Review Form 3

Journal Name:	**Journal of Advances in Biology & Biotechnology**
Manuscript Number:	**Ms_JABB_122992**
Title of the Manuscript:	**Effect of juvenile hormone mimics on the biochemical parameters of silkworm, Bombyx mori L.**
Type of the Article	**Original Research Article**

Review Form 3

PART 1: Review Comments

Compulsory REVISION 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. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	The findings of this study could have significant implications for the sericulture industry, as identifying effective juvenile hormone mimics could lead to improved silk production methods. Additionally, the study provides valuable insights into the molecular mechanisms by which juvenile hormones regulate insect growth and development	
Is the title of the article suitable? **(If not please suggest an alternative title)**	The title of the article, "Effect of Juvenile Hormone Mimics on the Biochemical Parameters of the silkworm, Bombyx mori L.," is appropriate because it accurately describes the scope and focus of the study. However, the title could be more informative and engaging for readers by highlighting the main results or conclusions of the research. Here are some alternative title suggestions: 1. Juvenile Hormone Mimics as Biochemical Enhancers for Silk Production in Bombyx mori L.: Evidence from Plant Extracts. 2. Pinus as a Promising Bio-Stimulant for Silk Production: Natural Juvenile Hormone Mimic Increases Silk Gland Protein in Bombyx mori L. 3. Optimizing Silk Production Through Hormonal Manipulation: An Investigation of the Impact of Juvenile Hormone Mimics in Bombyx mori L.	
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.	The abstract of the article is concise, but it could be more comprehensive by incorporating the following key points found in the full article: Suggested Additions: 1. **Detailed Experimental Design:** The abstract briefly mentions the use of topical applications of JH mimics at different larval stages. Expanding this section to include specific information about the concentrations used (20% and 30%), the timing of application (fourth and fifth instars), and the concept of single and double treatments would enhance clarity. 2. **Silkworm Species:** Mentioning that the study used Double Hybrid (FC1XFC2) silkworms in the abstract would provide important information about the subjects studied. 3. **Controls:** Including a brief mention of the control group (untreated) used in the study would strengthen the experimental validity described in the abstract. 4. **Key Quantitative Results:** The abstract highlights only the increase in silk gland protein content. Incorporating specific numerical results for other significant biochemical characteristics, such as fat body protein, hemolymph protein, and AST and ALT activities, would increase the abstract's impact. 5. **Implications and Significance**: While the abstract briefly mentions the importance of JH mimics for cocoon yield, it could be enhanced by expanding on the potential implications of the results. For example, mentioning the potential of plant-based JH mimics, such as pinus extract, as sustainable alternatives to synthetic chemicals in sericulture would increase the significance of the research.	
Are subsections and structure of the manuscript appropriate?	Yes, the structure of the article is adequate.	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.	The manuscript presents scientifically robust and technically solid research due to various factors. Firstly, the experimental design is well-structured, using a control group and different treatments with JH mimetics, including varied concentrations and application times. The choice of a complete randomized factorial design ensures statistical validity of the results and allows for the assessment of interactions between different factors. Additionally, the methodology employed is detailed and precise, describing the procedures for	

	rearing the silkworms, extracting the phytojuvenoids, applying the treatments, and methods for data collection and analysis. This thorough description of the methods contributes to the replicability of the study, a fundamental aspect of scientific research. The results section presents data consistent with the scientific literature, demonstrating the positive effects of JH mimetics, especially the pine extract, on biochemical parameters such as silk gland protein, fat body protein, and enzymatic activity. The discussion of the results is comprehensive and based on various sources, comparing the obtained results with previous studies and contextualizing the research within the field of sericulture. The inclusion of references to relevant scientific articles lends credibility to the research and demonstrates the scientific rigor of the study.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. **-**	The reference list of the manuscript includes a variety of sources relevant to the research topic, ranging from classical studies on insect hormones to more recent works on the application of JH mimetics in sericulture. However, an analysis of the publication dates of the references reveals a potential need for updating the consulted literature. **Outdated References:** While some references are from recent publications, there is a significant number of references from studies conducted over two decades ago. It is important to note that research in the fields of biotechnology and insect physiology has advanced rapidly, and new discoveries and technologies may have emerged since the publication of these studies. 1. **Suggestions for Additional References:** To strengthen the theoretical foundation and discussion of the results, it is recommended to include more recent references on the following topics: 2. **JH Mimetics in Sericulture:** Recent research on the application of different types of JH mimetics (e.g.: phytojuvenoids, synthetic analogs) in various silkworm species, evaluating their effects on zootechnical, biochemical, and physiological parameters. 3. **Molecular Mechanisms of JH Mimetics:** Studies investigating the molecular mechanisms by which JH mimetics influence protein metabolism, gene expression, and insect development. 4. **Applied Biotechnology in Sericulture:** Recent advancements in biotechnology, such as genetic editing and bioinformatics, that can be applied to sericulture to improve silk production, thread quality, and disease resistance. **Importance of Updating:** Updating the consulted literature is crucial to ensure that the manuscript aligns with the current state of research in its field. Including more recent references demonstrates an in-depth understanding of the topic and adds greater robustness and relevance to the study.	
Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	Yes.	
Optional/General comments		

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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)*	

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