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## SOUVENIR

PHARMACIST DAY

TITLED ON .

TRANSFORMING GLOBAL HEALTH

Date: 25<sup>™</sup> September, 2020

**AUTHORS** 

Ms. Rupa Arya

Ms. Chanda Ray

Mr. Vikas Sharma



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SJIF Impact Factor: 5,273

## RESEARCH ARTICLE ON ANTI-BACTERIAL EFFICACY OF ETHANOLIC EXTRACT OF THYME AND CINNAMON IN TREATMENT OF ACNE VULGARIS

Jaya Bhati\*1, Amarjeet Singh2 and Giriraj T. Kulkarni3

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Received on: 13/06/2021 Revised on: 03/07/2021 Accepted on: 23/07/2021

\*Corresponding Author Jaya Bhati Assistant Professor, Innovative College of Pharmacy, Greater Noida.

#### ABSTRACT

In current scenario, Herbal Formulations are being treatment of choice, as Allopathy drugs posing harmful side effects and additionally, microbes developing resistance to Allopathy drugs. Hence, the development of herbal formulation is going to be essential for enhancing the patient's quality of life, safety and avoiding harmful side effects. In this study, we have explored anti-bacterial activity of ethanolic extract of Thymus vulgaris and Cinnamonium verum against Propionibacterium acnes. Thymus vulgaris and Cinnamonium verumwere macerated with aqueous-ethanolic solution to get extracts. The formulated proniosomal gel by using surfactants, lecithin, cholesterol with extracts. Formulations were evaluated for its physicochemical parameters and other parameters like TEM, DLS, in vitro study, optical microscopy. The efficacy of Thyme and Cinnamon was determined by evaluating zone of inhibition against standard Clindamycin. The formulated proniosomal gel was found effective against the acne and it was able to kill acne causing bacteria (P.acnes) and provide controlled release upto 24 hours.

KEYWORDS: Proniosomes, Thyme, Cinnamon, Propionibacterium acne, Dynamic light scattering (DLS), Transmission electron Microscopy (TEM).

#### INTRODUCTION

Acne is the most prominent disorder among adolescents with 15-25 years of age. It begins prominently at puberty age. Preferentially, it occurs on facial portion and includes back, shoulders, chest as non-facial parts. As per the statistics, it affects population from almost every age group i.e., approximately 85% of young people aged between 12-25 years, 8% of adults aged between 23-34 and 3% of elders aged between 35-44 across the world. Major factors responsible for acne include exposure to sunlight, less intake of water, dietary habits and stress. Other causes include hormonal imbalance, excessive production of sebum in sebaceous glands, depression and anxiety. Acne is characterized by inflammatory, non inflammatory lesions, Sebocyte differentiation and proliferation. Occurrence of papules, pustules, open and closed Comedones. Propionibacterium acne present on the skin significantly promotes acne lesions. Treatments for acne comprise of topical gels, creams and oral dosages forms. Reduced preference for Anti-acne treatments pose side effects and hence, antibiotic resistance while herbal medicines overcome it Propionibacterium acne is the anaerobic gram positive bacteria responsible for acne vulgaris. The bacterium promotes inflammation along with chemotactic factors. lipolytic and proteolytic enzymes in acne. The enzymes due to hydrolytic action convert triglycerides present in

the glands into free acids that aggravate inflammation and edema. This further leads to breakdown of the follicular wall. The major reasons behind inflammation are higher sebum production, release of proinflammatory mediators and activity of the bacteria. [11,43]

#### Pathogenesis

The major etiology of acne includes high levels of sebum production, sebocyte differentiation and inflammation by virtue of Propionibacterium acne. The anaerobic gram positive bacteria is typically present on normal skin flora but grows rapidly on the areas of skin which are preferably block and have high levels of sebum. This causes inflammation and converts triglycerides into fatty acids which are presents in the glands. The bacterium also promotes Proinflammatory mediators and cytokines, [14]

The pathogenesis of acne vulgaris associated with multifactorial process involves follicular hyperkeratinization, obstruction and increased sebum production. P.acnes binds to immune receptors and stimulates inflammation. Microcomedones are caused by obstruction in the follicular orifice due to follicular hyperkeratinization and deposition of keratinocytes. Comedones can be classified as open and closed Comedones. Open Comedones are visible and easily







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Jaya Bhati\*1, Amarjeet Singh2 and Giriraj T. Kulkarni3

<sup>1</sup>Assistant Professor, Innovative College of Pharmacy, Greater Noida. <sup>2</sup>Professor &H.O.D. Innovative College of Pharmacy, Greater Noida. <sup>3</sup>Professor & Principal, Gokaraju Rangaraju College of Pharmacy, Hyderabad.

Received on: 13/06/2021 Revised on: 03/07/2021 Accepted on: 23/07/2021

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KEYWORDS: Proniosomes, Thyme, Cinnamon, Propionibacterium acne, Dynamic light scattering (DLS), Transmission electron Microscopy (TEM).

#### INTRODUCTION

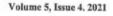
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2. Anti-Hyperlipidemic Activity of Ursolic Acid Derivative Obtained from Lantana Camara

Anjali Singh<sup>1</sup>, Chhater Singh<sup>2</sup>, Dr. Amarjeet Singh<sup>3</sup> <sup>3</sup>Innovative College of Pharmacy, Greater Noida

ABSTRACT: Lantana camara is to be a tackler in Indian ethanopharmacology It is found commonly every where even on waste land, road side, dry place and spread vigorously on cultivated ground. The aim of present study is to evaluate pharmacological effect ursolic acid steroyl glucoside obtained from lantana camara on lipid profile of high fat diet (58%) induced hyperlipidemia Administration of high fat diet increase the lipid profile of the animal significantly as compared to normal control. Treatment with the ursolic acid steroyl glucoside for 12 weeks. Decreased the lipid parameters as compared to disease controls. The study shown promising effect in lowering of body weight and by other pharmacological parameter, we concluded that ursolic acid derivative of lantana camara have a potent anti hyperlipidemic activity.

Keywords: hyperlipidemia, lantana camara, ursolic acid





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3. A Review on Holy Improving Plant Nyctanthes Arbor-tristis Linn. (Night Jasmine) With Monster Therapeutic Possibilities

ndu Mittal\*<sup>1</sup> , Dr. Mohd. Javed Naim<sup>2</sup> , <mark>Dr. Amarjeet Singh<sup>3</sup> ,</mark> Suraj Mand <sup>3</sup>Innovative College of Pharmacy, Greater Noida

ABSTRACT: The current study of this review is exploration and compiling the comprehensive information of Nyctanthes arbor-tristis Linn and find out some medicinal values, therapeutic use, chemical properties, pharmacological action and some of biological activities so can emphasizes the need for further exploring available information. A traditional plant Nyctanthes arbor-tristis Lin is a most useful medicinal plant found in India. Every part of this plant having different kind of medicinal properties and values thus it is commercially exploitable. Nyctanthes arbor-tristis Linn commonly known as Harsingar of Parijat is a traditional herbal medicine which is being used to treat the rheumatism and inflammatory diseases. It is also known as a night jasmine Night jasmine is widely distributed in sub-Himalayan regions to southwards to Godavari.

**KEYWORDS:** Nyctanthesarbor-tristis Linn., Night jasmine, rheumatism, Biological activity, Therapeuticactions.





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#### 4. ANTIBIOTIC RESISTANCE

Dr. Amarjeet Singh<sup>1</sup>, Anubhav Sawhney<sup>2</sup>, Satyam Singh<sup>3</sup>, Mohsin Hasan

<sup>1</sup>Innovative College of Pharmacy, Greater Noida

ABSTRACT: Antibiotics are the 'wonder drugs' to combat microbes. For decades, multiple varieties of antibiotics have not only been used for therapeutic purposes but practiced prophylactically across other industries such as agriculture and animal husbandry. Uncertainty has arisen, as microbed have become resistant to common antibiotics while the host remains unaward that antibiotic resistance has emerged. The aim of this review is to explore the origin, development, and the current state of antibiotic resistance, regulation and challenges by examining available literature.





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#### 5. GOOD LABORATORY PRACTICE

Mohd. Sameer <sup>1</sup>, Jaya Bhati<sup>2</sup>
<sup>2</sup>Innovative College of Pharmacy, Greater Noida

**ABSTRACT:** Good Laboratory Practice (GLP) is set of principle intended to assure the quality and integrity of non-clinical laboratory studies that an intended for product regulate by government agencies. The term GLP is the most commonly associated with the pharmaceutical industry are the required non-clinical animal testing that must be performed prior to approval of new drug product. However GLP applies to many other non-pharmaceutical testing that must be performed prior approval of new drug product.

However GLP applies to many other non-pharmaceutical agents such as colo additives. Food additives, food contamination limits, food packaging an medical devices. The actual regulation is the United States can be found in European union via the organization for economic co-operation and development. This post in not intended to be a comprehensive review of GLI regulation are applied when they should not be used creating confusion extra work and addition cost. Let's take a look at scope of GLPs form the FDA and the OECD.





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6. Hypertesion: Hypertension Affects your Whole Body

Aman Yadav<sup>1</sup>, Jaya Bhati<sup>2</sup>, Gaurav Kumar<sup>3</sup>, Khushdil Anwar<sup>4</sup>, Shivam<sup>5</sup>
<sup>2</sup>Innovative College of Pharmacy, Greater Noida

ABSTRACT: Hypertension remains one of the most significant causes o mortality worldwide. It is preventable by medication and lifestyle modification Office blood pressure (BP), out-of-office BP measurement with ambulatory BI monitoring, and self-BP measurement at home are reliable and important data for assessing hypertension. Primary hypertension can be defined as an elevated BP of unknown cause due to cardiovascular risk factors resulting from change in environmental and lifestyle factors. Another type, secondary hypertension is caused by various toxicities, iatrogenic disease, and congenital diseases Complications of hypertension are the clinical outcomes of persistently high BP that result in cardiovascular disease (CVD), atherosclerosis, kidney disease diabetes mellitus, metabolic syndrome, preeclampsia, erectile dysfunction, and eye disease. Treatment strategies for hypertension consist of lifestyle modifications (which include a diet rich in fruits, vegetables, and low-fat food or fish with a reduced content of saturated and total fat, salt restriction appropriate body weight, regular exercise, moderate alcohol consumption, and smoking cessation) and drug therapies, although these vary somewha according to different published hypertension treatment guidelines.





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#### 7. PEPTIC ULCER DISEASE

Naseem khan<sup>1</sup>, Mohd Sameer<sup>2</sup>, Md. Bakar, Atul kumar<sup>3</sup>, Mrs. Monika Setia<sup>4</sup>, Renu Tiwari<sup>5</sup>
<sup>5</sup>Innovative College of Pharmacy, Greater Noida

**ABSTRACT**: Peptic ulcer disease refers to painful sores or ulcers in the lining of the stomach or first part of the small intestine, called the duodenum Peptic ulcers are present in around 4% of the population. They newly began in around 53 million people in 2014. To understand the basisetiology and pathogenesis of the fundamental efforts and basic knowledge is required. The study has planned with following objective understand the distribution of peptic ulcers.

The 40 peptic ulcer disease patients were enrolled in to the study. The aggroup of the patients are from 20-70 years. The patients visited to Out Patien Department (OPD) and in-patient department (IPD) of a tertiary care hospital in North India were considered in the study. From the study it has been found that duodenal ulcers are more common than gastric ulcers.

The comments ages of the ulcers are above 30 years. The majorly observe site of the ulcer pain is the epigastrium. The burning & the hunger is the commonest type of pain observed in the duodenal ulcer. All patients suffering from the ulcers are doing smoking as well as alcohol previous regulations consumption. The consumptions of the NSAID's & Steroids are the also on of the factors for the duodenal & gastric ulcers.





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8. Pathophysiology of Infertilty and their Diagnostic Parametres

Akancha Kumari<sup>1</sup>, Amarjeet Singh<sup>2</sup>, Preeti Devi<sup>3</sup>, Akhilesh Kumar Mishr
<sup>2</sup>Innovative College of Pharmacy, Greater Noida

ABSTRACT: The document attempts to first construct a broad uniformit of existing definitions of infertility from the perspective of demography reproductive endocrinology on one hand and primary and secondary infertilit on other band to gang is psychological and social impacts. The faces of medical inquiry in the paper is to determine the major cases for male are female fertility (ria, ASA, genetic & DNA factors besides the general factor like Diabetes mellitus, Thyroiddisorders indiagnosed and atrireated coelact adrenal disease. Ayothelic pitary factor besides alimentary habits before exploring the advantages & ettical.

Keywords: Infertility, Diagnostic Parameters





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#### 9. AGGRESSIVE BEHAVIOUR IN SOCIETY

Harshit Deep<sup>1</sup>, Ms. Priyanka Bhati<sup>2</sup>, Yashika Tiwari<sup>3</sup>, Sumail, Mimad<sup>4</sup>, Mansi Rajoriya<sup>5</sup> <sup>2</sup>Innovative College of Pharmacy, Greater Noida

**ABSTRACT:** Aggression is a response by an individual that delivers something unpleasant to another person. Violence refers to extreme forms of aggression, such as physical assault and murder.

Even if male preponderance is there aggression is also common in females.





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10. Pharmacometabolomic-guided Personalized Therapy In Type 2 Diabetes

Qumre Alam, Innovative College of Pharmacy, Greater Noida

ABSTRACT: This study explores the application of pharmacometabolomic in optimizing treatment strategies for type 2 diabetes mellitus (T2DM). We conducted a prospective, randomized clinical trial involving 200 newly diagnosed T2DM patients. Plasma metabolomic profiles were analyzed using liquid chromatography-mass spectrometry before and after treatment with metforming or sitagliptin. Machine learning algorithms were employed to identify metabolite signatures predictive of drug response. Our findings reveated distinct metabolomic patterns associated with treatment efficacy, enabling the development of a predictive model for personalized drug selection. This approach significantly improved glycemic control and reduced adverse effect compared to standard care, highlighting the potential of pharmacometabolomics in tailoring T2DM treatment.

**Keywords:** Pharmacometabolomics, type 2 diabetes mellitus, personalized medicine, metformin, sitagliptin, metabolomic profiling, machine learning





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## 11. Nanoparticles in Targeted Drug Delivery for Preventing Aneurysm Rupture and Promoting Vascular Remodelling

## Deepika Chauhan<sup>1</sup>

### Innovative College of Pharmacy, Greater Noida

ABSTRACT: Targeted medication delivery using nanoparticles has shown promise avoiding aneurysm rupture and boosting vascular remodelling. Due to their weaker arte walls, aneurysms carry a high danger of rupturing and causing potentially dead outcomes. Presently available interventions like endovascular coiling and surgic clipping are intrusive and fraught with danger. Through the direct delivery of therapeut drugs to the aneurysm site, targeted medication delivery using nanoparticles provides non-invasive and possibly more effective option.

This paper delves into the latest developments in nanoparticle technology specifical designed to treat aneurysms. It talks about the different kinds of nanoparticles used, sur as metallic, polymeric, and liposomal nanoparticles, emphasizing their special qualiti that improve the effectiveness of therapy and the efficiency of drug administration. addition, targeting strategies that are employed to attain targeted accumulation nanoparticles at the aneurysm site are also covered. These strategies include actitargeting using ligands that target biomarkers expressed on the aneurysm wall as passive accumulation through increased permeability and retention effect.

Additionally, the potential of the therapeutic substances encapsulated in nanoparticle such as growth factors, antioxidants, and anti-inflammatory drugs. To prevent aneuryst rupture and encourage vascular remodelling is investigated. In addition, the stud discusses difficulties with biocompatibility, pharmacokinetics, and clearance in nanoparticle-based drug delivery and suggests future research avenues to improve nanoparticle design and therapeutic results.

In summary, targeted medication delivery mediated by nanoparticles has enormou potential to transform the way cerebral aneurysms are treated. Realizing the full clinical benefit of this novel strategy for preventing aneurysm rupture and boosting vasculature remodelling will need ongoing research efforts focused on improving therapeutic payload fine-tuning nanoparticle composition, and addressing regulatory issues.

Keywords: Nanoparticles ,Vascular remodelling,Aneurysms





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12. Review Article On Novel Operating Policies, Purposes And Procedures For The Standard Pharmacy Practice For Indian Hospitals

Syed Akmal Shah Qadry\* <sup>1</sup>, Pankaj Sharma<sup>2</sup> and Amarjeet Singh<sup>3</sup> <sup>3</sup>Innovative College of Pharmacy, Greater Noida

ABSTRACT Health and socioeconomic developments are so close interrelated that it is impossible to achieve one without the other. Althoug economic development in India has been gaining momentum over the pa decade, our health system is at crossroads. Even though government initiative in public health have recorded some remarkable success over time, the India health system is ranked 118 among 191 WHO countries on the heal programme. The vision and mission statement of an organization is to help in preparing the policies and guidelines for its smooth operation. The vision and mission statements need to be published and popularized among the state and the public as guiding principles for the optimum functioning. The hospit pharmacy should function within the administrative and financial policy of the hospital. Nevertheless, the pharmacy can have its own policy and planning majors to improve the quality and efficiency in service.

KEYWORDS: pharmacy practice; hospital pharmacy; policies, counseling.



# A HANDBOOK OF PRACTICAL PHARMACEUTICAL INORGANIC CHEMISTRY

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