B showed better zone of inhibition as compared with the base. However, formulation B exhibited maximum activity against the selected strains which may be attributed to its greater amount of herbal extracts as compared to formulation A.

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## *In vitro* hypoglycemic effects of unripe and ripe fruits of *Musa sapientum*

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Ganesh Hindurao Wadkar, Tejashri Suresh Hasabe

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The present study was undertaken to verify the hypoglycemic potential of unripe and ripe fruit extracts of *Musa sapientum* by using various *in-vitro* techniques, namely glucose adsorption capacity, glucose diffusion, amylolysis kinetics and glucose transport across the yeast cells. The results revealed that the unripe and ripe fruit extracts of *Musa sapientum* adsorbed glucose and the adsorption of glucose increased remarkably with an increase in glucose concentration. There were no significant ( $p \leq 0.05$ ) differences between their adsorption capacities. In the amylolysis kinetic experimental model the rate of glucose diffusion was found to be increased with time from 30 to 180 min and both extracts exhibited significant inhibitory effects on the movement of glucose into external solution across the dialysis membrane as compared to control. The plant extracts also promoted glucose uptake by the yeast cells and enhancement of glucose uptake was dependent on both the sample and glucose concentration. The hypoglycemic effect exhibited by the extracts was observed to be mediated by inhibiting  $\alpha$ -amylase, inhibiting glucose diffusion by adsorbing glucose and by increasing glucose transport across the cell membranes as revealed by an *in-vitro* model of yeast cells.

**Keywords:** Diabetes mellitus. Hypoglycemic effect/study. Glucose diffusion. Yeast cells. *Musa sapientum*/effects.

### INTRODUCTION

Diabetes mellitus is a metabolic disorder characterized by chronic hyperglycemia and disturbances of carbohydrate, protein and fat metabolisms, secondary to an absolute or relative lack of the hormone insulin (Bhutkar, Bhise, 2012; Bhutkar *et al.*, 2016). There is a global increase in the prevalence of diabetes mellitus predominantly, related to lifestyles and the resulting surge in obesity (King *et al.*, 1998). It has been estimated that about 171 million people worldwide suffer from diabetes mellitus (Roglic *et al.*, 2004). The incidence of prediabetes and diabetes is increasing and imposes a great burden on healthcare worldwide. Patients with prediabetes and diabetes have significantly increased risk for cardiovascular diseases and other complications. Currently, management of hyperglycemia includes pharmacological interventions, physical exercise, and

change of lifestyle and diet (Deng, 2012). The use of orthodox drugs in the management of diabetes mellitus has not improved the situation. Management of diabetes without any side effects is still a challenge in the medical field, as presently available drugs for diabetes have one or more adverse effects (Bohannon, 2002). Since the existing drugs for the treatment of diabetes mellitus do not satisfy our need completely, the search for new drugs continues. Food stuffs and supplements have increasingly become attractive alternatives to prevent or treat hyperglycemia, especially in subjects with mild hyperglycemia (Bhutkar, Bhise, 2011; Deng, 2012). Therefore, there has been increasing demand for the use of plant products and food stuffs with antidiabetic activity due to low cost, easy availability and lesser side effects. Plants are well known in traditional medicine for their hypoglycaemic activities. Ayurveda, the most ancient system of medicine plays an important role for prevention and cure of diseases and for achieving and maintaining excellent health (Randive *et al.*, 2016; Savali, Bhinge, Chittapurkar, 2011). Available literature indicates that there are more than 800 plant species showing hypoglycaemic activity (Rajagopal,

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# ***In vitro* Anthelmintic Activity of Leaf Extracts of *Adhatoda vasica* Nees (Acanthaceae) Against *Eudrilus eugeniae***

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**Received: May 11, 2015; Accepted: August 03, 2015; Published (web): January 31, 2016**

**ABSTRACT:** The present study specifically indicated that the crude ethanolic and aqueous extracts of the leaves of *Adhatoda vasica* Nees produced anthelmintic activity against african earthworm *Eudrilus eugeniae*. Various concentrations (10, 25, 50 mg/ml) of aqueous and ethanolic extracts were evaluated in the bioassay involving determination of time of paralysis (P) and time of death (D) of the worms. Albendazole was used as standard anthelmintic drug and distilled water was used as negative control. The results of the present study indicated that the ethanolic and aqueous extracts significantly exhibited paralysis of worms in lower doses (10, 25 and 50 mg/ml) and also caused death of worms at higher concentration of 50 mg/ml, as compared to standard drug. Further studies are in process to isolate the active principle responsible for the activity.

**Key words:** Albendazole, anthelmintic activity, *Adhatoda vasica*, *Eudrilus eugeniae*

## **INTRODUCTION**

Helminthes infections or helminthiasis are among the most the pervasive infection. It is degenerative disease distressing a large proportion of world's population. In developing countries, they pose a serious threat to public health and contribute to the prevalence of malnutrition, anemia, eosinophilia and pneumonia.<sup>1</sup> Highly effective and selective anthelmintic drugs are available, but such compounds must be used correctly, judiciously, and with consideration of the parasite/host interaction to obtain a favorable clinical response, accomplish good control, and minimize selection for anthelmintic resistance. So the research for new agents is continuing.

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Leaves of *Adhatoda vasica* nees is a shrub native to Asia, commonly known as Malabar nut, which grows also in Sri Lanka, Nepal, India and the Pothohar region of Pakistan and in the Pharwala area.<sup>2</sup> It has multiple traditional uses in folk medicine. Mostly it is used in the treatment of asthma and cough.<sup>3</sup> Additionally, they are used in cold, cough, whooping cough, chronic bronchitis and asthma as sedative expectorant, antispasmodic and anthelmintic.<sup>4</sup> Al-Shaibani *et al.*<sup>5</sup> have studied the anthelmintic activity of aerial parts of *A. vasica* against gastrointestinal nematodes of sheep but we have investigated anthelmintic activity by taking leaves of *A. vasica* only. The method reported by Mali *et al.*<sup>6</sup> was excluding the use of Dunnet's 't' test, which was found to be the limitation of the method. Also they used *Pheretima posthuma* (indian adult earthworm) but we have studied on *E. eugeniae* earthworm (African species) and Dunnet's 't' test which are novelty of our research work. The assay was performed on adult African species of earthworm *E. eugeniae*.<sup>7</sup> These are easily available and used as a

## Formulation and evaluation of polyherbal gel containing extracts of *Azadirachta indica*, *Adhatoda vasica*, *Piper betle*, *Ocimum tenuiflorum* and *Pongamia pinnata*

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**ABSTRACT:** In the Indian system of medicine-Ayurveda, *azadirachta indica*, *adhatoda vasica*, *piper betle*, *ocimum tenuiflorum* and *pongamia pinnata* has been mentioned as a remedy for treatment of various infectious diseases and ailments. Based on the folkloric use, the present study was designed to formulate and evaluate polyherbal gel containing extracts of *Azadirachta indica*, *Adhatoda vasica*, *Piper betle*, *Ocimum tenuiflorum* and *Pongamia pinnata*. Gel formulations (Formulation A, B and C) were prepared which comprised of the ethanolic extracts of *Azadirachta indica*, *Adhatoda vasica*, *Piper betle*, *Ocimum tenuiflorum* and *Pongamia pinnata* in a concentration of 0.1, 0.3 and 0.5 %, respectively in a base. The prepared formulations were evaluated for appearance and homogeneity, pH, viscosity and rheological studies, spreadability, skin irritation test (patch test) and washability. The formulations were also screened for their antimicrobial activity by disc plate method against *S. aureus*, *B. subtilis*, *A. niger* and *E. coli*. The results of the studies revealed that all formulations under study viz. A, B and C showed better zone of inhibition as compared with the control. However, formulation C exhibited maximum activity against the selected strains which may be attributed to its greater amount of herbal extracts as compared to formulation A and B. The polyherbal gel formulations were observed to possess antimicrobial action. The effective activity may be attributed to the synergistic action of the plants constituents present in the formulation.

**KEYWORDS:** Antimicrobial activity; patch test; polyherbal gel; evaluation test.

### 1. INTRODUCTION

More than 80% of the world's population still greatly depends upon traditional medicines for treatment of various skin diseases [1]. In the recent years, there has been a gradual revival of interest in the use of medicinal plants in developing countries, as herbal medicines have been reported to be safe with minimal side effects especially when compared with synthetic drugs [2, 3]. Herbal treatments applied topically have gained considerable attention due to their widespread use and ill-defined benefit/risk ratio [4, 5]. There are numerous medicinal plants which are widely used in the treatment of skin diseases and also known to possess antimicrobial activity [6]. Topical application of gels at pathological sites offer great advantages in a faster release of a drug directly to site of action as compared to cream and ointment [7, 8].

*Azadirachta indica* (Neem), is phytochemically rich in steroids, alkaloids, tannins, triterpenes, flavonoid and anthraquinone glycosides [9, 10]. It has been known to be used traditionally for their various therapeutic properties like antibacterial, antimicrobial, antioxidant, skin disorder, and wound healing activity [11, 12]. Also it has been reported to possess various therapeutic properties like anti-inflammatory, antipyretic, antimalarial, antiulcer, antidiabetic, neuropharmacological effect, anthelmintic activity, antimicrobial and antibacterial effect [13-20]. *Ocimum tenuiflorum* has been found to exhibit various activities like antioxidant, antidiabetic, chemo preventive effect, anti-ulcer, anticarcinogenic, anti-stress and also useful in modulation of immune response [21-26]. *Adhatoda vasica* has been reported to be used traditionally for their various medicinal

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## A STUDY ON DRUG UTILIZATION PATTERN OF ANTI-DIABETIC DRUGS IN RURAL AREAS OF ISLAMPUR AND KASEGAON AT MAHARASHTRA

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### ABSTRACT

Diabetes a chronic disease is associated with significant morbidity, complications with poor glycemic control. Hence, meticulous management is necessary. A prospective observational study was carried out in adult diabetic patients visiting the outpatient Departments of General Medicine. Diabetes mellitus was observed to be highest in patients with the age group of 60-70 years, affecting 58.5% males and 41.5% females. We observed that 56 patients were treated with sulfonylurea, 38 were treated with biguanide. The choice of drug should be based economic status, associated conditions. Rational prescribing should focus on dose and duration as well as interaction with other medications.

**Keywords:** Drug utilization, anti-diabetic drugs, prescribing pattern.

### INTRODUCTION

Drug utilization has been defined as the marketing, distribution, prescription, and use of drugs in a society, with emphasis on the resulting medical and social consequences<sup>1</sup>. The principal aim of drug utilization studies (DUS) is to facilitate the rational use of drugs in population. DUS is an essential part of pharmacoepidemiology as it describes the extent, nature and determinants of drug exposure and it is used to identify treatment adherence problems. Diabetes has emerged as a major healthcare problem in India. India has the largest population of diabetes in the world. The international diabetes federation (IDF) estimates the number of people with diabetes in India will reach 80 million by the year 2025. A survey depicts that 4% of adults in India suffered from diabetes in the year 2000 and is expected to increase to 6% by the year 2025<sup>2</sup>. The world health organization (WHO) has projected that the global prevalence of type-2 diabetes mellitus will more than double from 5 million in 1995 to 300 million by 2025. Between 1995 and 2025, there will be a 35% increase in worldwide prevalence of diabetes mellitus, from 4 to 5.4%<sup>3</sup>.

A projected to rise from 171 million in 2000 to 366 million in 2030 is noted worldwide. The urban population in developing countries is projected to double between 2000 and 2030<sup>4</sup>. Nowadays the incidence is increasing in rural parts of India due to urbanization, obesity, unsatisfactory diet, sedentary life style, etc<sup>5</sup>. Since the literature review on drug utilization pattern in rural parts of India yielded a very few data, we planned to carry out a study to evaluate the drug utilization pattern among diabetic patients in a rural population of Tamilnadu, South India.

Since 1995, a dozen orally administered diabetes medications or combination of medications for the management of type-2 diabetes mellitus have been approved by FDA<sup>6</sup>. They play a primary defense function against hyperglycemic events in comparison to insulin therapy<sup>7</sup>. Traditionally in oral hypoglycemic agent therapy, sulphonyl ureases have always been the agents of first choice, while bisguanides and alpha-glucosidase inhibitors were unpopular<sup>8</sup>. A good number of diabetes patients suffer from cardiovascular disease such as hypertension, hyperlipidaemia and ischemic heart disease.



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Pharmaceutical Sciences

RESEARCH ARTICLE.....!!!

## **ZEBRAFISH AS DYNAMIC ORGANISAM FOR REGENERATION OF ORGAN IN PARKINSONISM**

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### **KEYWORDS:**

Parkinsonisam ,organ  
regeneration, ratina growth,  
cardiac regeneration.

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### **ABSTRACT**

Zebrafish found in Indian ganga river. These fish having capacity to regenerate their organ such as heart, ratina, brain cells. They can be alternate way for stem cell organ generation. About 20% of population suffer from blindness as well as parkinsonisam this fish can helpfull for cure them. The different ability of these fish are not known. This review article gives information for use of this fish for generation of organ. This capacity of zebrafish can be utilized for generation of ratina. This can create a new area of organ regeneration. This capacity can be utilized for parkinsonisam disease which can regenerate brain fluid responsible for course of parkinsonism. Thus Zebrafish can be model organism to be used in future for organ regeneration.

**Research Article**

**A REVIEW ON *CISSUS QUADRANGULARIS* AND EVALUATION OF ITS IN-VITRO ANTHELMINTIC ACTIVITY**

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**ABSTRACT**

In current scenario focus on plant research has increased throughout the world and show immense potential of medicinal plants used in various traditional systems. Production of plant-made pharmaceuticals can gain more capital for new therapeutics. This paper highlights some of the phytochemical and pharmacological investigations of *Cissus quadrangularis*. *Cissus quadrangularis* L. is a succulent plant of family Vitaceae commonly found in tropical and subtropical semi wood. It is a fleshy, cactus-like liana widely used in India. The plant is prescribed in Ayurvedic literature as a general tonic and analgesic, with specific bone fracture healing properties. The plant is believed to be useful in helminthiasis, anorexia, dyspepsia, colic, flatulence, skin diseases, leprosy, hemorrhage, epilepsy, convulsion, haemophysis, tumors, chronic ulcers, swellings. The aim of the present study was the collection of Stem of *Cissus quadrangularis*, powdered and its successive extraction by soxhlet method. Then extracts are subjected to evaluate in vitro anthelmintic activity on earthworm *Pheretima postuma* (Annelida). Extracts of *Cissus quadrangularis* Liana stem were subjected to qualitative phytochemical tests for different constituents and it was confirmed that the different plant extract contains constituents such as Phenolic compounds, tannins, saponins, steroids, carbohydrates, glycosides and triterpenoids etc. It is concluded by saying that, active constituents responsible for good pharmacological activity. Needless to say that versatile uses and various therapeutic activities has made plant a valuable medicinal herb.

**Keywords:** *Cissus quadrangularis*, Extraction, Phytochemical, Anthelmintic

**INTRODUCTION TO PLANT**

*Cissus quadrangularis* (Linn) has been used by common man in India for promotion of fracture healing and well known as Hadjod. It is also known as *Vitis quadrangularis* wall which belongs to family Vitaceae. It is a common perennial climber, which is distributed throughout India particularly in tropical regions (Raj, 2011). The plant is commonly known as Vajravalli in Sanskrit, Hadjod in Hindi, Kandhel in Marathi, Haddjor in Punjabi, Hadbhanga in Oriya, Vedhari in Gujarati, Perandi in Tamil, Nallera in Telugu and Veldgras, Edible Stemmed Vine in English. Dichotomously branched, sub-angular, glabrous, fibrous and smooth (Rastogi, 1995). *Cissus quadrangularis* L. is commonly known as Asthisandhari is a succulent plant of family Vitaceae commonly found throughout the hotter parts of India. It can be cultivated in plains coastal areas, jungles and wastelands up to 500m elevation. Plant is propagated using cuttings (Anonymous, 1992).



**Figure 1. Photo of *Cissus quadrangularis* (Linn)**



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**A NEW APPROACH OF FORMULATION AND EVALUATION OF HERBAL SINDOOR  
POWDER AND STICK FROM HERBAL INGREDIENTS.**

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**ABSTRACT**

Herbal word is a symbol of safety in contrast to synthetic one which has adverse effects on human health. Herbal preparations like herbal tablets, herbal tonic, herbal paste, herbal creams, herbal shampoos and herbal lipstick etc. has become more popular among the consumer herbal medicines represent the fastest growing segment to heal the various ailments. Sindoor is one of the key cosmetics used by the married women of our countries. In present days the use of such product has increased and choice of shades of color and texture have been changed and become wider. Prolong use of dye based sindoor show symptoms like hair loss, whitening of hair etc. In view of above scenario, a process technology has developed to produce safe, alternative, non toxic herbal sindoor powder and stick. The present investigation was done to formulate herbal sindoor using different natural ingredients, as these preparations are one of the key cosmetics to be used by the married women of our country. The sindoor was formulated using five different natural coloring agents in four batches (F1 to F4) and were evaluated. It was found from the present investigation that F3 has good results as compared to other formulated herbal sindoor, though a detailed clinical efficacy is still needed to establish safety profile of the formulation.

**KEY WORDS:** Cosmetics, Herbs, Herbal Sindoor, Natural Coloring agents.

**INTRODUCTION**

Now-a-days, in the whole world there is turn to return towards the use of herbal products and to adopt more natural way of life, people prefer natural food, herbal medicines and natural curing practices for healthy life. There is much craze for the vegetable products cultivated through biological/organic farming without using synthetic fertilizers and pesticides. The usage of herbal cosmetics has been increased to many folds in personal care system and there is a great demand for the herbal cosmetics. All this happened due to the excessive use of synthetic based products, synthetic chemicals, chemical dyes and their derived products in the last one and half century, their production and usage cause human health hazard with several side-effects leading to numerous diseases.<sup>[1,2]</sup> Skin disease is a common ailment of all age groups because of the infection of a variety of microorganism, chemical agents and biological toxin present in the atmosphere and also due to physical factors, malnutrition and environmental pollution. Similar problems occur with hair as hair fall and their graying at early age becomes a general feature. There are immense opportunities to use phytochemicals ingredients in the cosmetics for the skin and hair care in accordance with the principles of both cosmetic preparation and traditional systems of medicine. Every individual has his

own choice and liking for color and nature manifests itself in a wide spectrum of colors. Colors are well known since ancient time for coloring cloths, consumer articles and food. Addition of colors in consumer products significantly enhances the general appearance of products. The cosmetics products are generally colored by synthetic or natural coloring agents. In herbal-based cosmetics, there is a trend to use natural coloring agents because of their safer, non-toxic and ecofriendly characteristics.<sup>[3-5]</sup> In India, sindoor is an important cosmetic item for married women, worship and other purposes. Prolonged use of synthetic dye-based sindoors has shown symptoms of hair loss, graying of hair, edema, erythema and even skin cancer. In view of above scenario, a process technology has been developed to produce an alternative, safe, non-toxic, eco-friendly natural dye-based sindoor. The process is novel as pharmaceutical/food grade natural ingredients are used as bulking/filler materials and no salt of any heavy metals are used. The process provides an opportunity for the preparation of different shades of sindoor like orange, red, dark red, melbroon, etc., using different dyes and their blends.<sup>[6,7]</sup> Due to various adverse effects of available synthetic preparation the present work was conceived by us to formulate a herbal sindoor having minimal or no side effects which will extensively used





## A New Simple Method for Determination of Partition Coefficient by Normal Phase Thin Layer Chromatography (TLC).

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### ABSTRACT:

Owing to the importance of partition coefficient in field of pharmaceutical education and research in the present work, We have made and attempt to determine benzene/water partition coefficient (logP) values for drugs by simple normal phase TLC technique. The partition coefficient being the relative concentration of drug in benzene/water, remains as an important physicochemical parameter which determine the absorption of drug in the body and thus influence its therapeutic response.

According to literature the determination of partition coefficient is done by shake-flask method, GC, HPLC and by potentiometric method. These methods are accurate but expensive. Here there is need for simple and efficient method to determine logP value for desire drug compound or pharmaceutical research. This reassured to come out with simple experiment technique like normal phase TLC to determine to calculate logP value. And which can be the part of under graduate laboratory practical. The differential values like R<sub>f</sub>/w and logR<sub>f</sub>/logR<sub>f</sub>w were calculated and found to be closer to reported log P values (i.e from chemical abstract, ACD lab), Paracetamol-0.461, Naproxen-0.769, Atenolol-0.22, Hydrochlorothiazide-0.331, Telmescartan-5.11, Phthalic acid-0.85, Sulfathiazoline-0.1, Nimesulide-0.9, Diclofenac-0.2, Benzoic acid-0.9. Considering the results we have concluded that simple and convenient TLC method was developed to determine logP values, which were matching with reported logP values of drugs bank.

**KEYWORDS:** Partition coefficient, Thin layer chromatography, logP, Relative concentration

### INTRODUCTION:

The partition coefficient being the relative concentration of the drug in benzene and water, remains as an important physico-chemical parameter which determines the absorption of the drug in the body and thus influences its therapeutic response<sup>1</sup>. The hydrophobicity of a compound plays a major role in determining where drug are distributed within the body after their absorption and as a consequence, how rapidly they are metabolized and excreted<sup>2,4</sup>. Partition coefficient is also one of the important parameters in deriving quantitative structure activity relationships (QSAR). According to the literature the determination of partition coefficient is done by shake-flask method<sup>1</sup>, GC method<sup>5</sup>, reverse phase RP HPTLC/HPLC method<sup>7</sup> and by potentiometric method<sup>8</sup>. Among these existing methods, HPLC method is proven to be an most accurate method.

Today, all the Pharmaceutical industries and research institutions are following this method to determine the log P values for the drugs. Academic institutions are following shake-flask method as part of the undergraduate and postgraduate laboratory practical to determine the logP values for the drugs. For the shake-flask method, availability of appropriate simple procedures for the quantitative analysis of the separated benzene or water layers is a major disadvantage. Hence, there is a need for simple and efficient method to determine the logP values for the desired compounds or drugs in pharmaceutical research as well as in pharmaceutical education. This reassured us to come out with simple experimental techniques like normal phase TLC to calculate the logP value for the organic Drug.

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## Evaluation of anthelmintic activity of leaves of *Tragia involucrata* Linn

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### Abstract

Methanolic extract of the leaves of *Paedaria foetida* were screened for its anthelmintic activity against *Pheretima posthuma* and *Tubifex tubifex*. Various concentrations (25, 50, 100 mg/ml) of all extracts were tested and results were expressed in terms of time for paralysis and time for death of worms. Also, prepared herbal tablet of *Tragia involucrata*.

**Keywords:** *Tragia involucrata*, Anthelmintic, methanol, *Tubifex tubifex*.

### Introduction

Ayurvedic medicine *Kolthee churna*, known to be effective in diarrhoea diseases has been standardized by following modern scientific quality control procedures, both for the raw material and the finished product. *Tragia involucrata* commonly known as the Mauritius or Mysore thorn or the cat's claw is a tropical tree species originating in India. It is as a robust, thorny, evergreen shrub 2-4 m high or climber up to 10 m or higher; often forming dense thickets; the stems are covered with minute golden-hair; the stem thorns are straight to hooked, numerous, and not in regular rows or confined to nodes.

Plant derived drug serve as a prototype to develop more effective and less toxic medicines. Helminthiasis is among the most important animal diseases inflicting heavy production losses. The disease is highly prevalent, particularly in third world countries due to poor management Helminthiasis practices. A number of medicinal plants have been used to treat parasitic infections in man and animals. 5, 6, 7, 8 the plants are known to provide a rich source of botanical anthelmintics.



### Local names in India

Marathi - Kolthee, Hindi - Barhanta English - stinging nettle, Malayalam - Kodathooova, Kodithooa Cheriuvinnam, Sanskrit - cernuusine - Dhanaraj, Ananta Varma Dhanalakha Family

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## RESEARCH ARTICLE

### Survey on Antidiabetic Drugs

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#### **ABSTRACT:**

Diabetes is a chronic disease that occurs when the pancreas does not produce enough insulin or alternatively, when the body cannot effectively use the insulin it produces. According to the Indian Council of Medical Research-Indian Diabetes study (ICMR), a national diabetes study, India currently has 62.4 million people with diabetes. A Home survey of various antidiabetic drugs was carried out by visiting individual patients home in the region of Vategaon (Walva). Currently, there are five distinct classes of hypoglycemic agents available, each class displaying unique pharmacologic properties. These classes are the sulfonylureas, meglitinides, biguanides, thiazolidinediones and alpha glucosidase inhibitors. The objective of the study was to find out the most frequently used drug for the Antidiabetic for the diabetes treatment. Therefore, this study was carried out to find the current prescribing pattern of anti-diabetic drugs and efficacy of these drugs in maintaining adequate glycemic control in diabetic patients in vategaon region. The study revealed that the Biguanide have been followed by the sulphonylureas which were prescribed in 32% prescriptions followed by 6 % was Thiazolidinedione and then 8 %  $\alpha$  glucosidase inhibitor.

**KEYWORDS:** Diabetes, survey, Antidiabetic drugs.

#### **INTRODUCTION:**

Diabetes mellitus is a pandemic disease that has struck each and every corner of the world. According to the Indian Council of Medical Research-Indian Diabetes study (ICMR), a national diabetes study, India currently has 62.4 million people with diabetes. This is set to increase to over 100 million by 2030. The prevalence of diabetes among adults has reached approximately 20% in urban and approximately 10% in rural populations in India.

Various classes of anti-diabetic drugs including insulin and oral hypoglycemic agents (OHA) are currently used

The currently used anti-diabetic drugs are very effective, however because of lack of patient compliance, clinical inertia, insulin resistance, lack of exercise and lack of dietary control leads to unsatisfactory control of hyperglycemia. Currently, there are five distinct classes of hypoglycemic agents available, each class displaying unique pharmacologic properties.<sup>2</sup> These classes are the sulfonylureas, meglitinides, biguanides, thiazolidinediones and alpha glucosidase inhibitors. In patients for whom diet and exercise do not provide adequate glucose control, therapy with a single oral agent can be tried. When choosing an agent, it is prudent to consider both patient and drug specific characteristics.<sup>3</sup>





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## RESEARCH ARTICLE

DESIGN AND CHARACTERIZATION OF FAST DISSOLVING TABLETS OF  
VALSARTAN USING SYNTHETIC AND NATURAL SUPERDISINTEGRANTSRaut Indrayani D <sup>\*1</sup>, Mane Pallavi, Mane Dipak, Mohite S.K, Magdum C.S.  
Department of Pharmaceutics, Rajarambapu college of pharmacy, Kasegaon.*Manuscript Info**Manuscript History:*Received: 22 January 2015  
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Published Online: March 2015*Key words:*Valsartan, Fast Dissolving,  
Croscopovidone, gum karaya, direct  
compression.*\*Corresponding Author*

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*Abstract*

The present study has a design the formulation of the valsartan fast dissolving tablets and evaluate which was prepared by using synthetic and natural superdisintegrants. Fast dissolving drug delivery is currently the gold standard in the pharmaceutical industry where it is regarded as the fastest, safest, convenient and most economic method of drug delivery having the highest patient compliance and preferred over conventional tablets. Valsartan fast dissolving tablet formulations prepared by the direct compression method by using croscopovidone synthetic and gum karaya natural superdisintegrant. Formulations were evaluated for precompressional and postcompressional parameters like uniformity of weight, thickness, hardness, friability, drug content, wetting time, water absorption ratio, *in vitro* dispersion time, *in vitro* disintegration time and *in vitro* dissolution study. Results revealed that among the 6 formulations, the formulation S3 containing 7.5% of croscopovidone and formulation N 3 containing 7.5% of Gum karaya was found to be promising formulation. S3 shown disintegration time of 9.22 seconds and the drug release was up to 96.78% in 30 minutes and N3 shown disintegration time of 16.34 seconds and the drug release was up to 75.60% in 30 minutes.

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## INTRODUCTION

Solid dosage forms are popular because of ease of administration, accurate dosage forms, pain avoidance and most importantly the patient compliance. The most popular solid dosage forms are being tablets and capsules; one important drawback of this dosage forms for some patients, is the difficulty to swallow.<sup>1</sup>

The unpleasant taste can be masked by sugar coating. As some drugs resist compression into dense compacts, remaining to their amorphous nature, low-density character and drugs with poor wetting, slow dissolution properties, intermediate to large dose, or any combination of these features may be difficult or impossible to formulate and manufacture as a tablet that will still provide adequate bioavailability.<sup>2,3</sup> Bitter tasting drugs, drugs with objectionable odour, or drugs sensitive to oxygen or atmospheric moisture may require encapsulation or entrapment prior to compression the tablets may require coating. Valsartan is an angiotensin II receptor antagonist and is widely used in the management of hypertension to reduce cardiovascular mortality in patients with left ventricular



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Research Article

**SURVEY ON ANTI-HYPERTENSIVE DRUGS**

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**Abstract:**

*Hypertension is a major disorder that worsens the quality of life. Newer drugs are being introduced in order to treat the the hypertension. A market survey of various antihypertensive drugs was carried out in the region of Islampur. the objective of the study was to find out the most frequently used drug for the antihypertensive treatment. The study revealed that the sympathoytic drugs were most used drugs followed by calcium channel blockers and AT II receptor antagonists.*

**Keywords:** *Hypertension, survey, Antihypertensive drugs.*

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## Attention Deficit Hyperactivity Disorder

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### ABSTRACT

The aim of study was to find out symptoms, diagnosis, various causes, treatment, associated risk factors among children about ADHD. ADHD is most commonly seen developmental disorder in children within 5-12 years. Children shows symptoms associate with ADHD as talk nonstop, fidget and squirm, forget things, difficulty focusing on one thing. The core behavioral symptoms of Hyperkinetic disorder (HKD) and attention deficit hyperactivity disorder (ADHD) are inappropriate patterns of inattentiveness, impulsivity, and hyperactivity. The causes that lead to the development of ADHD include genetic and environmental factors, nutritional and psychosocial factors, chemical exposure. Children are emotionally affected when they witness violence within the family. Attention deficit hyperactivity disorder (ADHD) is neurobehavioral disorder in children, characterized by symptoms as inattention, hyperactivity impulsivity. Dopamine deficit theory proposed for ADHD says that abnormalities in the dopamine modulated frontal-striatal circuits, effects on brain imaging and functioning. It also associate with the iron deficiency which is major cause of Restless Leg Syndrome (RLS), a condition related to ADHD. This study indicated that yoga may contribute to stabilising the emotions, reducing restless /impulsive behavior and reducing oppositional behavior. Negative family relationships are associated with symptoms of ADHD. Its association with the intelligence quotient reiterates the importance of the genetic and environmental basis at the origin of the disorder.

**Keywords :** Attention deficit hyperactivity disorder, Hyperkinetic disorder, Restless Leg Syndrome, symptoms of Attention deficit hyperactivity disorder

### I. INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) has many faces and remains one of the most talked-about and controversial subjects in education. Hanging in the balance of heated debates over medication, diagnostic methods, and treatment options are children, adolescents, and adults who must manage the condition and lead productive lives on a daily basis.

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common neuropsychiatric disorders of childhood. The core behavioral symptoms of Hyperkinetic disorder (HKD) and attention deficit hyperactivity disorder (ADHD) are inappropriate patterns of inattentiveness, impulsivity, and hyperactivity. Attention-deficit/hyperactivity disorder is an early-onset, highly prevalent neurobehavioral

disorder, with genetic, environmental, and biologic etiologies, that persists into adolescence and adulthood in a sizable majority of afflicted children of both sexes. These disorders are common, particularly in boys, with 1 year combined prevalence rates in school-age children of 1.7% for hyperkinetic disorder and between 5 and 10% for ADHD. The impairments associated with ADHD are associated with social, interpersonal, and academic problems which often persist into adulthood.

Cognitive deficits, particularly impairments in attention and executive functions (EF), are hypothesized to be a core part of ADHD. The term EF refers to a set of cognitive functions which enable one to demonstrate goal-directed behavior, usually in novel contexts with competing response alternatives. Children who have ADHD have been reported to exhibit sub average or relatively weak performance on various tasks of



## Microwave Assisted Synthesis, Characterization and Antibacterial Activity of 2-Chloromethyl Benz Imidazole Derivatives

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### ABSTRACT

Objective-the objective of present research work to synthesize and screen novel 2-chloromethyl-1-h-benzimidazole derivative for antibacterial activity. Method-2-chloromethyl-1-H-benzimidazole was prepared by condensing 2-chloromethyl-1-h-benzimidazole with different aromatic amines and heterocyclic. The synthesized compounds were screened for their antibacterial activity against stap. Aurious by well plate method. 2-chloromethyl benzimidazole can be synthesized by the reaction of o-phenylenediamine with chloroacetic acid. This on reaction with substituted anilines in presence of ethanolic KOH gives corresponding benzimidazole derivatives. The synthesized compounds were characterized by TLC & IR data.

**Keywords :** 2-Chloromethyl Benzimidazole, O-Phenylenediamine, Chloroacetic Acid Aniline.

### I. INTRODUCTION

In the field of science of technology, medicinal chemistry has been a fascinating subject. The rapid development in the last 7 decades has been truly a challenging and very exciting. Medical chemistry according to Burger, tries to be based on the ever increasing hope that biochemical rationals for drug discovery may be found.

Medicinal chemistry is the branch of science, which has remarkable value for synthesis of novel drugs with intense therapeutic activity. It concern with discovery, development, identification and interpretation of mode of action of biologically active compounds at molecular level.

These developments have provided new challenges and opportunities for drug research in general and drug desings in particular. Pure organic compounds, natural or synthetic products are the chief source of agents for the cure, the mitigation or the prevention of disease today. The major objectives of the medicinal chemists are transformation of path biochemical and physiological data into a „chemical language“ with the

aim of designing molecules interacting specifically with the derailed or degenerating processes in the diseased organisms.

The development of chemotherapy during past 60 years constitute one of most important therapeutic advances in history of medicine and antibacterial drugs are the greatest contribution of present century to therapeutics. Potential therapeutic targets are being disclosed with increasing frequency and the exponential growth will continue during the next decates.

#### A. Benzimidazole

The benzimidazole contain a phenyl ring fused to an imidazole ring, was shown in structure (1).

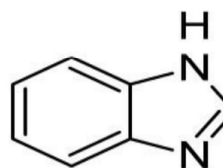


Figure 1. Benzimidazole

## A Review On : Phytochemicals as Nutraceuticals

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### ABSTRACT

Nutraceuticals are food product that provides health as well as medical benefits; including the prevention and treatment of disease. Few nutraceuticals are being used as pharmaceutical and a number of other being used and purchased by the general public as self-medication. Such products may range from dietary supplements to genetically engineered foods, herbal products and processed foods. Phytochemicals of nutraceuticals importance are bioactive constituents that sustain or promote health and occurs at the intersection of food and pharmaceutical industries. Such substances may range from isolated nutrients, dietary supplements and specific diets to genetically engineered designer foods, herbal products, processed foods and beverages. Phytochemicals are broadly described as polyphenols, flavonoids, isoflavonoids, anthocyanidins, terpenoids etc,. They have tremendous impact on the health care system and may provide medical health benefits including the prevention and/ or treatment of diseases and physiological disorders. Majority of foods, such as whole grains, beans, fruits, vegetables and herbs contain phytochemicals. Amongst these, fruits and vegetables contribute to the significant sources of phytochemicals. These phytochemicals, either alone and/or in combination, have tremendous therapeutic potential in curing various ailments. The respective health benefits are based on science and ethics, for health claims, for functional foods, and presence of certain phytochemicals. They play certain pharmacological effects in human health as antioxidants, antibacterial, antifungal, anti-inflammatory, antiallergic, antispasmodic, chemopreventive, hepatoprotective, hypolipidemic, neuroprotective, hypotensive, prevent aging, diabetes, osteoporosis, DNA damage, cancer and heart diseases, induce apoptosis, diuretic, CNS stimulant, analgesic, protects from UV induced carcinogenesis, prevent, immuno-modulator and carcinative.

**Keywords:** Nutraceuticals, Phytochemicals, Polyphenols, Flavonoids, Isoflavonoids

### I. INTRODUCTION

The term nutraceuticals, coined by Dr. Stephen de Felice, is derived from the words “nutrition” and “pharmaceutical”, is a food or food product that provides health and medical benefits, including the prevention and treatment of disease <sup>(1)</sup>. Such products may range from isolated nutrients, dietary supplements and specific diets to genetically engineered foods, herbal products, and processed foods such as cereals, soups, and beverages. A nutraceutical is demonstrated to have a physiological benefit or provide protection against chronic disease. Their bioactive ingredients, the phytochemicals, sustain or promote health and occur at the intersection of food and pharmaceutical industries. Such substances may range from isolated nutrients, dietary supplements and specific diets to genetically

engineered designer foods, herbal products, processed

foods and beverages <sup>(2, 3)</sup>. They play a crucial role in maintaining optimal immune response, such that deficient or excessive intakes can have negative impact on health.

### II. METHODS AND MATERIAL

**Nutraceutical is a combination of 2 words:**

Nutrition and Pharmaceutical. Nutraceuticals are food product that provides health as well as medical benefits; including the prevention and treatment of disease. Phytochemicals and antioxidants are two specific types of nutraceuticals. Research has proved that foods with phytochemicals may help to provide protection from diseases such as cancer, diabetes, heart disease, and hypertension, e.g. carotenoids found in carrots.

Antioxidants may be helpful in avoiding chronic



## A Review on Anticancer Drug from Marine

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### ABSTRACT

T

The marine environment is a rich source of both biological and chemical diversity. It is very much likely that marine organisms would be wonderful source of biologically active molecules. The collection of the marine therapeutics includes molecules with antibiotic, antiviral, antiprastic, analgesic and anticancer agent from bacteria, cyanobacteria, *tunica*, fungi, sponge. This review focuses on the latest studies and critical research in this field and evidences the immense potential of marine organisms as sources of bioactive peptides and other anticancer biomolecules. Various anticancer compounds like Aplidine, Bryostatin-1, Didemin B, Dolastatin, Ecteinascidine with diverse modes of action, such as, anti-proliferative, antioxidant, anti-microtubule have been isolated from marine sources. Traditional chemotherapeutic agents have a range of side effects like fatigue, gastrointestinal distress and depression of immune system which introduces the these sources have been shown to have antioxidant activity and cytotoxic effect on several human cancers such as leukemia, lymphoma, ovarian, melanoma, breast, bladder, neuroendocrine, prostatic, colon and non-small cell lung cancer very potently.

**Keywords:** Marine Organisms, Bryostatin-1, Dolastatin, Human Cancers

### I. INTRODUCTION

Over the past few years, about 3000 new compounds like anti-tumor, anti-microtubule, anti-proliferative, photoprotective, antibiotic and anti-infective discover from various marine sources some have entered clinical trials. This activity has been largely due to improvements in the technologies involved in deep-sea sample collection and large-scale drug production through aquaculture and drug synthesis which took place in the 1980s. These developments suggest that, in the future, the oceans will become an important source of novel chemical classes not found in the terrestrial environment.

### II. METHODS AND MATERIAL

Therapeutic Agents from Marine Sources

#### Bacteria

Marine microorganisms are a rich source of new genes, exploitation of which is likely to lead to the discovery of new drugs and therapeutic approaches. Only a few marine bacteria can be isolated under laboratory

conditions and there is an urgent need to develop new

culture techniques to isolate slow-growing bacteria and also to isolate the bacteria that are unique in production of novel natural products. (e.g. *Seudopterossins*, *Topsentins*, *Scytonemin* and *Manoalide*), anticancer agents (e.g., *Bryostatins*, *Discodermolide*, *Eleutherobin* and *Sarcodictyin*) and antibiotics (e.g. *Marinone*). Anti-Parasitic compound *Valinomycin* isolated from *Streptomyces sp.* strains of Mediterranean

#### Cyanobacteria

The cyanobacteria population comprises 150 genera and about 2000 species of considerable diversity. The potency of marine cyanobacteria as anticancer agents is the most explored among all marine derived chemicals. Besides cytotoxicity in tumor cell lines, several compounds have emerged as templates for the development of new anticancer drugs. Well studied species of marine cyanobacteria includes *Nostoc*, *Calothrix*, *Lyngbya*, *Symploca*

#### Fungi

Marine derived fungi provide plenty of structurally unique and biologically active secondary metabolites.

The Anthracenedione derivatives acting as the potent



## A Review On : Herbal Anticancer Drug

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### ABSTRACT

Cancer is major health problem in both developed developing countries. Cancer after cardiovascular disease is the second leading cause of death. Cancer is the abnormal growth of cells in our bodies that can lead to death. Plant-derived compounds have been an important source of several clinically useful anti-cancer agents. Plant has been the beacon of therapeutic sources for curing diseases from times immemorial. Medicinal plant with their isolated lead molecules is also used as an alternative medicine for treating cancer. These chemical compounds are formulated with a view to create effective drugs against cancer. Vincristine, Vinblastine, Homoharringtonine, Honokiol, Paclitaxel, Topotecan, Maytansine, Astraguloside, Docetaxel, Elliticine, Lapochel, Oleanolic acid, Cisplatin, Etoposide, Teniposide and Resveratrol this lead molecules isolated from different medicinal plants are in use to treat cancer and chemotherapeutic side effect. In the present review, an attempt has been made to study the plants that have been used in the treatment of cancer.

**Keywords:** Cancer, Anti-Cancer Drugs, Vincristine, Paclitaxel

### INTRODUCTION

In recent times, medicinal plants occupy an important position for being the paramount sources of drug discovery, irrespective of its categorized groups- herb, shrub or tree. Plants have been indispensable in treating diverse forms of diseases including cancer. According to World Health Organisation, 80% of the people living in the rural areas depend on medicinal plants as primary health care system. These practices are solely based on the knowledge of traditional use of medicinal plants. Natural products are formulated to generate different types of effective drugs to enhance anticancer activities. Proper understanding of the complex synergistic interaction of various constituent of anticancer herbs would help in formulating the design to attack the cancerous cells without harming the normal cells of the body.

India is the largest producer of medicinal plants and is rightly called the "Botanical garden of the World". And have many of plant used in cancer. The search for this cancer drug discovery from Natural sources began

with the investigations done by Hartwell and his co-

workers in the late 1960s with the application of Podophyllotoxin and its derivatives from the plant *Podophyllum peltatum*. Further discoveries lead to isolate anticancer compound from plants like *Catharanthus roseus*, *Camptotheca acuminata*, *Lapacho*, *Cephalotaxusharringtonia*, *Mangoliagrandiflora* and *Taxus brevifolia* bark are the established potential anticancer agents derived from these plants which are found to be effective against various types of cancer.

To the scientific mind, these translate easily into ideas. Numbers and standard letters such as n are also in the mathematical with 100s of applications and websites, allowing you to put Equations Everywhere and Anywhere.

**LEUKEMIA** used in leukemia therapy.

Vincristine, Vinblastine, Homoharringtonine and Honokiol this drug are Leukemia is a group of cancers that originate from blood-forming tissues. The name of the disease is derived from the Greek word „leukos“ for „white blood“ Leukemia is classified into four main



## Ayurvedic and Allopathic Antidiabetic Formulations Available in Market

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### ABSTRACT

Diabetes is one of the first diseases described with an Egyptian manuscript from c. 1500 BCE mentioning —too great emptying of the urine. Diabetes is one of the hardest diseases to live with. The first described cases are believed to be of type I diabetes. Indian physicians around the same time identified the disease and classified it as *madhumeha* or *honey urine* noting that the urine would attract ants. The term "diabetes" or "to pass through" was first used in 250 BCE by the Greek Apollonius of Memphis. Type I and type II diabetes were identified as separate conditions for the first time by the Indian physicians Sushruta and Charaka in 400-500 CE with type I associated with youth and type II with obesity. The term "mellitus" or "from honey" was added by Thomas Willis in the late

1600s to separate the condition from diabetes insipidus which is also associated with frequent urination. The first complete clinical description of diabetes was given by the Ancient Greek physician Aretaeus of Cappadocia (fl. 1st century CE), who also noted the excessive amount of urine which passed through the kidneys. Diabetes mellitus appears to have been a death sentence in the ancient era. Hippocrates makes no mention of it, which may indicate that he felt the disease was incurable. Aretaeus did attempt to treat it but could not give a good prognosis; he commented that "life (with diabetes) is short, disgusting and painful." The disease must have been rare during the time of the Roman empire with Galen commenting that he had only seen two cases during his career.<sup>1</sup>

**Keywords:** Antidiabetic drugs, *Momordica charantia*, *Gymnema sylvestre*, Insulin

### I. INTRODUCTION

#### 1. History

Diabetes is one of the first diseases described with an Egyptian manuscript from c. 1500 BCE mentioning —too great emptying of the urine. Diabetes is one of the hardest diseases to live with. The first described cases are believed to be of type I diabetes. Indian physicians around the same time identified the disease and classified it as *madhumeha* or *honey urine* noting that the urine would attract ants.

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## Comparative Standardization Study of Two Marketed Hingvashtak Churna Formulation

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### ABSTRACT

T

In the few decades, there has been exponentially growth in the field of herbal medicines. Most of the traditional systems of medicine are effective but they lack standardization. So there is a need to develop a standardization technique. Standardization of herbal formulation is essential in order to assess the quality, purity, safety and efficacy of the drug. The Hingvashtak churn is excellent remedy for indigestion, stomach pain, loose motions along with indigestion, loss of appetite and also used as carminative. The present research study deals with the comparative standardization of two marketed Hingvashtak Churna formulation from Baidyanath and Zandu. The standardization of this formulation, the organoleptic characters, physical properties, the various physico-chemical properties such as, ash values, extractive values were carried out.

**Keywords:** Standardization, Hingvashtak churn, Physico-chemical parameters.

### INTRODUCTION

Nature always stands as a golden mark to exemplify the outstanding phenomena of symbiosis. Today about 80% of people in developing countries still rely on traditional medicine based largely on the different species of plants for their primary health care. About

500% of plants with medicinal uses are mentioned in ancient literature and 800 plants have been used in indigenous system of medicine. The various indigenous systems such as ayurveda, siddha, unani use several plant species to treat different ailments. Herbal medicines make up an important component of the trend toward alternative medicine<sup>1-2</sup>. Tyler defines herbal medicines as "crude drugs of vegetable origin utilized for the treatment of disease states, often of a chronic nature, or to attain or maintain a condition of improved health. Current demands for herbal medicines have resulted in an annual market of \$1.5 billion and increasingly widespread availability. Churna is one such ayurvedic formulation that is defined as a fine powder of drug or drugs in ayurvedic system of medicine. The churna is free flowing and retains its potency for one year, if preserved in an air tight container. They are

similar to powder formulations in Allopathic system of medicine. Due to lack of modern pharmacopoeial standards laid down and followed for processing of hingvashtak churna using traditional methods, the medicine may not have the desired quality and batch to batch consistency. Thus WHO has emphasized the need to ensure quality control of medicinal plant products by using modern techniques and by applying suitable standards and parameters<sup>3</sup>.

### Advantages of Herbal Medicine

- 1) They have large amount of use.
- 2) They have better patient tolerance as well as acceptance.
- 3) The medicinal plants have renewable source of cheaper medicines.
- 4) Improvements in the quality, efficacy and safety of herbal medicines with the development of science and technology.
- 5) Prolong and apparently uneventful use of herbal medicines may offer testimony of their safety and efficacy.
- 6) They are cheap in cost.
- 7) They are not harmful.
- 8) They are more effective than any synthetic drug.