

# Anthelmintic Activity of Some Medicinal Plants

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**Abstract—** *Helminthic infections are the most common infections in various animals and human beings, affecting much of the world population. Helminthic infections can also affect millions of animals*

*Leading to significant economic losses to pets. To control Helminthic diseases in different parts of the world are the use of synthetics effective drugs for the treatment of helminthiasis, but also it causes many side effects. Continued use of synthetic anthelmintic drugs also cause severe drug resistance problems in various different diseases. The plant received crude products they do not work well in the treatment of organic diseases but one it has no side effects. Number of medicinal plants exist traditionally used to treat helminthiasis in various countries. Therefore,*

*Herbal remedies are gaining much attention in the treatment of pest's infection. There are several medicinal plants and their various , organic extracts and active ingredients using a variety of methods to control helminthic / larvicidal infections.*

**Index Terms—** *Anthelmintic activity; medicinal plants; vermifuges; vermicides; helminths; larvicidal activity.*

## I. INTRODUCTION

Helminthiasis, also called as worm infection, is macroparasitic human and animal diseases in which part of the body is infected with worms, known as helminths. A lot species of these parasites, broadly classified as tapeworms, flukes and roundworms.

Helminthic infections are among the most common diseases in human's creatures, which affect a large part of the human population on earth. In developing countries pose a serious threat to public health as well participate in blood circulation, malnutrition, eosinophilia and pneumonia. Although most infections due to worms exist it is usually limited to tropical countries, which can occur for travelers, who have visit those places and .The worms for carrying intestinal infections are cestodes e.g. Tapeworms (*Taenia Solium*), nematodes e.g. hookworm (*Ancylostoma duodenale*), *Ascaris lumbricoids* and trematodes or flukes (*Schistosoma mansoni* and *S. hematobolium*). The diseases arose from parasites that caused serious illness include lymphatic filariasis, onchocerciasis and social effects.

Helminthes infection can also affect the millions of animals that lead to it significant economic losses to domestic and farm animals.

Anthelmintics or antihelminthics is a group of drugs that drive out helminth worm from the body by kiling them without causing damage to host. They can also be called vermifuges. Or vermicides (those that kill). Anthelmintic drug or antihelminthic drugs are used to treat people infected with helminths, a condition called helminthiasis. These drugs are used to treat infected animals.

The ancient man received more than 90% of the medical supplies from plants. Even today, traditional medicine is used by many countries with ancient cultures, and for the most part therapeutic requirements are found in medicinal plants. India in its entirety eco-geographical diversity affect medicinal plant wealth and has a very rich knowledge base in the

use of prescription drugs. The vast majority of people in the world depend on it current time in traditional medicine programs Ayurveda, Unani and Sidha including India. In recent years, there has been a incredible growth the proliferation of new reports of work on natural diseases, both from the scientific and traditional practices. Therefore, the plant based medicine is very important and forms an important part of a global primary health care system. The release of extract of medicinal herbal plants are tested for the putative anthelmintic properties.

The active ingredients of these herbal products are now being identified and have been shown to establish their own mechanism of action. Plant derived drugs are serve as prototype for more highly effective and non-toxic drugs.

- Anthelmintic activity of medicinal plants:

1) Anthelmintic activity of:

- a) Clitoria ternatea
- b) Guazuma ulmifolia
- c) Madhuca indica

a) clitoria ternatea



Linn, a member of the Fabaceae family, is perennial and twisted herb; terete stem, approximately or less light. A tropical natural environment as well a tropical region, known as aparajita.

The medicinal plant used as a laxative, brain tonic, antiulcer, and for headache treatment and snake bites.

b) Guazuma ulmifolia



Lam., Known as "mutamba", has, the Guazuma ulmifolia bark is used to treat diarrhea, bleeding, fever, cough, bronchitis, asthma, intestinal pain and high blood pressure, and as a cervical stimulant pressure.

c) Madhuka Indica



Gmel, of the family Sapotaceae used from ancient medicine to treat various ailments. It's a way of an important economic tree that grows throughout the world the hot region of Indo-Pak sub-continent. Mahua seeds are economically viable importance as it is a good source of fats, satisfactory in the production of the washing soap. The leaves are an astringent and the juice of flowers is considered as a tonic for both nutritional, cooling and also in treatment of helminthes, acute & chronic tonsillitis, pharyngitis.

- Materials and methods:

Accepted method check the anthelmintic activity of the three plants Clitoria ternatea, Guazuma ulmifolia and Madhuca indica below.

- Planting and preparation materials:

Medicinal plant extract available prepared from 3 plants widely used in traditional medicine. Medicinal plant material was authenticated by the Department of botany, University of Rajasthan, Jaipur where a voucher sample is included. For the ethanolic extract, dry powdered material (50 gm) extracted with with 100 ml of ethanol for the 24 hours by using Soxhlet extraction apparatus. The Release extract was filtered and concentrated under vaccum apparatus for the 30 minutes. All the medicinal plant extracts were stored at 4 ° C.

- Worm Collection and Certification:

The Indian worm that is earthworm called Peritima posthuma (Annelida) was collected from Durgapura Agriculture University, Jaipur and confirmed from

Department of Agriculture, Agriculture University, and Jaipur.

• Anthelmintic Activity:

Anthelmintic activity was performed on an indian worm called Pheritima (earthworm) as it physiological and anatomical similarities with intestinal roundworm parasites in the intestines of humans. Five groups of about six equal earthworms, earthworms in each group were released to the target of 50 ml make-up. The group first-served as a control, get only normal saline, The second group works as test-1, find different issues for (25,50,100 mg / ml) ethanolic release of *C. Ternatea*, The third group serve as test-2, find different concentrations of (25, 50,100 mg / ml) ethanolic the release of *G. ulmifolia*, The fourth group acts as a test-3, found the opposite concentration of (25,50,100 mg / ml) ethanolic extract of *M. indica*, and The fifth group works as usual, get the standard drug Piperazine citrate (10mg / ml) Considered the time taken to disable either death of individual worms. Paralysis is said to occur when the larvae don't even get regular saline. Death was concluded when Parasitic worms lose their mobility followed by the loss of their bodies color.

2) *Carica papaya*:



Anthelmintic material for liquid extraction of *Carica papaya* seeds (*Carbi-caeaceae*) against *Ascaris lumbricoides* and *Ascaridia galli* it is also well established. High efficiency KaCa. Benzyl isothiocyanate separated from *C. papaya* seeds and use as an anthelmintic activity against *Caenorhabditis elegans*. Anthelmintic work of *Zanthoxylum zanthoxyloides*, *Morinda's* release coincides with *Newbouldia* leaf and *C. papaya* extracted seeds collected in West Africa faces different categories of

*H. contortus*. Another study, *Z. zanthoxyloides*, *M. Lucida*, *N. laevis* and *C. papaya* extract is included inhibition based on egg-laying capacity of *T. colubriformis*. This plant extraction also show their effects on infectious worms in *T. colubriformis*. On the contrary, in an adult larvae, the results are very statistically significant only *N. laevis* no *C. Papaya*. *C. the pope* is there cheap, natural, harmless, easily accessible monotherapy and prevention of intestinal parasitosis. Anthelmintic performance of the plant *C.papaya* cysteine proteinases have been present reported in mice infected with adult *Trichuris muris*, intestinal nematode.

3) *Cucurbita Maxicana*:



Extraction of water, etheral and alcohol Seeds of *Cucurbita mexicana* (*Cucurbitaceae*) include has shown anthelmintic activity against *Moniezia expansa*, *Fasciolopsis buski*, *Ascaris lumbricoides* and *Hymenolepis diminuta*. Water issued found to contain the most important toxicity compared to alcohol and etheral issued. Extraction of water and ethanol for *C. Mexicana* seeds are active and shown above anthelmintic action against *Aspicularis tetraptera*

4) *Zingiber officinale*:



Zingiber officinale is a perennial plant and is considered a universal tree in ayurveda. Anthelmintic activity of ethanol extracts of the rhizomes of *Z. officinale* against the human *Ascaris lumbricoides* are appreciated. Caterpillar activity of large Fasciola larvae (sporocyst, redia and cercaria) *Z. officinale*. *Z. the officinale* issued tested against the experimental Setariacervi infection in mice showed significant filarial ant function. Its seeds are Carum copticum (Umbelliferae), Agati gratifolia (Leguminosae) and Mangifera indica (Anacardiaceae) have shown excellent anthelmintic activity against the human *Ascaris lumbricoides*. rhizomes of *Z. zerumbet* (Zingiberaceae) carry an important anthelmintic activity against person *A. lumbricoides*.

5) Allium Sativum:



Dry, powdered Allium sativum contains about 1% alliin which is the most essential compound (S-allyl cystein sulfoxide) many organic compounds, (diallyl thiosulfinate or diallyl disulfide) is not present in *A. sativum* until crushed or cut; injury to *A. sativum* activates the enzyme alliinase, making alliin metabolism alliin. Alliin was the first chemically isolated in 1940, it contains antimicrobial drugs the effects of fighting germs, bacteria, fungi and insects

However, the growing problems of development of resistance to helminthes anthelmintic drugs have led to the testing of their medicinal plants anthelmintic work. A bulb discharge of *A. sativum*. The *A. sativum* also exhibits moderate in vitro anthelmintic *Ascaris*' anti-chemical activity. *A. sativum* reported to be effective for diarrhea as well acts as a vermifuglumb *A. sativum* she was also reported to have anthelmintic work and discards all that is harmful intestinal parasites *A. sativum* has exhibited anthelmintic action in in vitro and in vivo situation against helminthes.

6) Ocimum Sanctum:



Various essential oils and eugenol are separated from *Ocimum sanctum* Linn. (Lamiaceae) have shown strong anthelmintic activity against *C. elegans*. Martinez-Ortiz-de-Montellano et al. studied the effects of a hot tannin plant, *Lysiloma latisiliquum* in adults of *H. contortus* in sheep and suggested that short-term use of *L. latisiliquum* can measure direct adult biology *H. contortus* affecting worm size and female size. Important *Ocimum sanctum* oil and eugenol, tested in vitro, demonstrated strong anthelmintic activity in Model for *Caenorhabditis elegans*. Singh once Nagaichi examined the anti-extinction effects of ethyl alcohol phytochemicals as a remedy for worm infections in traditional herbal remedies *Ocimum sanctum* against *A. Galli* in vitro.

7) Piper longum



Essential oils from *Piper longum* fruit have been tested with anthelmintic activity against *Ascaris lumbricoides*. The research has shown that its oil has a direct effect on paralysis in the preparation of the muscle fibers of *A. Lumbricoides*.

CONCLUSION

Traditional use of a variety of conventional medicinal plants hold great brilliance a source of easily accessible and effective national anthem mintic /

larvicidal activity in various animals. The current review of the literature indicates testing of raw materials, organic and distinct emission nutrients from active plants need persistence studies at the molecular level of alternative search phytochemicals can replace synthetic drugs that control the wide range of insect diseases diseases.

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