



# RESEARCH JOURNAL OF PHARMACOGNOSY AND PHYTOCHEMISTRY (RJPP)

ISSN 0975-2331

Volume 02, Issue 01, January - February, 2010

## CONTENT

### REVIEW ARTICLE

- **Hyptis suaveolens Poit: A Review on Its Phytochemical and Pharmacological Profile**  
*Praveen S Nayak, Shweta Nayak, Ranjan Shety and P Das.....01*

---

#### ABSTRACT

Medicinal herbs are the local heritage with global importance. Medicinal herbs have curative properties due to presence of various complex chemical substance of different composition, which are found as secondary plant metabolites in one or more parts of these plants. *Hyptis suaveolens* (L.) Poit. Is a plant belonging to family Lamiaceae, or the Mint family. It is a family of plants of about 210 genera and some 3,500 species. The original family name is Labiatae, so given because the flowers typically have petals fused into an upper lip and a lower lip. Although this is still considered an acceptable alternate name, most botanists now use the name "Lamiaceae" in referring to this family. They are herbs or undershrubs, distributed over both hemispheres and include a number of medicinal and sub-medicinal plants of great value. This important order has no poisonous members. They mostly exhibit aromatic or bitter-aromatic, stimulant and astringent properties. They are used as tonics, emmenagogues, diaphoretics, antispasmodics, burns and wounds, antimicrobial, antibacterial, antispasmodic, analgesic, anti-inflammatory, headaches, anticatarrhal, anticutaneous. A wide range of chemical compounds including terpenoids, alkaloids, acidic polysaccharide and 33 constituents were identified in the oil of *Hyptis suaveolens* isolated from its leaves. Extracts and metabolites from this plant have been found to possess pharmacological and insecticidal activities. This contribution provides a comprehensive review of its ethnomedical uses, chemical constituents and the pharmacological profile as a medicinal plant. Particular attention has been given to antioxidant and anti-inflammatory, antibacterial and wound healing properties, insecticidal effects presented in this review such that the potential use of this plant either in pharmaceutics or as an agricultural resource can be evaluated.

**KEYWORDS:** *Hyptis suaveolens* (L.) Poit, essential oil, terpenoids, ethnomedical.

---

- **Butea monosperma: The Palash- A Versatile Tree Full of Virtues**  
*Jain A., Dubey S., Sahu J., Gupta A., Tyagi A.K. and Kaushik A.....07*

---

#### ABSTRACT

*Butea monosperma* (Fabaceae) commonly called Palash and "Flame of the forest" is a tree growing in abundance in most part of India, Berma, Srilanka and Pakistan is valued in Indian peninsula for its religious general and therapeutic applications. It is well known for its folk loric and traditional curative values. The tree possesses aphrodisiac, anti implantation, antistress, antibacterial, antidiarrhoeal, anthelmintic, anti inflammatory, antihepatotoxic and wound healing activities which may be due an array of phytoconstituents present in nearly all its plant morphology.

**KEYWORDS:** Butin, Aphrodisiac activity, *Butea monosperma*.

---

## RESEARCH ARTICLE

- **Production of Neomycin Using Immobilized Cells of *Streptomyces marinensis* and It's Antimicrobial Activity**  
*YM Subbarao, Madhukar Vajjanepalli, Dupaguntla Suresh, KL Senthil Kumar and S Pratheep.....12*

---

### ABSTRACT

The use of immobilized whole cell is promising and advantageous in several cases. The mutant strain of *Streptomyces marinensis* was grown on Potato Agar Medium. Among various supporting matrices studied so far for whole-cell immobilization of *S. marinensis*, calcium alginate was found to be a better entrapment matrix for neomycin production. The effect of several parameters, such as the effect of alginate concentration, the effect of cation, the concentration of cation, and the curing times, on neomycin production and bead stability were studied. The Neomycin production started after 24 hours fermentation and reached a minimum level by 120 hours (1245 mg/l). On further incubation, there was no appreciable change in Neomycin liter. Finally, Minimum Inhibitory Concentrations (MICs) of the produced Neomycin was assayed against major Bacterial groups. The MICs for *E. coli* at a high inoculum density was 64  $\mu\text{g/ml}$  under aerobic conditions and 128  $\mu\text{g/ml}$  under anaerobic conditions. The latter value was higher than those of other intestinal organisms.

**KEYWORDS:** *Streptomyces marinensis*, Neomycin, immobilization

---

- **Preliminary Pharmacognostical and Phytochemical Studies of Leaves of *Hemigraphis colorata***  
*Saravanan. J, Shariff W.R., Joshi Narasimhachar. H, Varatharajan R., Joshi V.G., Karigar Asif A.....15*

---

### ABSTRACT:

The aim of this research was to develop the pharmacognostical parameters and phytochemical screening alongwith histological studies and quantitative microscopy of the leaf powder of *Hemigraphis colorata*.

The dried leaves of *Hemigraphis colorata* (Family: Acanthaceae) were subjected to standardization by following pharmacognostical and phytochemical screening methods. Methanolic extract was subjected to thin layer chromatography (TLC) to find out various phytoconstituents.

Microscopic study showed the presence of Cuticle, covering trichome, single layered thick walled epidermis, palisade cells, transfusion tissue, spongy cells, vascular bundle and chlorenchyma. Phytochemical screening reported the presence of alkaloids, tannins, proteins; steroids and sterols were present in Methanolic extract. TLC showed two different  $R_f$  values (0.86 and 0.36) with different nature of their residues.

**KEYWORDS:** Phytochemical screening, TLC, *Hemigraphis colorata*

---

- **Antimicrobial and Anti-Inflammatory Activity of *Roccella belangeriana***  
*Akash P Dahake, Rita C Chakma, Chirantan Chakma and Deshbandhu Joshi.....18*

---

### ABSTRACT

The investigation was carried out to study the antibacterial and anti-inflammatory of the *Roccella belangeriana* (Lichens) in carrageenan induced rat paw oedema in albino rats. Antimicrobial activity of the acetone and aqueous extracts of *Roccella belangeriana* were determined against various pathogenic bacteria. The extracts were tested against various bacteria like *Bacillus subtilis*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Escherichia coli* by disk diffusion method. Minimum Inhibitory Concentration (MIC) values of both extracts were determined. It is concluded that acetone extract exhibited significant antimicrobial activity. Acetone extract of *Roccella belangeriana* was given at a dose of 100, 200 and 300 mg/kg of body weight (p.o) and standard drug, Diclofenac sodium at a dose of 100 mg/kg. The paw oedema volume was determined for 3 hours at every one hour interval. The extract exhibited dose dependent activity at all three dose levels. This Study lends scientific support for its use in folk medicine.

**KEYWORDS:** *Roccella belangeriana*, Carrageenan, Antimicrobial, Anti-inflammatory

---

- **Antimicrobial Activity of the Leaves Extract of *Punica granatum* Linn.**  
*Punasiya R, Joshi A, Yadav S, Patidar K and Kapse K.....21*

**ABSTRACT:**

Human and veterinary medicines have not been so well succeeded in order to achieve their goals concerned with the treatment of various types of infections. The antibiotic activity of *Punica granatum* Linn. (Fresh leaves) extract was evaluated by the agar diffusion method and agar disc diffusion to determine the zone of inhibition. The extract of *P. granatum* presented potential antibiotic action over all the assayed strains, forming 10 to 36 mm diameter inhibition zones. This paper's results claim the effectiveness of the extract of *P. granatum* as a potential antibacterial agent and display the significance of evaluating new substances with antimicrobial potential, which can contribute to alternative therapeutics for medicine.

**KEYWORDS:** *Punica granatum*, aqueous extract, methanol extract and antibiotic activity.

- **Evaluation of Anti-Inflammatory, Antipyretic and Antifungal Activity of *Solanum laeve* Dunal**  
*P Muthumani, R Meera, Sweetlin, P Devi, B Kameswari and B Eswara Priya.....25*

**ABSTRACT**

*Solanum laeve* Dunal var *biegninatum* is small shrub is used by the tribals as a medicinal plant. The objective of the present investigation was to study the anti inflammatory, antipyretic and anti fungal activity potential in experimental animal models. The isolated compounds obtained from the chromatography after the extraction completed were used for (SA-I, SA-II, SA-III) these studies. Anti inflammatory potential of isolated compounds (SA-I, SA-II, SA-III) was evaluated by Carrageenan induced paw edema method in rats. Also antipyretic activity was tested on animal models. The studies were conducted on wistar rats of either sex (160-180g). The change in edema volume of the rat hind paw was measured using plethysmometer. The SA-III of isolated compound of *Solanum laeve* dunal inhibited the formation of edema to significant levels in rats treated with carrageenan. At a dose of 100mg/kg orally, the SA-III produced 40.90% inhibition in case of the carrageenan induced edema (p<0.01).

The isolated compounds of *Solanum laeve* Dunal (SA-I, SA-II,SA-III) were also evaluated for antipyretic activity on animals as per Vogel's method. *Solanum laeve* Dunal elicited a dose dependent inhibition of rectal temperature compared with control group. The isolated compound SA-II having maximum antipyretic activity which was compared with standard inhibition at 300mg/kg p.o.

The fungal activity of the isolated compounds (SA-I,SA-II,SA-III) were prepared at various concentration of 1%,2% and 3% solution respectively. In this the compound SA-II(C) having significant antifungal activity compared with other compound against *Candida albicans*.

The results indicated that the isolated compounds (SA-I,SA-II,SA-III) were active against all the experimentally induced laboratory models of inflammation, pyretic activities and also antifungal activity.

- **Antidepressant-Like Effects of the Ethanolic Extract of *Albizzia lebbeck* (Linn) Leaves in Animal Models of Depression**  
*Malarkodi Velraj, A Vijayalakshmi, S Jayakumari, S Ramamoorthy, V Ravichandiran and J Srikanth.....30*

**ABSTRACT**

The present study was designed to investigate the antidepressant effects of *Albizzia lebbeck* leaves in various animal depression models. The alcoholic extract (70% v/v ethanol) of *Albizzia lebbeck* leaves (200 and 400 mg/kg. p.o) was administered once daily for seven successive days to separate groups of young male swiss albino mice. The immobility periods of control and treated mice were recorded in two behavioral despair models forced swim test (FST), tail suspension test (TST) and the effect of extract on locomotor function of mice was studied using actophotometer. The antidepressant-like effect of tested drug was compared to that of imipramine

(15 mg/kg. p.o) and fluoxetine (20mg/kg.p.o). The leaf extract at doses of 200 and 400 mg/kg significantly decreased the duration of immobility time in a dose dependent manner in both FST and TST.

The extract did not show significant effect on locomotor activity of mice. The efficacy of tested extract was found to be comparable to that of imipramine and fluoxetine. Our results suggested that the ethanolic extract of *Albizzia lebbek* leaves exerts antidepressant-like effect.

**KEYWORDS:** *Albizzia lebbek*, Depression, Forced swim test, Tail suspension test.

---

- **Evaluation of Wound Healing Potential of Ethanolic Extracts of Various Parts of *Phyllanthus simplex* Retz.**  
*Arasan Elayaraja, M Vijayalakshmi and Devalarao Garikapati.....34*

---

#### **ABSTRACT**

Wound healing is a complex dynamic process that results in the restoration of anatomic continuity and function. The present study has proved that the wound healing potential of ethanolic extract obtained from roots of *Phyllanthus simplex* Retz showed a significant effect than the same extract obtained from other parts of the plant. That extract showed a facilitatory epithelisation and wound contraction than other parts extracts. The root extract animal groups showed a high collagen content than other extracts and the control groups. Hexosamine content and ascorbic acid levels showed an increased level of the extract. Ascorbic acid is reported to have scavenging activity and inhibition of lipid peroxidation, which helps to show a better healing effect for the test groups.

**KEYWORDS:** Wound healing, Collagen, Hydroxy proline, Hexose amine, Epithelization.

---

- **Phytochemical study and In Vitro Cytotoxic Activity of *Cinnamomum tammala* Linn. Against Ehrlich Ascites Carcinoma (EAC) and Dalton's Ascitic Lymphoma (DAL) Cell Lines**  
*M S Saluja, B Sangameswaran, A Sharma and C Dubey.....37*

---

#### **ABSTRACT**

Present study was performed to explore the cytotoxic activity of various concentration (10- 200ug/ml) of Acetonic and 50% ethanolic Extract from the leaves of *Cinnamomum tammala* linn Against EAC and DAL cell lines using Trypan Blue method and to find out the phytoconstituents presented in leaves. Results found that both of extracts exhibited significant cytotoxicity activity at 200ug/ml, but higher cytotoxic activity was found in acetonic extract.

**KEYWORDS:** Cytotoxic Activity, *Cinnamomum tammala* Linn. Ehrlich Ascites Carcinoma (EAC) and Dalton's Ascitic Lymphoma (DAL)

---

- **Hypoglycemic Potential of *Verbesina encelioides* Benth. Root**  
*Rakesh K Sindhu, Pradeep Kumar, Inderbir Singh and Sandeep Arora.....41*

---

#### **ABSTRACT**

Medical plants play an important role in the management of diabetes mellitus especially in developing countries where resources are meager. Plant-based drugs have been used against various diseases since a long time. The nature has provided abundant plant wealth for all the living creatures, which possess medicinal virtues. Therefore, there is a necessity to explore their uses and to conduct pharmacognostic and pharmacological studies to ascertain their therapeutic properties. In fact, nowadays, diabetes is a global problem. Hence, the present study aims to open new avenues for the improvement of medicinal uses of *Verbesina encelioides* Benth. roots for the selected area for diabetes.. Dried aqueous and alcoholic extracts were subjected for hypoglycaemic activity in swiss albino mice (30-40g). Blood sugar level was determined using digital glucometer. The oral administration of roots extracts at doses of 400 mg/ kg lead to a significant blood glucose reduction in normal and in Streptozotocin, alloxan diabetic mices significantly within 4 h. Continued, daily administration of the drug produced a sustained effect.

**KEYWORDS:** *Verbesina encelioides* , Alloxan-induced diabetes, Streptozotocin -induced diabetes, Hypoglycaemic activity.

---

- **Quantitative Estimation of Rosmarinic Acid in *Ocimum sanctum* Extracts and Polyherbal Formulation by HPTLC**  
*Bincy Raj, Salma Khanam, Soosamma John and Madhavi T Ayesha Siddique.....46*
- 

**ABSTRACT**

Rosmarinic acid is an important bioactive content having analgesic and inflammatory activity. The content of Rosmarinic acid in *Ocimum sanctum* and three polyherbal formulations was estimated by HPTLC.

**KEYWORDS:**

---

- **Evaluation of Total Phenolic Content, Flavonoid Content and Antioxidant Activity of Stem Bark of *Careya arborea* Roxb**  
*KA Wadkar and CS Magdum.....49*
- 

**ABSTRACT**

In this study we have determined the total phenolic, flavonoid content and antioxidant activity of pet. ether, aqueous and alcoholic extract of the stem bark of *Careya arborea* Roxb. (Lecythidaceae). Folin-ciocalteu method was used to determine the total phenolic content and flavonoid contents of these extract were assessed by aluminium chloride method. The antioxidant activities were determined by DPPH method.

Aqueous extract and alcoholic extract showed presence of phenolic and flavonoid content and hence possessed greater antioxidant activity. Pet. ether extract containing very less amount of phenol and flavonoids, did not showed any antioxidant activity. The results suggest that the plant is good source of antioxidants and support their use in various diseases.

**KEYWORDS:** *Careya arborea*, total phenol, flavonoids, antioxidant.

---

- **Pharmacognostical and Phytochemical Studies of *Melhania futteyporensis* Munro ex Masters Leaf**  
*Rabari HA, Pandya SS, Vidyasagar G, Gajra B, Somani JU and Upadhyay NP.....52*
- 

**ABSTRACT**

The leaves of *Melhania futteyporensis* Munro ex Masters (Sterculiaceae) are reported to have good medicinal values in traditional system of medicines. The present study deals with pharmacognostical examination of morphological and microscopical characters and phytochemical investigations of *Melhania futteyporensis* leaves including determination of loss on drying, ash values and extractive values. The preliminary phytochemical screening of powdered drug was also carried out. The qualitative chemical examinations revealed the presence of various phytoconstituents like carbohydrates, saponins, phenolic compounds and mucilages in the leaf extracts.

**KEYWORDS:** *Melhania futteyporensis*, Hanju, Leaf microscopy, Phytochemical screening

---

- **In Vitro Antibacterial and Antifungal Assay of *Tectona grandis*-A Screening Study**  
*K G Purushotham, P Arun, J Johnsy Jayarani, R Vasanthakumari, and D Chamundeeswari.....57*
- 

**ABSTRACT**

Medicinal plants are potential of antimicrobial compounds. The present study deals with the antibacterial and antifungal activity of methanolic extracts of *Tectona grandis* (Verabinaceae) leaves were collected from the garden of Dr. M.G.R. University during May- June 2009, Chennai, India. Air- dried and extracted by methanol. The methanolic extract of *Tectona grandis* leaves were examined for antibacterial and antifungal activity by *in vitro* using the disc diffusion method, Minimum Inhibitory Concentration (MIC), Minimum Bactericidal Concentration (MBC) and Minimum fungicidal Concentration (MFC). Activity against Gram-positive (*Streptococcus species* (MTCC 389)), Gram-negative bacteria (*Klebsiella pneumonia* (MTCC 432), *Pseudomonas aeruginosa* (MTCC 1688), *Proteus mirabilis* (MTCC 425), *Escherichia coli*, (MTCC 729), *Salmonella*

*typhimurium*(MTCC 98))and fungal strains (*Candida albicans*, *Cryptococcus neoformans*, *Aspergillus flavus*, *Aspergillus niger* *Aspergillus fumigatus* *Rhizopus sp.* *Trichophyton rubrum*,*Trichophyton gypseum* and *Trichophyton mentagrophytes*) is discussed.

**KEYWORDS:** Antibacterial activity, Antifungal activity, Disc diffusion method, MIC, MBC, MFC, *Tectona grandis*,

---

- **Evaluation of Anti-Diabetic Activity of Leaves and Fruits of Ficus Religiosa Linn**  
*RB Goswami, Neelima Goswami, P Khare, S Choudhary and AK Pathak.....61*

---

**ABSTRACT**

The ethanolic extract of the leaves and fruits of *Ficus religiosa* Linn. was evaluated for its antidiabetic activity in normal rats and alloxan induced diabetic rats. Fruit extracts were found to have no effect on normal rats while they were effective in lowering the elevated blood glucose level in experimental diabetic rats. Fruit extract in a dose of 250 mg/kg body weight was found to be more effective than 100 mg/kg body weight.

**KEYWORDS:** *Ficus religiosa*, Antidiabetic, Alloxan diabetic model.

---

- **In-Vitro Anthelmintic Activity of Thespesia populnea Linn Roots**  
*SM Shaheedha, R Uma, Ramya K, CH Phanindra and MD Dhanaraju.....64*

---

**ABSTRACT:**

The aim of the proposed study was to evaluate anthelmintic potential of *Thespesia populnea* root which was extracted with petroleum ether (60°-80°C), chloroform, ethyl acetate and methanol. The extracts were prepared in the percentage of 0.1%, 0.2% and 0.5%. These fractions were tested in the bioassay, which involved the determination of time taken for paralysis and death on the Indian helminthes *Pheritima posthuma* and *Ascaris lumbricoides*. Piperazine citrate was included as reference standard and 10% DMSO in normal saline as vehicle. Petroleum ether extract (0.5%) showed significant activity against the Indian varieties *Pheritima posthuma*, and *Ascaris lumbricoides*. The time taken for paralysis and death was found to be 9.25 min and 15.8min against *Pheritima posthuma* and 4.50 min and 9.25 min against *Ascaris lumbricoides* respectively. The results proved that the extracts were significant at higher concentration (0.5% pet ether) and had almost the same activity as that of the standard Piperazine citrate. The traditional use of the root of *Thespesia populnea* as an anthelmintic has been confirmed.

**KEYWORDS:** Anthelmintic activity, *Thespesia populnea*, *Pheritima posthuma*, *Ascaris lumbricoides*, Piperazine citrate.

---

- **Evaluation of Anti Bacterial and Anti Platelet Activity of Ethanolic Leaf Extract of Physalis Angulata**  
*Jafferi SAH, Sandhya S, Vinod KR, Narender Prasad D and Venkataramana K.....67*

---

**ABSTRACT**

There has always been a closed association between plants and human beings through ancient time and till date. *Physalis angulata* is an annual herb indigenous to many parts of the tropics, including the Amazon. It can be found on most continents in the tropics, including Africa, Asia, and the Americas. It grows up to 1 m high, bears small, cream-colored flowers, and produces small, light yellowish-orange, edible fruit sometimes referred to as Cutleaf Groundcherry. It is a popular medicine used due to its anti-inflammatory effects, anti tumor effects, immunomodulatory effects etc. The present study is to evaluate the anti bacterial and anti platelet activity of the ethanolic leaf extract of *Physalis angulata*. From the phytochemical screening it was found that the plant is mainly constituted with phenols, steroids and flavonoids .The anti bacterial activity was performed by well diffusion method on various concentrations of the extract. Gentamycin was used as the standard and ethanol as the control. In the antiplatelet activity study, the platelet was induced using adenosine di phosphate. Nephloimeter was used to observe the aggregation. It was observed that the ethanolic leaf extract showed pronounced anti platelet activity. But the anti bacterial activity was found to be false positive.

**KEYWORDS:** *Physalis angulata*, anti-platelet, anti bacterial, nephloimeter

---

- **Screening of Immunomodulatory Activity of Extracts of Seeds of *Jatropha Curcas* Linn. On Human Neutrophils**  
*DSHugar, Sanjeev Heroor and Zakir Hussain.....70*

---

**ABSTRACT**

***Jatropha curcas* Linn. (Euphorbiaceae)** traditionally claimed to be used as tonic, tissue builder and stimulant, the present work was undertaken to prove scientifically its tonic property as immunomodulator (immunostimulant) on human neutrophils by some in-vitro models, viz.- Nitroblue tetrazolium (NBT) dye test, phagocytosis of *candida albicans* and chemotaxis assay at different concentrations – 10µg/ml, 20µg/ml, 40µg/ml, 100µg/ml and 1000µg/ml (undiluted extract) of aqueous and petroleum ether(40-60<sup>o</sup> c) extracts of seeds of the plant. The extracts at concentrations of 1000µg/ml (undiluted extract) and 100µg/ml showed 70-80% of phagocytic and chemotactic activities when compared to normal and positive controls in the parameters studied. However, the activity was lower at concentrations 40µg/ml, 20µg/ml and 10µg/ml. Preliminary phytochemical investigation showed the presence of flavonoids, tannins, carbohydrates, saponins and amino acids in the extracts; hence these compounds might be responsible for immunomodulatory (immunostimulant) activity.

**KEYWORDS:** *Jatropha curcas*, Immunomodulatory (immunostimulant), NBT, *candida albicans*, chemotaxis.

---

- **Antinephrolithiatic Potential of *Macrotyloma Uniflorum* Aqueous Extract in Rats**  
*VDN Srinivas, G Sumalatha, PPV Jagannath, D Siva Kishore, P Madhu Kiran and M Jhansi Rani.....75*

---

**ABSTRACT**

Urolithiasis is a major health problem with its high morbidity, high cost of management and potential for end-stage renal disease. The aim of our study is to cure and prevent the recurrent stone formation. Herbal drugs claim many promising remedies in urolithiasis. An attempt is made in this direction in the current work by using ***Macrotyloma uniflorum***. The experimental model selected for the present study is subcutaneous administration of gentamicin (40mg/kg/day) for 8 days and dietary supplementation with 5% ammonium oxalate starting at day 5 of the treatment regimen to induce calcium oxalate urolithiasis. On administration of aqueous extract of ***Macrotyloma uniflorum*** in preventive and curative groups, moderate to few crystals are observed along the mild appearance of edema and dilation in tubules and crystals are present focally indicating the ability of aqueous extract of ***Macrotyloma uniflorum*** to dissolve the pre-formed stones. The parameters monitored in the present study are Kidney weight, calcium and oxalate deposition in kidney and the histological studies support the calcium and oxalate deposition data in kidney. Thus aqueous extract of ***Macrotyloma uniflorum*** showed significant antinephrolithiatic activity.

**KEYWORDS:** Urolithiasis, *Macrotyloma uniflorum*, calcium oxalate stones.

---

- **Antioxidant Activity of *Sida Veronicaefolia***  
*Pandey Manisha, Verma Rohit K, Dharamveer, Koshy MK and Saraf Shubhini A.....79*

---

**ABSTRACT**

**Purpose:** The present study was aimed at evaluating time dependent and dose dependent antioxidant effect of extract of *Sida veronicaefolia* (ESV) and the reductive capabilities of extract compared to ascorbic acid (reference). **Methods:** The meristem and leaves were separated, washed with water and dried under shade. The antioxidant properties of the meristem and leaves of *Sida veronicaefolia* were evaluated by determining their superoxide anion radical scavenging and hydrogen peroxide scavenging activities. **Result:** The phytochemical screening of plant extract showed positive reaction for psuedotannins, flavonoids, phenolic acid, choline and oxalic acid. The superoxide and hydrogen peroxide scavenging activity of ESV increased significantly with the increase in doses. The scavenging effect of various doses of ESV and reference (ascorbic acid) was found to decrease in the following order Ref (reference)>ESV (0.3mg/kg)> ESV (0.2mg/kg)>ESV (0.1mg/kg). Scavenging of Hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) by *Sida* extract may be attributed to their phenolic content. **Conclusion:** The results obtained in the present study indicate that the ethanolic extract (ESV) exhibits free

radical scavenging activity. The overall antioxidant activity of ESV might be attributed to its polyphenolic content and other phytochemicals constituents. The findings of the present study suggest that *Sida veronicaefolia* could be a potential source of natural antioxidant that could have great importance as therapeutic agent in preventing or slowing the progress of aging and age associated oxidative stress related degenerative diseases.

**KEYWORDS:** *Sida veronicaefolia*, Antioxidant, Superoxide anion radical, Scavenging activity

---

- **Effect of Ficus glomerata Fruit Extract on Various Biochemical Parameters in Alloxan Induced Diabetic Rats**  
*A Choudhury, RJ Mandade, SH Patil, A Khan, PD Warke and KS Patil.....82*
- 

**ABSTRACT:**

Serum cholesterol and serum triglycerides are the element which provokes the development of hyperlipidemia and coronary arterial disease. Present study deals with the study of effect of Ficus Glomerata Fruit extract on biochemical parameters like serum urea, serum cholesterol, serum triglycerides and blood glucose level in alloxan induced diabetic rats. Petroleum ether, benzene, alcohol and aqueous extract showed highly significant activity in decrease of blood cholesterol, petroleum ether and chloroform extract showed highly significant activity in decrease of serum triglyceride. From the data obtained, it can be concluded that the various fruit extract of Ficus glomerata acts as potent antihyperlipidemic and antidiabetic agent.

**KEYWORDS:** Serum cholesterol, serum triglycerides, Ficus glomerata, antihyperlipidemic.

---

- **Anti-Ulcerogenic and Membrane Stabilization Effect of Ethanol Extract of Coconut (Cocos nucifera)**  
*Anosike Chioma Assumpta, Obidoa Onyechi, Nwodo Okwesilieze Fredrick C. and Joshua Parker Elijah.....85*
- 

**ABSTRACT:**

The effects of the ethanol extract of coconut on indomethacin – induced gastric ulcer in Wistar rats and on Hypotonicity induced haemolysis of human red blood cells were studied. Ulcer was induced in the rats by post oral (p.o.) administration of indomethacin (50mg/kg) using standard procedures. The percentage ulcer inhibition was taken as the measure of the cytoprotection offered by the coconut extract. The extracts reduced the gastric erosions induced by indomethacin in a dose dependent manner with 100mg/kg dose having an ulcer inhibition of 65.4%; 200mg/kg gave 67.9% inhibition while 400mg/kg caused a 70.1% reduction in the ulcerations formed. These results were comparable to the 91% reduction recorded for ranitidine, the standard anti-ulcer drug. The effect of the coconut extract on haemolysis induced by distilled water was evaluated by incubating various concentrations of the extract with red blood cells and distilled water. The effect of the standard anti-inflammatory drug, indomethacin was determined as a positive control. Changes in absorbance were used to assess the extent of haemolysis, hence membrane stabilization. From the results obtained, coconut extract gave a dose dependent reduction in the haemolysis induced by distilled water. This suggests that the extract has a stabilizing effect on lysosomal membranes.

**KEYWORDS:** Coconut extract, gastric erosions, cytoprotection, RBCs haemolysis, distilled water.

---

- **Hypoglycemic Activity of Erythrina varigata Extract in Alloxan Induced Diabetic Mice**  
*Murugan M, Uma Maheswara Reddy C, Vedhapal Jeyamani S, Babu Ananth D and Umasankar K ...89*
- 

**ABSTRACT**

Ethanol leaf extract of *Erythrina varigata* was carried out using soxhlet apparatus. The extract was evaluated for preliminary phytochemical studies, acute toxicity studies and hypoglycemic activity. Acute toxicity study revealed that the ethanolic leaf extract even at high dose (2000mg/ kg) produced no death and found to be safe. The hypoglycemic activity was evaluated in normal and alloxan induced diabetic mice. The chloroform fraction of the leaf extract was found to possess significant hypoglycemic activity when compared to standard Glibenclamide.

**KEYWORDS:** *Erythrina varigata*, hypoglycemic activity, Diabetes mellitus.

---

---

***ADMINISTRATIVE, EDITORIAL, ADVERTISING AND SUBSCRIPTION OFFICE***  
A and V Publication, E-282 'Saikripa' Sector-4, Pt. Deendayal Upadhyay Nagar, Raipur 492010. (CG) India  
Phone No. +919406051618. E. mail: [editor.rjppc@gmail.com](mailto:editor.rjppc@gmail.com); Website: [www.anvpublication.org](http://www.anvpublication.org)