# Chapter 2

## Chapter -2: LITERATURE SURVEY

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of the sub-title</th>
<th>Page No</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Ethnobotanical survey on folklore medicinal plants used in anantapur district</td>
<td>19</td>
</tr>
<tr>
<td>2.2</td>
<td>Antioxidant activity</td>
<td>20</td>
</tr>
<tr>
<td>2.3</td>
<td>Phytochemical and pharmacological studies of <em>Stylosanthes fruticosa</em></td>
<td>23</td>
</tr>
<tr>
<td>2.4</td>
<td>Phytochemical and pharmacological studies of <em>Indigofera linnae</em></td>
<td>24</td>
</tr>
<tr>
<td>2.5</td>
<td>Phytochemical and pharmacological studies of <em>Cinnamomum tamala</em></td>
<td>25</td>
</tr>
<tr>
<td>2.6</td>
<td>Antimicrobial activity</td>
<td>30</td>
</tr>
<tr>
<td>2.7</td>
<td>Antidiabetic activity in-<em>vivo</em> and in-<em>vitro</em></td>
<td>31</td>
</tr>
<tr>
<td>2.8</td>
<td>Anthelmintic activity</td>
<td>32</td>
</tr>
</tbody>
</table>
Chapter 2

LITERATURE SURVEY

2.1. Ethnobotanical survey on folklore medicinal plants used in Anantapur district.

An ethnobotanical survey was carried out in the local area of Anantapur district; few potential medicinal plants were identified for the present investigational research work.

Table. 2.1. List of medicinal plants found in Anantapur district

<table>
<thead>
<tr>
<th>S.No</th>
<th>Botanical Name</th>
<th>Family</th>
<th>Folklore Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Indigofera linnae</em></td>
<td>Fabaceae</td>
<td>Anti-diabetic, analgesic, wound healing, anti-inflammatory, worm infection,</td>
</tr>
<tr>
<td>2</td>
<td><em>Stylosanthes fruticosa</em></td>
<td>Fabaceae</td>
<td>analgesic, Anti-inflammatory, anti-diabetic, worm infection and wound healing,</td>
</tr>
<tr>
<td>3</td>
<td><em>Cinnamomum tamala</em></td>
<td>Lauraceae</td>
<td>Anti-cancer, astringent, antiseptic, anti-bacterial, analgesic, anti-fungal,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>hypoglycemic and wound healing</td>
</tr>
<tr>
<td>4</td>
<td><em>Cocculus hirsutus</em></td>
<td>Menispermaceae</td>
<td>Diabetes, rheumatism, stomach ache, gonorrhea, eczema and dysmenorrhea</td>
</tr>
<tr>
<td>5</td>
<td><em>Urena lobata</em></td>
<td>Malvaceae</td>
<td>Rheumatism and dysentery</td>
</tr>
<tr>
<td>6</td>
<td><em>Melochia corchorifolia</em></td>
<td>Sterculiaceae</td>
<td>Remedy for water snake bite</td>
</tr>
<tr>
<td>7</td>
<td><em>Triumfetta rhomboidea</em></td>
<td>Tiliaceae</td>
<td>Dysentery and diarrhea</td>
</tr>
<tr>
<td>8</td>
<td><em>Erythroxylum monogynum</em></td>
<td>Erythroxylaceae</td>
<td>Jaundice, intestinal worms and hiccups</td>
</tr>
<tr>
<td>9</td>
<td><em>Naringi alata</em></td>
<td>Rutaceae</td>
<td>Cholera, chest pain, antiasthma and cold</td>
</tr>
</tbody>
</table>
From the ethno-botanical survey conducted, three medicinal plants were identified with common ethnic use. Hence these species were collected and processed for pharmacognostical and pharmacological investigations. The medicinal plants selected for further investigations are *Stylosanthes fruticosa, Indigofera linnae* and *Cinnamomum tamala*.

### 2.2 Antioxidant activity

Kyung-Hee Lee *et al.*, (2006) studied the function of osteoblastic MC 3T3-E1 cells and inflammatory bone diseases using the bark of *cinnamomum cassia blume* extract.\(^{28}\)

Vanitha Reddy *et al.*, (2005) studied for antioxidant activity of *V.vinifera, E.officianalis* and *Moringa oleifera* were used as the sources of natural antioxidants. Extract of all the species and formulated food substances were studied for antioxidant activity and also the food products were stored in different environment in relation with temperature were also accessed for antioxidant activity.\(^{29}\)

Djeridane A *et al.*, (2006) investigated and studied on some algerian folklore use of plants extracts containing phenolic compounds. The study proves that all the species showed a potent antioxidant activity. Thus the author concluded that all the extracts were enriched with polyphenolic phytoconstituents may possibly be responsible for the potent antioxidant activity.\(^{30}\)
Chin-Hui Chen *et al.*, (2009) have worked on folklore medicinal plant extracts for antioxidant activity, and they were concluded that, the results revealed most powerful antioxidant ability. Further, responsible compounds characterization for the antioxidant potentials of the examined extracts\textsuperscript{31}.

Monika Bajpai *et al.*, (2005) have worked on some food and medicinal plants. Phyllanthus emblica fruits and leaves, and seeds of Syzygium cumini elevated for total phenolic contents about 72.0-167.2 mg/g and having high antioxidant activity (69.6-90.6%). The compounds isolated from the various extracts were identified as rutin, quercetin, gallic acid and kempferol\textsuperscript{32}.

David Mantle *et al.*, (2000) intensive investigation performed for different species found in Britton with the preliminary aim of identifying species for the treatment of Alzheimer in correlation with radical mechanism on isolated tissue. Selected plants were extracted with solvents in increasing in their polarity and all the extracts were performed for radical scavenging antioxidant activity\textsuperscript{33}.

Marja P *et al.*, (1999) worked on the Phenolic Compounds Containing Plant Extracts for antioxidant activity and they observed that the antioxidative properties of phenolic extracts were examined by autoxidation of methyl linoleate. Further characterizations of the phenolic composition were carried out\textsuperscript{34}.
Effat Souri et al., (2008) studied antioxidant activity on screening of thirteen medicinal plant extracts and they concluded that the IC50 value of from 1.28 ng/ml in *A. hirtifolium* and *B. multifida* to 63.48 ng/ml in *P. vulgare* of antioxidant activity expressed as ranged Radical scavenging activity.  

Sanja S D et al., (2009) have performed antioxidant activity on *portulaca oleracea* and concluded that the present study was designed to assess the anti-oxidant activity of the *Portulaca oleracea* methanolic extract. TLC and HPTLC fingerprint method was used on the methanolic extract were evaluated. Methanolic extract was determined for anti-oxidant activity.

Ferda Candan et al., (2003), identified 36 phenolic from the methanolic extract and volatile oil of *A. millefolium* was investigated for the antioxidant activity. From the studies the methanolic extract and volatile oil showed potent activity further spectral characterization of the isolated volatile oil were performed.

Micheline N. Albano et al., (2013), stated that the *Casearia sylvestris* (Salicaceae) hydro-alcoholic extract was subjected for the *in-vitro* antioxidant activity. Lipid peroxidation assays were carried out for possible protein oxidative damage and its pathway.

Agnieszka Bazylko et al., (2013), originated that anti-inflammatory effect and antioxidant activity of the *Potentilla recta*, Antioxidant activities were implied for the different extracts and its ethyl acetate fractions showed strong antioxidant activity. The
presence of tannin related compounds were responsible for anti-inflammatory and antioxidants activity\textsuperscript{39}.

Guno Sindhu Chakraborthy.; (2009) worked on Successive extracts of Leaves of \textit{A.indica} and the successive extracts of \textit{A.indica} were screened for \textit{in-vitro} antioxidant potentials using the standard. The successive extracts explored IC 50 values in nitric oxide radical inhibition assays and compared with ascorbic acid and quercetin were shown significant antioxidant activity\textsuperscript{40}.

Hasnah osman \textit{et al.}; (2008) have worked on \textit{paederia foetida} and \textit{syzygium aqueum} and reported that, the percentage of antioxidant activity for all extracts samples 80\%, both plants (fresh samples) found to have rich content in antioxidant activity compared with dried samples. The β carotene bleaching assay were observed (R\textsuperscript{2} = 0.9849)\textsuperscript{41}.

\textbf{2.3. Phytochemical and pharmacological studies of \textit{Stylosanthes fruticosa}}

Malairajan P et al., (2006) investigated on \textit{Sida acuta} whole plant and including \textit{Stylosanthes fruticosa} whole plant. The different plants were identified in folklore medicinal uses as for the treatment of anthelmintic, toothache, analgesic, and strengthening of gums, hepatoprotective, antihyperglycaemic, anti-inflammatory, kidney diseases, and antihyperglycaemic\textsuperscript{42}. 
Antony Sandosh T et al., (2013) have studied the different leaves extracts of *Stylosanthes fruticosa* for characterizing it bioactive compounds by applying the UV-Visible, FT-IR and GS-MS also proven phenols, aromatics, alkanes, secondary alcohols, carboxylic acids, alkenes, amines and nitro compounds in different extracts were also determined the peaks for various compound\(^{43}\).

Paul John Peter M et al., (2012) have investigated on ethanolic extracts of leaf of *Stylosanthes fruticosa* for phytochemical analysis and Carbohydrate, Alkaloid, Phenolic compounds, Glycoside, Saponin, Protein, Amino acid Phytosterols & Flavonoids were identified. They suggested that the *Stylosanthes fruticosa* contains biologically active compounds and acts as candidate for the discovery of new drugs\(^ {44}\).

### 2.4. Phytochemical and pharmacological studies of *Indigofera linnaei*

Akila M et al., studied on the Whole plants of *Indigofera linnaei* for hepatoprotective effect on wistar albino rats by carbon tetrachloride induced liver injury method and found significant increase in the activities of aspartate transaminase\(^ {45}\).

Raju Senthil Kumar et al., investigated on Methanol Extract of *Indigofera linnaei* for antioxidant, Antitumor and Cytotoxic Activities against human cancer cell lines and transplantable tumors. Found significantly reduced antioxidant activity, solid tumor volume and increase in mean survival time \(^ {46}\).
2.5. Phytochemical and pharmacological studies of *Cinnamomum tamala*

Mang B *et al.*, (2006) investigated the effects on HbA1c, plasma glucose, and serum lipids on diabetes mellitus type II on a *cinnamon* aqueous extract. The extract was having very moderate glyceamic outcome in the decrease of fasting plasma glucose concentrations in very poor glyceamic control on diabetic patients\(^{47}\).

Krishnamoorthy B *et al.*, (2006) studied Clonal progeny evaluation in Chinese cassia (*cinnamomum cassia*) as a preliminary study. IISR Kerala is the only source of cassia germ plasms available in India, among the four elite lines; D1 has comparatively more number of branches than the rest\(^ {48}\).

Akil baruah *et al.*, (2004) investigated various fruit essential oil of *C.tamala Nees.* It shows seventeen components constituting 98.96% of the oil were identified, eugenol (73.60%) was the major component in the oil and other oils were Eugenyl acetate, α-farnesene, caryophyllene, α-terpineol, caryophyllene, terpinen 4-0l and 1,8-cineole\(^ {49}\).

Akil baruah *et al.*, (1997) studied Essential oil *C.tamala Nees.* is a new source from north east India, the essential oil from *C.tamala Nees* were analysed by GC and GC-MS. Fifteen components of each representing 99.51% and 99.97% of the leaf and stem bark oils were identified respectively. Eugenol (56.6%) and linool (24.5%) were the
major components in the leaf oils while linalool was predominant in
the oil of stem bark (75.5)\textsuperscript{50}.

Rana VS et al., (1997) studied identification, characterisation
and investigation of essential oil of \textit{C.tamala} leaves. The oil was
obtained by hydro-distillation and the yield was 2.42\% w/w. Fifty one
components accounting 93.03\% of the oil was identified. Eugenol
(81.69\%) was the most abundant with appreciable amounts of α-
phellandrene (4.08\%) and cymol (1.37\%) \textsuperscript{51}.

Bolin Qin \textit{et al.}, (2003) carried out study on extracts of
\textit{Cinnamon} were potentiated glucose utilization via enhancing insulin
signaling in rats. These results contributes that the extract of
\textit{cinnamon} would improve the action of insulin via increasing glucose
up take \textit{in-vivo}, at least in part from end to end enhancing the insulin-
signaling path way in skeletal muscle\textsuperscript{52}.

Khan A \textit{et al.}, (2003) studied the improved glucose and lipids of
people with type II diabetes by \textit{Cinnamon}. the range of cinnamon in
take helpful in reducing the risk factors related with cardio vascular
diseases and diabetes in patients with type II diabetes. Non-diabetic
population will be benefitted by preventing and controlling elevated
glucose\textsuperscript{53}.

Hoi-Seon Lee \textit{et al.}, (2006) studied on \textit{C.cassia} for the Inhibitory
activity and resultant constituent were studied against rat lens aldose
reductase. From \textit{C.cassia} barks extracts Cinnamaldehyde was isolated
may be useful for lead compound and a curative food staff for aldose reductase inhibition\textsuperscript{54}.

Akhil Baruah \textit{et al.}, (1997) studied on \textit{Cinnamomum schaeffer} (Lauraceae) from North Eastern India for determining Foliar Epidermal characters in twelve species. Epidermal cell wall nature, stomata, trichomes and number of epidermal cells per mm\textsuperscript{2}, length and breath epidermal cell, number of stomata per mm\textsuperscript{2} and stomatal index was found to be very useful in deciphering the individual species except in \textit{C.tamala} and \textit{C.impressinervium}\textsuperscript{55}.

Jayaprakasha G K \textit{et al.}, (1997) studied on the \textit{C.zeylanicum} \textit{blume} fruits and identified Chemical composition of the volatile oil from the steam distillation method. From the fruit grown from Kerala and Karnataka were analysed by Gas Chromatography and mass spectroscopy for the volatile oil of the cinnamon. This consists of hydrocarbons of 32.08\% and 20.08\% & oxygenated compounds of 63.7\% and 73.4\% respectively. The major compound in cinnamon fruits were found as Trans-cinnamyl acetate and $\beta$-caryophyllene\textsuperscript{56}.

Gopal Mallavarpu R \textit{et al.}, (1995) performed study on leaf of \textit{Cinnamon} grown at two different regions as Hyderabad and Bangalore was selected for investigating the essential oil from them. The isolated compounds were analysed by Gas Chromatography and mass spectroscopy. Further the main constituents, eugenol found to be 81.4-84.5\% and many other constituents comprising those
compounds present in a very tracer quantity have also been found in the oil samples\textsuperscript{57}.

Sing H B et al., (1995) studied on the identification of active fungitoxic constituent of oil obtained from cinnamon bark. Cinnamic aldehyde from \textit{C.zeylanicum}. The vapours of the oil have fungitoxic properties. The oil containing compounds were eluted and characterised\textsuperscript{58}.

Medici D De \textit{et al.}, (1992) investigated Chemical analyses on Malagasy medicinal plants to determine essential oils by GC & NMR. They were analysed and suggested a report by capillary gas chromatography and \textsuperscript{1}H and \textsuperscript{13}C–NMR techniques. The study showed better result on the essential oil analyses of commercial plants of cinnamomum species\textsuperscript{59}.

Chitra Sarathy et al., (1988) suited Structural features if a D-glucan from the \textit{C.zeylanicum} stem barks. Fractionation of the alkali extractable polysaccharide, isolated from \textit{C.Zeylanicum} stem bark on sephadex G-200 gives a glucan as the major component\textsuperscript{60}.

Thomas J et al., (1987) reported Studies on leaf oil and quality of \textit{Cinnamomum zeylanicum}. The maximum leaf oil with superior quality is got when two harvests were done per year, one is May and another in Nov. Application of 900g /tree/year of misery phos increased the oil yield and quality\textsuperscript{61}. 
Chandola H M et al., (1980) studied Hypoglycaemic effect of
*C. tamala* in patients of maturity on set (Insulin independent) diabetes. In cases of diabetes, the paper has dealt with effect of *C. tamala*, on fasting blood sugar in diabetes, Glucose tolerance of patients suffering from diabetes in addition to assessing the immediate response of *C. tamala* as evaluated by biochemical study in about two hours after administration\(^6\).

Ungsurungsie M et al., (1982) studied Mutagenicity screening were performed on prevalent THAI spices, two variant of the rec-assay in the strains of Bacillus subtilis H17 (rec\(^+\)) by rapid streak method and M45 (rec\(^-\)) were also been used, only the barks of Ceylon cinnamon showed mutagenic activity\(^6\).

Chandola H.M et al., (1980) have investigated on *C. tamala* for its determination on plasma insulin in comparison with blood sugar in Diabetes mellitus patients, the paper reports results of study at clinical level and advance a view that *C. tamala* has promising potential in the release of insulin\(^6\).

Ross M S F. (1976) have studied and analyzed cinnamon oils by HPLC and the major components of the cinnamon oils are aromatic. *Cinnamon* bark oil were containing Cinnamaldehyde (55.00-75.00\%); eugenol (05-08\%); *leaf oil of cinnamon*: cinnamaldehyde (01-08\%), eugenol (65-95\%)\(^6\).
2.6. Antimicrobial activity on medicinal plants

Giordani R et al., (2006) investigated essential oils from *cinnamomum cassia* were studies for the antimicrobial effect. Essential oil extracted from the plants showed a potent effect of the antifungal activity when compared with the standard amphotericin B\(^66\).

McGaw L J et al., (2000) reported on the different extracts of medicinal plants used by South African traditional therapists towards the treatment of stomach related ailments were screened for anti-amoebic, anthelmintic and antibacterial activities. To estimate the results for antibacterial activity, disc-diffusion assay was performed against several suitable microorganisms. The micro-dilution assay showed minimal inhibitory concentration values of ethanolic extracts showed good activity, the nematode *Caenorhabditis elegans* was selected for assays to determine he anthelmintic activity\(^67\).

Pessoa L M et al., (2006) reported on the essential oil of *Ocimum gratissimum* Linn (Labideae) for ovicidal activity. Eugenol the main component identified was evaluated against *Haemonchus contortus*. Tween 20 (0.5%) at five different concentrations was used. *H. contortus* eggs were acquired from feces of goat’s trial infected in the egg hatch test. At the concentration of 0.50% the essential oil and eugenol proved an inhibition. Results of these suggest a probable utilization of the *O.gratissimum* essential oil as an aid for controlling of gastrointestinal helminthiasis\(^68\).
Zafar Iqbal et al., (2006) investigated on *Z. officinale* rhizome for the anthelmintic activity. For justifying the traditional plants veterinary uses as medicine, author have chosen dried ginger and made in to powder (1–3 g/kg) crude aqueous extracts (CAE) was given to sheep naturally infected with mixed varieties of gastrointestinal nematodes. The aqueous extracts revealed anthemintic activity. 7.5 mg/kg concentration of Levamisole was used as standard and showed 99.2% reduction. This study also suggested that anthemintic activity of ginger in sheep thus justifies the traditional uses in helminthes infection.\(^{69}\)

### 2.7. Antidiabetic activity *in-vivo* and *in-vitro*

Michael G. Weller., (2012), explored bioassay guided fractionation and studied and discussed the various approaches and its advantages along with limitations with the association of biological activities with qualitative and quantification of chemical moieties leads to appropriate biological assays.\(^{70}\)

Raju Patil., (2011), investigated on anti-diabetic component and it’s Isolation, fractionation by bioactivity guided isolation and characterization and structural elucidation of *Ocimum sanctum* L. (Lamiaceae) aerial part. Found tetracyclic triterpenoid isolated and has a great anti-diabetic potential.\(^{71}\)

Y. Janapati *et al.*, (2008), investigated on the alloxan induced Antidiabetic model for the ethanolic leaves extracts obtained from
holostemma ada kodien, the antidiabetic activity were seen ethanolic extracts by induced diabetic in rodent, using standard glibenclamide72.

Aroke S.Ahmed et al., (2012), investigated and reported on four species of Bauhinia indigenous ethno medicine found in South Africa, and it is traditionally used by medical practitioners. Used majorly to identify and treat ailments which include diabetes, infectious diseases, GIT, and inflammation have revealed that the polyphenolic compound present in the selected sample extracts were responsible for showing anti-oxidant and antimicrobial activity73.

2.8. Anthelmintic activity on medicinal plants

Asha M K et al., (2006) have studied in-vitro potent anthelmintic activity on the essential oil and eugenol from Ocimum sanctum and Caenorhabditis elegans. Eugenol shows an ED50 of 62.1μg/ml and it was being the predominant component of the essential oil also it was suggested as the putative anthelmintic principle.74

Akhtara M S et al., (2000) investigated and reported that a wide variety of antihelminthes is been used for the treatment of helminths in animals. The commonly used anthelmintics have always been a challenge faced by the animal health care professionals today due to the development of resistance in helminthes. As a result on anthelmintic potential reviews, the exploit of some indigenous medicinal plants were explored as anthelmintics in animal usage75.
Yadu nandan dey et al., (2011) investigated the presence of alkaloids and steroidal phytoconstituent which produced the paralytic effect and death of *peritima posthuma* and *Tubifex tubifex* for the *Paederia foetida* methanolic leaves extracts and piperazine citrate as a reference standard\(^7\).

Sangh Partap, M et al., (2012) experimented the anthelmintic activity of crude leaves extracts of *L.cylindrica* were challenged against *peritima posthuma* using albendazole as a reference compound. From the study author concluded that the presence of flavonoids and tannins in the methanolic extracts were showed significant effect and a potent anthelmintic activity\(^7\).

Aditya M et al., (2012) studied phytochemical and anthelmintic activity on the ethanolic and aqueous extracts of *Blumea lacera*. Presence of terpenoids alkaloids, steroids, tannins, flavonoids, and phenolics. The plant extracts showed resistant by producing potent paralytic and death of *Pheritema postuma* and *Ascaris lumbricoits* and piperazine citrate as reference compound\(^7\).

Haque Rabiu and co-authors (2011) worked on the vermicidal activity on three different species namely round, tape and earth worms against the aqueous extracts of crude leaves (*A.Indica*) using piperazine citrate as a reference standard. The aqueous extract showed a significant effect on all the three species of worms at a concentration of 40 mg/ml\(^7\).
Raj kumar and co-authors (2012) carried out an ethno-botanical survey in the region of Nalgonda district on traditionally used medicinal herb for the treatment of anthelmintic activity and found 36 species of herbs were practiced by the traditional healers for the treatment of various worm infections.

Satish, B Kosalge.; Ravindra, A Fursule.; (2009) studied the vermicidal activity on different species \textit{A.galli, R.spiralis} and \textit{P.posthuma} for the aqueous root extract of \textit{Thespesia lampas}. Anthelmintic activity was evident where aqueous extract produced a potent vermicidal activity shown very high at concentration of 50mg/ml.

Sarvani, Manthri et al., (2011) investigated the death and paralytic effect of adult earth worm against essential oils. For the investigation mustard and castor oil were used for determining the anthelmintic potency and compared with standard albendazole.

Vidyadhar S et al., (2010) investigated the wormicidal activity on whole plant of various extracts of \textit{Enicostemma littorale} were found very potent against parasitic infections. Studies of paralytic time and death were confirmed with standard albendazole at the concentration of 15mg/ml.

Deore, S L et al., (2009) explored the predominant effect of piperazine citrate and seeds of alcohol and aqueous extracts of Cassia tora on the worm. The possible mechanism of action was drawn from
piperazine citrate which causes a flaccid paralysis that effect in eviction of the worm by peristalsis, were found increasing in hyperpolarization. From the study both the extracts showed a significant wormicidal activity when compared with the reference\textsuperscript{84}.

Asha, A Kale \textit{et al}., (2011), have identified the anthelmintic potential of the different extracts of Juglance regia were studied on the helminthes parasite of \textit{Eicinia foeitida}. Determining its phytoconstituents of flavonoids and polyphenolics for anthelmintic activity were also explored compared with standard albendazole at concentration range from 10mg/ml to 50mg/ml\textsuperscript{85}.

Eguale T \textit{et al}., (2009) have explored the traditional plants of \textit{J.curcas, C.ambrosioides} and \textit{L.inermis} were scrutinized for its anthelmintic potential adult \textit{Haemonchus contortus} and its eggs. The crude aqueous and hydro-alcoholic extracts of leaves and seeds were showed activity. Among all the hydroalcoholic extract of \textit{C.ambrosioides} at the concentration of 0.09mg/ml showed very potent comparatively with standard and other extracts used for the study\textsuperscript{86}.

From the literature survey performed for the above mentioned plants was found that these medicinal plants were explored up to little extend. Still these medicinal plants were not screened for its keen phytoconstituent for bioactivity guided isolation of compound. Hence the present studies were focused on exploring the medicinal uses of the plants and to isolate novel bioactive compounds.