

Geethanjali College of Pharmacy

Cheeryal (V), Keesara (M), R. R. Dist- 501301, TS.

Innovative activities by faculty

Name of the faculty: Prof. M. Ravi Kumar, Dr. N. Anjaneyulu and Dr. R. Naga Kishore

Title: Preparation and comparison of bioplastic from natural sources for pharmaceutical applications

Year: 2019

Abstract:

Bioplastic is a biodegradable organic biomass that is made partly or wholly from polymers derived from biological sources such as sugar cane, potato starch or the cellulose from trees, straw, cotton, vegetable oils, acids, alcohols, fungi, bacteria derived or synthesized products and genetically modified plants and enzymes. Bioplastics are low molecular weight, resistant, low cost. Process of bioplastic preparation is simple and prepared bioplastic materials have the better biodegradable properties and can be used in **pharmaceutical industry such as packaging, storage etc.** Further studies required to evaluate the shelf life of the prepared bioplastic material.



Fig: Bioplastic Product

Name of the faculty: Dr. N. Anjaneyulu and Dr. R. Naga Kishore

Name of the Students: Mr.K. Raghu, Mr.K Anil, Mr. B. Harshith Reddy, Mr.N. Pradeep and Mr. Y. L. N. Narasimha Reddy (**B.Pharmacy**)

Title: Designing and developing a new in-door mosquito populations killing device

Year: 2019

Abstract:

Research pertains generally to in-door mosquito control devices and more particularly to mosquito Killing device as Mosquitoes are the root cause of many dreadful diseases like malaria, Dengue, Chikungunya and other diseases. Study aims to design a device to kill mosquitoes effectively. A device promises to eradicate the ‘mosquitoes borne diseases’ in rural and urban area of India

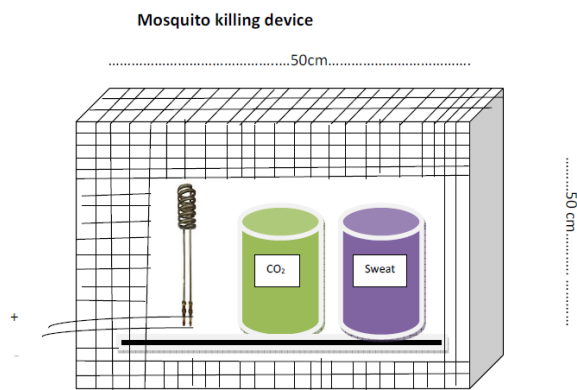


Fig: In-door mosquito populations killing device

Name of the faculty: Dr. N. Anjaneyulu and Dr. R. Naga Kishore

Name of the Students: Mr. A. Sivasai, Ms. L. Lekha, Ms. N. Varsha, Ms. P. Poojitha, Mr. T. Vishal, Ms. U. Pooja and Ms. A . Sowmya (**B.Pharmacy**)

Title: Modified Light and Dark Glass Box Model

Year: 2019

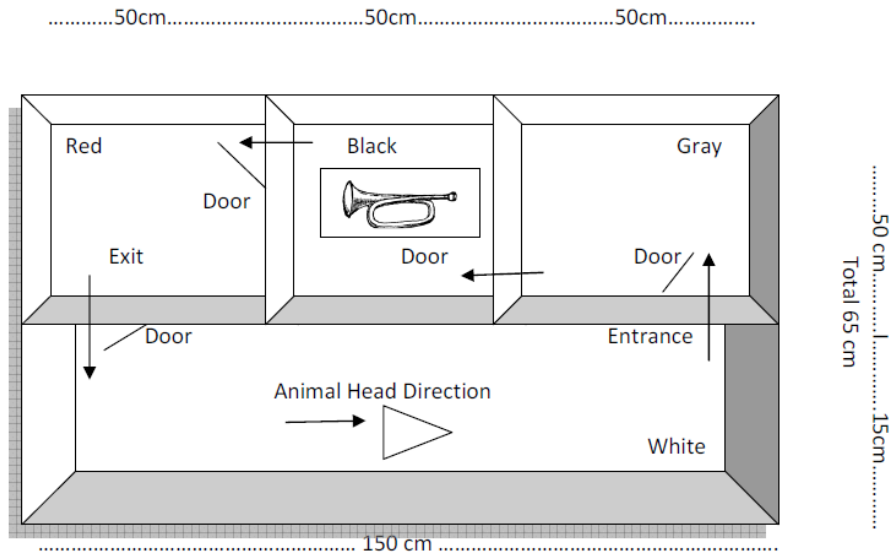
Abstract

Light and dark glass box has a size of 150cm×65cm×15cm and again divided in to four compartments. The walls of the box made with glass. Outer compartment is rectangular and three are square shaped (50cm×50cm×15cm) & outer compartment leads to the second, second to the third and third to the fourth compartments. All the inner compartments fixed with gray, black and red bulbs where as Outer compartment with white florescent bulb. Box will be associated with sound system which delivers low decibels. All compartments were connected with photoelectric diode cells which passes signal. Interruption of the signal will be recorded as 1 count.

End points/Inference:

- ❖ Time spent in each box
- ❖ Movement in each box by computerized arena
- ❖ Animal stunning (freeze)
- ❖ Number of defecations

- ❖ Number of nose poking (curiosity/exploratory behavior)



Light and Dark Glass Box Model

Name of the faculty: Dr. N. Anjaneyulu and Dr. R. Naga Kishore

Name of the Students: Ms. Shivani Goud, Pharm.D

Title: Urticaria Herbal Patch

Year: 2019

Abstract: Herbal compounds and home remedies can treat urticaria. Oatmeal can soak up the excess oil on your skin and help treat acne. It's antioxidants and anti-inflammatory properties help to treat dry skin and remove dead skin cells. Oats also contain compounds called saponins, which are natural cleansers. They remove the dirt and oil that clog the pores and exfoliate the skin. Urticaria Oatmeal bath : something you probably have lying around your house can help with the symptoms that make your hives unpleasant. Oatmeal baths: A cup of uncooked oatmeal in a bath can soothe itching and ease pain. Make sure it's a cool bath. If it's too hot, the water can make that itching and swelling hang around.

Name: Dr. Y. Shiva Kumar

Year: 2019.

Title: “Design of ophthalmic drug delivery systems using mucoadhesive materials for prolonged drug release and characterization”

Abstract:

The present research was designed to characterize ocular *In situ* gel and Microfiber drug delivery systems of forskolin for the treatment of glaucoma. The aim was to optimize and compare

ocular *in situ* gel and micro fiber systems of forskolin formulated with preferred polymers like Carbopol 940, Sodium Alginate, HPMC K 4M and Poloxamer F68 respectively. Forskolin was extracted from *Coleus forskohlii* dried plant by hot maceration technique and purified. Extracted forskolin was confirmed by Mass and NMR spectral analysis.

Name of the faculty: Dr.P.Neeraja

Title: “Preparation and evaluation of nano particles containing anti cancer agent from bacterial species”

Year: 2018

Abstract: The thesis comprises of process optimization and production of anti cancer protein from *Pseudomonas aeruginosa*. Native and recombinant anti cancer protein were synthesized in higher yields. In this work anticancer protein was isolated and purified. Further an attempt was made to synthesize bio synthetic nano particles of anticancer protein.

Name of the Faculty: Dr. R. Naga Kishore

Title: Phytochemical and Pharmacological Screening of some important Indian medicinal plants.

Year: 2018

Abstract:

In the present study the extracts of leaves of *L. usitatissimum*, *Mimosa pudica*, *P. spicigera*, *A. marmelos*, *S. urens*, *C. dactylon*, *V. nigrundo* and *E. aureum* were selected for the evaluation of various pharmacological studies includes antioxidant, antianxiety, antiasthmatic, diuretic and nephroprotective activities.

Name of the Faculty: Dr.Bharat Bhusan Mohapatra

Year : 2017

Title: “Antiulcer activity of aqueous and ethanolic leaf extract of Azadirachta indica & Ocimum sanctum in albino rats”

Abstract : The Anti-ulcer effect of aqueous and ethanolic leaf extract of Azadirachta Indica (NLEa & NLEe) and Ocimum sanctum was investigated in pylorus ligation, cold restrains stress and forced swimming endurance models in wistar albino rats. The anti-ulcer activity was assessed by determining and comparing the ulcer index in the test drug group with that of the distilled water (-ve) control group and Ranitidine 20mg/kg was used as a reference standard.

Name: Mahankali Naga Ganesh

Year: 2017

Title: Development and evaluation of modified release dosage forms based on gastro retentive and osmotic technology principles

Abstract : In the present investigation, alimentary osmotic pump of tramadol HCl (300 mg) or doxofylline (400mg) and floating gastroretentive drug delivery systems of diltiazem HCl (90mg) or Atazanavir sulphate (100 mg) were developed as tablets. The core tablets of elementary osmotic pumps were developed by wet granulation method followed by coating with cellulose

acetate polymer and drilling of pore by microdriller. Highly porous low density gastroretentive floating drug delivery tablets of diltiazam HCl were developed by sublimation method using camphor as subliming agent.

Name: Dr Rambabu Bathini

Year: 2017

Title: Phytochemical and pharmacological evaluation of some medicinal plants (*Jasminum sambac*, *sorghum halpense*, *lilium candidum* and *chamomilla capitula*).

Abstract: In the present study the flowers of *Jasminum sambac*(*Oleaceae*), *Sorghum halpense*(*Cyperaceae*), *Lilium candidum*(*Poaceae*) and *Chamomilla capitula*(*Asteraceae*) are taken based on phytochemical analysis and different activities are performed in rats such as anti-diabetic, anti-diarrheal, anti-ulcer, anti-depressant, anti-anxiety and anti-convulsant for their therapeutic potential of individual and combination of flower extracts. However, the literature survey revealed that no research work has been carried out on this combination of this flower extracts. The preliminary phytochemical studies of the aqueous and alcoholic extracts of the leaves showed the presence of various phytochemical constituents such as alkaloids, tannins, flavonoids, triterpenoids, and saponins. The aim of the present study was carried out with the objective of phytochemical screening and to evaluate the anti-diabetic, anti-diarrheal, anti-ulcer, anti-depressant, anti-anxiety and anti-convulsant activities of the flowers of EEJs, EELc, EESh and EECc and EEJSLC at a dose of 200 and 400 mg/kg as per body weight.

Name of the Faculty: Dr. N.Anjaneyulu

Title: Bioanalytical Method Development and Validation of Some Selected Drugs in Biological Samples by Using Liquid Chromatography Related Techniques

Year: 2016

Abstract:

A simple, fast and sensitive LC–MS/MS based bioanalytical techniques have been developed and validated in human plasma for the (1) Simultaneous quantitative estimation of rosuvastatin and amlodipine in human plasma,rosuvastatin-d6sodium and amlodipine-d4 maleate are used as an internal standards;(2)Quantitative estimation of Riluzole in human plasma using Carbamazepine as an internal standard;(3)determination of Acetazolamide in human plasma using Acetazolamide-d3 as an internal standard;(4)Quantitative estimation of Baclofen in human plasma using Baclofen-d4 as an internal standard; (5) Quantitative analysis of Linagliptin in human plasma using Sitagliptin as an internal standard.

Name of the Faculty: Dr. T. Mangilal

Title: Design, Development and Evaluation of Buccal Adhesive Diltiazem Tablets Using Natural Edible Mucoadhesives.

Year: 2014

Abstract:

Mucilages of plant origin have been used widely as demulcent because of their unique properties to bind with the mucus membrane. Isolation of water-soluble components from the natural edible sources was carried out by cold/hot aqueous extraction process followed by the organic solvent precipitation. The yields of PD, PJ, AA and AE were \approx 5.49, 4.91, 3.46 and 3.87 % w/w respectively to this initial weights. The isolated mucoadhesive materials obtained from natural sources were proved to be safe and free from toxic or adverse effects.

Faculty Name: Dr. B. Bhattacharya

Title: Characterization of Potential Ability of Medicinal Plant Constituents and Evaluation of their Pharmacological and Antimicrobial Activity.

Year : 2012

Abstract:

Coccinia grandis (Family-Cucurbitaceae) extract was studied “in vitro” and “in vivo” anticancer activity against Ehrlich Ascites Carcinoma (EAC) cell line on mice. Viable (live) and nonviable (dead) cell counting, intraperitoneal fluid volume, packed cell volume etc. were measured. Ethanol extract produced significant anticancer activity. Plasmid mediated drug resistance was also studied by isolated compound (Polyprenol C-60) on two bacterial strains of *Escherichia coli* (ATCC 25938) and *Bacillus cereus* (IMAUB1022). The genes responsible for resistance are present in plasmid DNA of both and confirmed that the resistance is plasmid mediated. In vivo antimalarial activity of aqueous extract was also conducted utilizing *Plasmodium berghei* parasite cell line. Parasites were stained using Giemsa stain and counted. It showed significant reduction of parasite count.

Name : Dr. R. Sivakumar

Year : 2009

Title: Enzymatic Synthesis Of Selected Phenolic And Vitamin Glycosides

ABSTRACT: The thesis comprises of synthesis of phenolic and vitamin glycosides with various carbohydrates by using glycosidase enzyme. In most of the cases regioselectivity is observed. HPLC and TLC were employed to monitor and to find out the extent of glycosylation. These synthesized glycosides were isolated through size exclusion chromatography and subjected for spectral characterization using UV, IR, Mass, optical rotation and 2D HSQCT NMR. Kinetic study of glycosylation was carried out. Biological activity of the synthesized glycosides was also determined. These are the results of outcome of DST funded project entitled “Synthesis of some

selected glycosides and amino acid esters using hydrolytic enzymes” and DBT funded project entitled “Synthesis of phenolic and vitamin glycosides using glycosidases”.