

# International Journal of Advanced Research

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## REVIEWER'S REPORT

Manuscript No.: IJAR-52756

Date: 11.07.25

**Title:** Establishing Chironomus Larvae as an Ethically Sound and Efficient System for Early-Stage Anthelmintic Screening

### 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: PROF DR DILLIP KUMAR MOHAPATRA

Date: 11.07.25

### *Detailed Reviewer's Report*

The study proposes the use of Chironomus larvae as a model organism for early-stage anthelmintic screening, highlighting its potential as a cost-effective, high-throughput, and ethically sound alternative to traditional in vivo models.

#### Strengths

- **Innovative approach:** The study proposes a novel approach to anthelmintic screening, leveraging the biological characteristics of Chironomus larvae to identify potential anthelmintic compounds.
- **High-throughput potential:** The model has the potential for high-throughput screening, enabling the rapid testing of large numbers of compounds or natural product extracts.
- **Cost-effective:** The use of Chironomus larvae as a model organism is likely to be more cost-effective than traditional in vivo models, reducing the financial burden of drug discovery.

#### Recommendations

- **Further research:** Additional studies are needed to fully validate the Chironomus larvae model and explore its potential for identifying anthelmintic compounds.

## **REVIEWER'S REPORT**

- **Standardization:** Standardized protocols for laboratory rearing, exposure setups, and endpoint assessment should be developed to ensure consistency and reliability in screening results.
- **Integration with advanced technologies:** The model's potential for high-throughput screening and phenotypic profiling could be further enhanced by integrating it with advanced technologies, such as high-content imaging and machine learning.

By addressing these areas, future research can build upon the foundation laid by this paper and further establish the *Chironomus* larvae model as a valuable tool in anthelmintic drug discovery