Review Form 3

Journal Name:	**Journal of Advances in Biology & Biotechnology**
Manuscript Number:	**Ms_JABB_130429**
Title of the Manuscript:	**Comparative Efficacy of Selamectin, Sarolaner and Ivermectin in Canine Sarcoptic Mange**
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.		
Is the title of the article suitable? (If not please suggest an alternative title)		
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.		
Is the manuscript scientifically, correct? Please write here.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.		

Review Form 3

Is the language/English quality of the article suitable for scholarly communications?		
Optional/General comments	***Regards*** ***The study has been reviewed for content and statistics.*** ***Please make the following corrections to make it acceptable for publication:*** The study involved only 12 dogs in the therapeutic trial, divided into three treatment groups of 4 dogs each. This small sample size significantly limits the statistical power of the study and makes it difficult to generalize the findings. A larger sample size is essential to ensure that the observed differences between the groups are reliable and not due to random variation. The study does not mention if the allocation of dogs to treatment groups was randomized or if the assessment was blinded. Randomization helps to eliminate selection bias, and blinding ensures that the outcome assessments are not influenced by the treatment allocation. These are important components of a well-controlled trial and their absence could weaken the validity of the results. The study lacks a true control group, which is critical for comparison with the treatment groups. Without a placebo or untreated control group, it is impossible to determine whether the observed improvements were solely due to the treatments or whether other factors contributed to the resolution of symptoms. Including a control group would strengthen the internal validity of the findings. The study evaluates the therapeutic response based on clinical signs, such as crusting, erythematous papules, and pruritus. However, the clinical signs are reported somewhat inconsistently across groups. For example, there is an increase in scaling in some groups post-treatment, which is not well-explained in the discussion. Further clarification is needed to understand why scaling worsened in some dogs despite treatment. This inconsistency should be addressed, as it raises concerns about the overall clinical evaluation process. The use of Chi-square and one-way ANOVA for statistical analysis is appropriate, but the results are presented in a way that makes it difficult to fully assess their significance. For instance, the paper mentions a "statistically non-significant" difference in occurrence rates between male and female dogs, but the actual p-values for comparisons between the treatment groups are not always provided in the main text. Furthermore, the use of "$p \leq 0.05$" in results tables could be misleading if p-values are not shown for each comparison. The chosen dosages for each treatment (e.g., ivermectin at 0.4 mg/kg daily for 28 days, sarolaner at 2 mg/kg as a single dose) may not reflect typical treatment protocols in practice. There is no justification for these dosages within the study, and the potential variation in treatment regimens between studies could affect the comparability of results. Providing more rationale for selecting these particular dosages, or comparing them to standard treatment doses used in practice, would enhance the study's credibility. While the study claims a significant reduction in mite counts post-treatment, the methodology for counting mites (deep skin scrapings under 10× magnification) could be more clearly explained. The sensitivity of this technique, especially with a small number of mites, could lead to false negatives, and multiple skin scrapings or alternate diagnostic techniques (such as PCR) might yield more reliable results. Although the article mentions that no adverse effects were observed, a more detailed examination of possible side effects would improve the quality of the study. The lack of a formal adverse event monitoring process is a significant omission, especially when dealing with drugs like ivermectin, which have known potential for side effects in certain breeds. While the study compares the efficacy of the three drugs, it does not adequately discuss the limitations of the study in depth. For example, the authors mention the small sample size but do not delve into the potential biases introduced by such a design. Additionally, the discussion could benefit from a more detailed examination of the mechanisms of action for each drug and the practical implications for their use in field conditions, including their cost-effectiveness and the impact on public health, especially in areas with a high zoonotic risk. The conclusion emphasizes the superiority of sarolaner and selamectin over ivermectin, which is a reasonable interpretation based on the data. However, the article could further explore the potential reasons for ivermectin's reduced efficacy in this study, such as possible resistance, drug formulation, or dose regimen, rather than simply attributing the findings to a general inferiority of ivermectin. In conclusion, while the study provides useful insights into the treatment of sarcoptic mange, it suffers from methodological shortcomings that impact its validity and generalizability. A more robust	

	experimental design, including larger sample sizes, randomization, control groups, and blinding, would significantly strengthen the findings and conclusions of the research. Regarding biodiversity and resistance in insects, use and cite the following articles to enhance your study content: - Biodiversity, Geographical Distribution, and Faunal Study of Tick Populations Infesting Livestock in an Elevated County of Midwest Iran - Molecular Surveillance of Sandfly-Borne Phleboviruses in Robat Karim County, Tehran - Evaluation of resistance of human head lice to pyrethroid insecticides: a meta-analysis study - A perspective on human leishmaniasis and new methods with therapeutic strategies for prevention, diagnosis, and treatment The study needs a complete revision in terms of language and grammar. Good luck.	

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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