Review Form 3

Journal Name:	**European Journal of Medicinal Plants**
Manuscript Number:	**Ms_EJMP_125815**
Title of the Manuscript:	**Innovation of BioCurcuminoids and its Pharmacokinetic Study of CurcuminAura™ with regular curcuminoids**
Type of the Article	

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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.	This manuscript is significant for the scientific community as it provides valuable insights into enhancing the bioavailability of curcumin, which has long been known for its therapeutic benefits but is limited by poor solubility and absorption. The innovative formulation of CurcuminAura™, which combines curcumin with sunflower lecithin, demonstrates a promising solution for improving the pharmacokinetics of curcumin. I appreciate the manuscript because it addresses a critical gap in curcumin research—making it more effective as a health-promoting agent. Moreover, the study's findings, showing that CurcuminAura™ has 3.8 times higher bioavailability than regular curcumin, are of practical importance for the nutraceutical and pharmaceutical industries	
Is the title of the article suitable? **(If not please suggest an alternative title)**	**Yes**	
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.	**Yes**	
Are subsections and structure of the manuscript appropriate?	**Yes**	
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.	This manuscript is scientifically robust and technically sound, employing a well-established methodology, including HPLC analysis and pharmacokinetic testing using animal models. The study design, which compares CurcuminAura™ and regular curcumin in Sprague Dawley rats, follows a rigorous protocol with appropriate dose administration and time-point blood sampling. The data presented, particularly the bioavailability improvement demonstrated through pharmacokinetic parameters, is clear and supported by reproducible methods. The manuscript also follows standard analytical procedures for bioavailability studies, such as HPLC analysis, making it a reliable contribution to the field.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. **-**	**Yes**	

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Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	**Need improvements**	
Optional/General comments	**1. Abstract** The abstract provides a concise and clear summary of the study's objectives, methodology, and key findings. However, it could be enhanced by briefly discussing the significance of the improved bioavailability of curcumin and its implications for therapeutic use. Additionally, a clearer distinction between the novel aspects of CurcuminAura™ and regular curcumin could have been provided to emphasize the innovation behind the formulation. **2. Introduction** The introduction does a good job of presenting the context and rationale for the study. The explanation of curcumin's limitations and the role of lecithin in addressing these challenges is well-grounded. However, more discussion on the implications of improving curcumin's bioavailability (e.g., its application in clinical settings or potential therapeutic benefits) could have been included. The introduction could also have touched on prior studies to highlight the novelty of the approach more effectively. **3. Methodology** The methodology is comprehensive and provides sufficient detail for replication. However, the section could have been improved by offering more justification for the specific dosage and animal model choice. The selection of Sprague Dawley rats as a model is appropriate for pharmacokinetic studies, but additional context on why this model was chosen over others would strengthen the rationale. **4. Methods** The methods section is well-organized and provides clear procedural details, particularly the HPLC methodology for analyzing curcumin levels. Including specific parameters such as detection wavelengths and retention times is beneficial for reproducibility. However, the methods could have included a more detailed explanation of why piperine and sunflower lecithin were specifically chosen as formulation ingredients, alongside a comparative analysis of other possible enhancers. **5. Results and Discussion** The results are well-supported by quantitative data, and the discussion appropriately interprets the findings in the context of curcumin bioavailability. The comparison between the two formulations is clear, but the discussion could have gone further in considering the clinical relevance of these results. Specifically, how this enhanced bioavailability could translate to improved human therapeutic outcomes remains underexplored. The results could also have benefited from addressing potential limitations, such as the variability in absorption between different species. **6. Study Outcome and Conclusion** The conclusion effectively summarizes the study's key findings and reaffirms the enhanced bioavailability of CurcuminAura™. However, the conclusion could have been strengthened by offering more specific insights into the next steps for research, such as clinical trials or exploring the bioavailability of CurcuminAura™ in other animal models or humans. Additionally, the conclusion does not address any potential side effects or safety considerations of CurcuminAura™, which would be	

	important for its use in clinical applications. **Overall Evaluation** This study presents a well-structured comparison of BioCurcuminoids (CurcuminAura™) and regular curcumin using a pharmacokinetic model. The enhanced bioavailability of CurcuminAura™ is clearly demonstrated, and the methodology is thorough. However, the paper could benefit from a more detailed exploration of the findings' broader clinical implications and potential limitations. Discussing the product's safety profile and future research directions would further improve the study's relevance to the field of nutraceuticals and pharmacology.	

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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