



ISSN NO: 2320-5407

ISSN(O): 2320-5407 | ISSN(P): 3107-4928

# International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

www.journalijar.com

## REVIEWER'S REPORT

Manuscript No.: IJAR-55109

**Title:** Évaluation in vitro de l'activité vermicide de *Gymnema sylvestris* Retz. et *Tacazzea apiculata* Oliv., deux plantes utilisées au Niger dans le traitement des maladies parasitaires

### Recommendation:

Accept as it is .....Yes.....

Accept after minor revision.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

| Rating         | Excel. | Good | Fair | Poor |
|----------------|--------|------|------|------|
| Originality    |        | √    |      |      |
| Techn. Quality |        | √    |      |      |
| Clarity        |        | √    |      |      |
| Significance   |        | √    |      |      |

Reviewer Name: Professor Dr Dillip Kumar Mohapatra

### Detailed Reviewer's Report

#### 1. Strengths

##### Relevance of the topic

The study addresses helminthiasis—an important neglected public health problem in tropical regions—making the research timely and socially relevant.

##### Use of locally important medicinal plants

Investigating *Gymnema sylvestris* and *Tacazzea apiculata*, plants traditionally used in Niger, adds ethnopharmacological value and supports local knowledge systems.

##### Clear experimental design

Both aqueous and hydroethanolic extracts were tested.

Dose-dependent assays (40, 50, 60 mg/mL) were used.

Albendazole was included as a standard reference.

##### Strong biological activity demonstrated

Hydroethanolic extract of *G. sylvestris* showed remarkable vermicial action, even surpassing albendazole at the same concentration.

**REVIEWER'S REPORT****Comprehensive phytochemical screening**

Identification of major secondary metabolite families provides a plausible biochemical basis for the observed activity.

**Statistical validation**

Use of ANOVA and Tukey's test strengthens the reliability of the comparisons.

**2. Weaknesses****Language and formatting issues**

Several grammatical and typographical errors need correction to improve readability.

**Lack of detailed extraction parameters**

Temperature, duration of decoction, and yield-processing conditions are mentioned only briefly and should be more specific.

**Absence of mechanistic discussion**

The discussion does not detail how specific metabolites might mechanistically induce paralysis or death in helminths.

**Limited biological model**

*Lumbricus terrestris* is a convenient model, but its physiological relevance to human helminths is limited.

No in vivo or other worm species studies were included.

**No quantitative phytochemical analysis**

Only qualitative screening was performed. Quantification (e.g., total phenolics, flavonoids) would increase scientific value.

**Figures not fully labelled or explained**

Graphs lack axis labels (units) and proper legends in the current draft.

**Conclusion incomplete**

The conclusion ends abruptly ("Cette activité peut être attrib...") and needs completion.

## REVIEWER'S REPORT

### 3. Significance of the Study

#### Novel contribution

Very few studies have evaluated the anthelmintic property of these two species in Niger. This makes the work an important contribution to regional ethnopharmacology.

#### Potential for low-cost local therapeutics

Results suggest that local plants may offer accessible, affordable alternatives to commercial anthelmintics—particularly valuable in low-resource settings.

#### Scientific foundation for traditional usage

This study provides laboratory evidence supporting long-standing traditional medicinal practices.

#### Promising lead for drug development

The strong effect of hydroethanolic *G. sylvestre* extract indicates it could serve as a lead for further purification and bioactive molecule identification.

### 4. Key Points

**In vitro vermicial activity of *Gymnema sylvestre* and *Tacazzea apiculata* evaluated using *Lumbricus terrestris*.**

**Hydroethanolic extract of *G. sylvestre* showed the strongest activity**, surpassing albendazole in both paralysis and lethal time.

**Six groups of secondary metabolites detected**, supporting the traditional claims of antiparasitic properties.

**Dose-dependent vermicial effect** observed across all extracts.

**The study provides evidence for developing plant-based anthelmintic alternatives** in Niger and similar regions.

# International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

*www.journalijar.com*

---

## REVIEWER'S REPORT

Further studies (in vivo, mechanism, compound isolation) are strongly recommended.