



# JOURNAL OF PHARMACEUTICAL SCIENCE AND BIOSCIENTIFIC RESEARCH (JPSBR)

(An International Peer Reviewed Pharmaceutical Journal that Encourages Innovation and Creativities)

## In Vitro Anthelmintic Activity of Guru Nanak Chyawanprash

Tribhuvan Singh\*, J.N. Narendra Sharath Chandra, V.Ravi Kumar, Shruthi Joshi, Sharvani Yanamandra  
Guru Nanak Institute of Pharmacy, Ibrahimpatnam, Hyderabad- 501506, India

### ABSTRACT:

The present study was designated to evaluate the in vitro anthelmintic activity on Guru Nanak Chyawanprash. The gastrointestinal nematode, *Pheretima posthuma*, has caused severe health problems to millions of people worldwide. Records show that many of the aqueous extracts obtained from various parts of different herbal plants exhibited significant anthelmintic activity against *Pheretima posthuma*. This gave us a lead to prepare new components resulting in the manufacturing of Guru Nanak Chyawanprash. The vermifugal activity in four respective concentrations 25, 50, 75 and 100 mg/ml each were studied and in each concentration the time of paralysis and time of death of the worm were determined. Guru Nanak Chyawanprash exhibited significant anthelmintic activity. At highest concentration of 100 mg/ml excellent anthelmintic activity compared to Dabur Chyawanprash was shown. Guru Nanak Chyawanprash is very easy to prepare and is cost effective.

**KEY WORDS:** Guru Nanak Chyawanprash, *Pheretima posthuma*, Anthelmintic activity, Time of paralysis, Time of death.

### Article history:

Received 10 Feb 2015  
Revised 1. 28 Feb 2015  
Revised 2. 04 August 2015  
Accepted 14 August 2015  
Available online 01 September 2015

### Citation:

Sing T., Sharath Chandra JNN., Joshi S., Yanamandra S. In Vitro Anthelmintic Activity of Guru Nanak Chyawanprash. *J Pharm Sci Bioscientific Res.* 2015 5(5):444-446

### \*For Correspondence:

Mr. Tribhuvan Singh

Research Scholar,

Shree JNT University,

Churu Jhunjhunu roas, Churela,

Jhunjhunu, Rajasthan, India

Email: [jpsbronline@rediffmail.com](mailto:jpsbronline@rediffmail.com)

([www.jpsbr.org](http://www.jpsbr.org))

### INTRODUCTION:

Herbal medicine is also called as botanical medicine or phytomedicine which refers to using plant's seeds, berries, roots, leaves, bark, and flowers for medicinal purposes<sup>1-3</sup>. Extracts from many plants like *Nicotiana tabacum*, *Nicotiana rustica*, *Azadirachta indica*, *Artemisia mexicana*, *Terminalia chebula*, *Juglans nigra*, *Ananas Comosus* show anti-anthelmintic qualities<sup>4-6</sup>. Some synthetic drugs also used for Anthelmintiasis like Albendazole, Mebendazole, Abamectan, Thiabendazole, Niclosamide and Fenbendazole<sup>12</sup>.

Most of the marketed drugs have been effective in controlling the infection but some drugs are not only expensive but also show the side effects. The purpose of these research works of the anthelmintic activity on Guru Nanak Chyawanprash against *Pheretima Posthuma* is simple and cheap for people worldwide<sup>7-9</sup>. Immature forms of the parasites invade the gastrointestinal tract of human beings and evolve into well differentiated adult worms that have characteristic tissue distribution e.g. *Taenia solium* (Nematodes), *Ancylostoma duodenale* (Hookworm), *Ascaris lumbricoides* (roundworm), *Schistosoma mansoni*, *Schistosoma hematobolium* (flukes) and trematodes<sup>10-11</sup>. An Anthelmintic drug acts locally to expel worms from the GIT or systematically to eradicate adult helminthes or developing forms that invade organs and tissues causing paralysis and death<sup>13-14</sup>.

**MATERIALS AND METHODS:**

**MATERIALS:**

Various herbals parts such as: Ashwagandha Roots (1.0gm), Ginger (1.5gm), Turmeric (1.5gm), Fennel (1.0gm), Cinnamon (Daalchini) (0.5gm), Bilva Fruit (2.0gm), Vasaka Leaf (0.5gm), Shatavari (0.5gm), Amalaki (5.0gm), Hibiscus Flower (Japaa) (0.5gm), Manjishtha root (0.5gm), Pippali Fruit(0.5gm), Shalaparni Root (0.5gm), Kutaja Bark (0.5gm), Chebulic Myrobalan (Bibhitaki Fruit) (0.5 gm), Yashtimadhu Root (Licorice Root) (1.0gm), Cardamom Seed (Ela Chhoti) (1.0gm), Bringraj or Bhringaraj (0.25gm), Musta (Nut Grass) (1.0gm), Kashmiri Root (1.0gm), Asoka Bark (1.0 gm), Dates (10gm), Ghee (25mL), and Honey (50 gm).

**PROCEDURE:**

Accurately weigh, mix and grind all the above mentioned ingredients together in correct proportions. The mixture must be kept in a soil pot with honey, dates and Ghee and must be mixed properly. Cover the soil pot with a cloth and keep it in a pit (4-5 feet deep) and cover the pot with soil for 90 days. Ensure that sufficient moisture is present. After 90 days remove the pot from the pit and collect the product.

**ANTHELMINTIC ACTIVITY:**

Anthelmintic activity on the Indian earthworm (Pheretima posthuma) was determined during the preparation of Guru Nanak Chyawanprash. The paralysis time and death time at respective concentrations (25mg, 50mg, 75mg and 100mg) were calculated. The anthelmintic activity in all the concentration was prominently shown and the result was better than the standard Dabur Chyawanprash.

**RESULTS AND DISCUSSION:**

**ANTHELMINTIC ACTIVITY:**

Data in the table no.1 clearly indicates that the newly prepared Guru Nanak Chyawanprash exhibits excellent anthelmintic activity. The paralysis time and death time at 25mg, 50mg, 75mg and 100mg concentrations are enlisted in the table below. The values of Dabur Chyawanprash preparation under similar conditions were used for the study.

**Table 1**

**Anthelmintic activity of newly prepared Guru Nanak Chyawanprash:**

TEST AND STANDARD COMPOUNDS	CONC. (mg/ml)	PARALYSIS TIME (min.)	DEATH TIME (min.)
<b>Guru Nanak Chyawanprash (T)</b>	25	00:15:54	00:58:39
	50	00:10:50	00:45:32
	75	00:08:35	00:33:54
	100	00:07:46	00:23:42
<b>Dabur Chyawanprash (S)</b>	25	01:51:38	02:15:37
	50	01:35:53	01:52:26
	75	01:09:55	01:38:52
	100	00:51:11	01:20:23

**Result expressed as mean ± SEM from observations.**

**CONCLUSION:**

In the present study Anthelmintic Activity of aqueous solution Of Guru Nanak Chyawanprash was performed. Various herbal drugs present in the Guru Nanak Chyawanprash are responsible for the Anthelmintic Activity. In comparison to the standard Dabur Chyawanprash, Guru Nanak Chyawanprash has shown excellent results.

**ACKNOWLEDGEMENTS:**

We are very thankful to Dr. S.A. Sreenivas, the principal of Guru Nanak Institute of pharmacy, Hyderabad, for providing necessary facilities to carry out the research work.

**REFERENCES:**

1. Saadabi AM, Lsehemi AG, Zailia AL, In-vitro Antimicrobial activity of some Saudi Arabian plants used in folkloric medicine, International Journal of Botany, 2006, 2,201-204.

2. Kulkarni SK, Hand book of experimental pharmacology, 3rd Edition, Vallabh Prakashan, 2005, 37-38.
3. Harborne JB, Photochemical methods a guide to modern technique of plant analysis, Champman and Hill, London, 1984.
4. Okeke IN, Laxminarayan R, Bhutta ZA, Antimicrobial resistance in developing countries recent trends and current status, Lancet Infection Disease, 2005, 5,481-493.
5. Bhattacharjee T, Kumar S, Hand book of Medicinal Plants, Pointer Publishers Jaipur, 1998,124.
6. The useful plants of India publication and Information Directorate, CSIR New Delhi, 1992, 163.
7. King J, Jagatheeson KA, Photochemical methods and disease for Medicinal plants, Journal Clinical Pathology, 1959, 12, 85-89.
8. Caroline J, Gross MS, Dian NS, Medicinal plants study, Pakistan. Journal of Biological Science, 2003, 6, 1564-1573.
9. Bean LJ, Saubel KS, Temalpakh Cahuilla Indian Knowledge and Usage of Plants Banning, Malki Museum Press, 1972.
10. Benedict RF, The Concept of the Guardian Spirit in North America, Memoir of the American Anthropological Association 1923, 29.
11. Roddick J, Hawkes J, Lester R, Neen M, Estrada N, The importance of the Solanaceae in medicine and drug therapy, Royal Botanic Gardens Kew and Linnean Society of London, 1991, 17-23.
12. Sawarkar HA, Singh MK, Pandey AK, Biswas D, In vitro Anthelmintic activity of ficus benghalensis, ficus carica & ficus religiosa, A Comparative Study, 2011,2, 152 – 153.
13. Víctor D, Szewczuk ER, Alicia PB, Antiparasitic activity of Melia azedarach growing in Argentina, 54-57.
14. Aswar M, Aswar U, Watkar B, Vyas M, Wagh A, Gujar NK, Anthelmintic activity of Ficus benghalensis, Journal of Biological Science 2008,170-172.



Journal of  
Pharmaceutical Science and  
Bioscientific Research Publication

www.jpsbr.org  
jpsbronline@rediffmail.com  
Copyrights 2011 JPSBR Publication Allrights Researved