Review Form 3

Journal Name:	**Journal of Advances in Biology & Biotechnology**
Manuscript Number:	**Ms_JABB_129176**
Title of the Manuscript:	**In Vitro Anthelmintic Activity of Mahaneem (Melia azedarach) and Chirata (Swertia chirata) extracts against eggs and adult stage of Haemonchus contortus**
Type of the Article	**Original Research Article**

PART 1: Comments

	Reviewer's comment	**Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	This work is important to the scientific community because it investigates economical and environmentally suitable substitutes for synthetic anthelmintics in the management of Haemonchus contortus, a serious parasite hazard to small ruminants. The study assesses the potential of two ethnomedicinal plants, Swertia chirata (Chirata) and Melia azedarach (Mahaneem), and offers important information about their in vitro anthelmintic effectiveness. It supports sustainable farming methods and helps solve global concerns about chemical residues in livestock products and medicine resistance. The results may also lead to more studies on plant-based remedies for parasite illnesses, which would be advantageous for commercial organic farming systems as well as smallholder farmers.	
Is the title of the article suitable? **(If not please suggest an alternative title)**	**No.** **Suggestion: "**Evaluating the In Vitro Anthelmintic Potential of *Melia azedarach* and *Swertia chirata* Against *Haemonchus contortus"*	

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Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	Although the abstract is rather thorough, it is missing several components that would improve its overall effect and clarity. The following are critiques and recommendations for enhancements: The abstract's drawbacks - Lack of Context: The abstract does not emphasize the benefits of using plant-based anthelmintics over synthetic ones or the wider implications of managing Haemonchus contortus. - Incomplete Methodology: The experimental design is not sufficiently detailed because it leaves out information about how the plant extracts and controls were prepared. - Excessive Numerical Results: The inclusion of multiple detailed numerical findings makes the abstract overly dense and harder to read. - Vague Conclusion: The conclusion lacks specificity, using non-committal language such as "may be utilized after proper dosing," which weakens its impact. Suggestions for Enhancement: Provide a succinct overview of the significance of tackling anthelmintic resistance and the function of plant-based substitutes. To give a comprehensive view, add important phases and controls to the process. Instead than overloading the reader with exact numerical data, provide a more general summary of the outcomes. Substitute ambiguous findings with practical advice or specific guidelines for further study.	
Is the manuscript scientifically, correct? Please write here.	The methods, findings, and discussions in the manuscript seem to support its scientific validity. To guarantee correctness and bolster its scientific rigor, a few points, nevertheless, might need more explanation or improvement. The following observations are made: The manuscript's strengths include: Known Techniques: Standard methods for assessing anthelmintic activity include the Adult Motility Inhibition Test (AMIT) and the Egg Hatch Assay (EHA), which provide the experimental design legitimacy. Specific Findings: In order to bolster the legitimacy of the conclusions, the manuscript presents quantitative data, including statistical significance. Well-Cited References: It provides pertinent material to support the selection of plants and put the results in context. Improvement Needed: Specifics of the Experimental Design To guarantee reproducibility, the extraction process and standardization may be more thoroughly explained. There should be a clearer explanation of the controls' selection as benchmarks, particularly with regard to the use of albendazole and its concentrations. Analysis of Statistics: The precise statistical tests that were conducted (such as ANOVA and post hoc tests) are not sufficiently described, even when statistical significance is acknowledged (e.g., $p<0.05$). Make it clear if the assay triplicates were technical or biological duplicates. Analysis of the Findings: The explanation of why Chirata outperformed Mahaneem is shallow. Were any particular phytochemicals found that would account for this discrepancy? More discussion is necessary regarding the variation in efficacy at lower dosages (e.g., 10 mg/ml). Formatting and Language: Errors in grammar and typography (such as using "mahanimbo" instead of "statitically signicant" or Mahaneem) diminish the professionalism of science. Maintain terminology uniformity (e.g., "Haemonchus contortus" vs. "H. contortus"). Ideas to Improve Scientific Rigor: Include a section outlining the study's possible limitations, such as the requirement for in vivo validation	

	or variations in plant extract potency brought on by environmental influences. Incorporate a first phytochemical investigation if at all possible to bolster the connection between bioactive substances and observed effectiveness.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	A variety of earlier and more contemporary citations are included in the manuscript's references, some of which were published more than five years ago. The work might benefit from including more recent references to represent the most recent developments in the subject, even though the fundamental research are crucial for historical context. Suggestions: To give a contemporary viewpoint, update the reference list to include studies released within the last five years. Where applicable, substitute more recent reviews or meta-analyses for older sources. To make the topic stronger, add further research on the ways in which the bioactive chemicals in *M. azedarach* and *S. chirata* work.	

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Is the language/English quality of the article suitable for scholarly communications?	The language quality of the article is generally understandable but does not meet the standards expected for scholarly communication. There are several grammatical, typographical, and structural issues that need to be addressed to enhance clarity, professionalism, and readability. Below is a detailed assessment: Strengths: 1. Clarity in Purpose: The research objectives and results are conveyed clearly. 2. Key Terminology: Proper scientific terms like "Egg Hatch Assay" (EHA) and "Adult Motility Inhibition Test" (AMIT) are used appropriately. Weaknesses and Suggestions for Improvement: 1. Grammatical Errors: o Examples: ▪ "Study were conducted" → should be "Study was conducted." ▪ "Avoiding direct sunlight" → should be "avoided direct sunlight." o Ensure subject-verb agreement throughout the text. 2. Typographical Errors: o Examples: ▪ "mahanimbo" → should be "Mahaneem." ▪ "statitically signicant" → should be "statistically significant." 3. Improper Sentence Structures: o Example: "In context, to these approaches is the exploration and screening of various plants for novel anthelmintic compounds." o Revision: "In this context, the exploration and screening of various plants for novel anthelmintic compounds are critical." 4. Repetition and Redundancy: o Certain sentences repeat the same ideas or numerical results unnecessarily, making the text verbose. Simplify and consolidate similar points. 5. Punctuation and Formatting: o Missing commas and inconsistent use of spaces in numerical data (e.g., "35.898 1.328"). o Ensure consistent formatting for units and data presentation. 6. Scholarly Tone: o Avoid conversational or vague phrases like "It may be concluded" or "can be utilized." Use definitive and precise language, such as "This study demonstrates." 7. Word Choice: o Replace informal or ambiguous words with more precise terms. For example, "good option" could be replaced with "viable alternative." Suggestions for Improvement: 1. Proofreading and Editing: Perform a thorough review to fix grammatical and typographical errors. 2. Professional Tone: Use precise and formal language suited for academic writing. 3. Structural Revision: Streamline sentences to avoid redundancy and improve readability. 4. Language Tools: Consider using language editing tools or seeking assistance from a professional editing service to ensure high-quality scholarly communication.	
Optional/General comments	General Comments: The article addresses an important issue in veterinary parasitology—anthelmintic resistance in *Haemonchus contortus*—and evaluates the potential of herbal remedies as sustainable alternatives. This is a timely and relevant topic, given the rising global concerns about synthetic anthelmintics. However, the manuscript has several areas requiring improvement to enhance its clarity, scientific	

rigor, and suitability for publication.

Strengths:

1. Timely Research Focus:
    - Investigating plant-based anthelmintics is a critical step toward sustainable livestock management and reducing dependency on synthetic drugs.
2. Comprehensive Experimental Design:
    - The study utilizes both Egg Hatch Assay (EHA) and Adult Motility Inhibition Test (AMIT), covering multiple parasite life stages.
3. Quantitative Results:
    - Detailed numerical data, including statistical analysis, provide strong evidence to support the findings.
4. Practical Implications:
    - The study's focus on ethnomedicinal plants accessible to small-scale farmers is commendable.

Weaknesses and Suggestions:

1. Language Quality:
    - Numerous grammatical errors and awkward sentence structures detract from the professionalism of the manuscript.
    - Example: "Study were conducted…" should be revised to "The study was conducted…"
2. Abstract:
    - The abstract is overly detailed with numerical results and lacks a broader context. Summarize the main findings and implications concisely.
3. Introduction:
    - While the introduction provides background, it could be more focused. The significance of *H. contortus* and the urgency of addressing anthelmintic resistance should be emphasized further.
4. Methodology:
    - Some steps, such as the preparation of extracts and controls, require more detailed explanations to ensure reproducibility.
    - Statistical analysis should include specific tests used (e.g., ANOVA) and justification for their application.
5. Results and Discussion:
    - The results section presents too many details, making it difficult for readers to grasp the key findings quickly. A summary of the most significant observations would improve readability.
    - The discussion could delve deeper into the mechanisms behind the differences in efficacy between the two plants.
6. References:
    - The references are relevant but include many older studies. Incorporating more recent research (post-2015) would strengthen the manuscript's relevance.
7. Conclusion:
    - The conclusion is tentative and lacks a strong take-home message. It should clearly state the implications of the findings and recommend future research directions.

Suggestions for Improvement:

1. Revise the manuscript for grammar, clarity, and scholarly tone.
2. Streamline sections by removing redundancies and presenting findings more succinctly.
3. Enhance the introduction and conclusion to emphasize the broader relevance and impact of the study.
4. Include additional recent references to ensure the manuscript reflects current research.
5. Consider adding a phytochemical analysis or referencing relevant studies to support the

	discussion of mechanisms of action. From my case, there is no competing interest issues in this manuscript	

PART 2:

	Reviewer's comment	**Author's comment** ***(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)***
Are there ethical issues in this manuscript?	***(If yes, Kindly please write down the ethical issues here in details)***	

Reviewer Details:

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