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| Journal Name: | [**Journal of Advances in Medicine and Medical Research**](https://journaljammr.com/index.php/JAMMR) |
| Manuscript Number: | **Ms\_JAMMR\_142122** |
| Title of the Manuscript: | **Photoprotective and Antimelanogenic Potential of Carica papaya Leaf Extract: Molecular Insights into Skin Aging Prevention** |
| Type of the Article | **Mini-review Article** |

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| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | **Author’s Feedback** (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 manuscript provides a timely and relevant review on the photoprotective and antimelanogenic potential of *Carica papaya* leaf extract, with a strong emphasis on molecular mechanisms involved in UVB-induced skin aging and pigmentation. Given the rising interest in natural compounds for dermatological and cosmeceutical applications, this review contributes valuable insights into the biological activities of papaya leaf constituents such as caffeic acid and rutin. The paper highlights current research trends, integrates mechanistic evidence from in vitro and in vivo studies, and points to gaps in clinical validation. It is an important contribution to ongoing discussions about plant-derived antioxidants in skin care and dermatology. | “This manuscript bridges the gap between dermatological research and the exploration of natural antioxidant sources. By focusing on the mechanisms of UV-induced skin damage and hyperpigmentation, it contributes to a deeper understanding of photoaging and its biochemical pathways. The review's emphasis on Carica papaya leaf extract as a potential therapeutic agent introduces a promising, plant-based intervention that aligns with the growing demand for sustainable and effective skincare solutions. Furthermore, it encourages future research into indigenous botanical resources, particularly in regions like Indonesia, where such plants are abundant yet underutilized in clinical applications.” |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | Yes, the title is generally suitable. |  |
| 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 covers the main objectives, methods, and findings; however, a few improvements are recommended:  1] The methodology section in the abstract could briefly mention that this is a narrative review, as this is stated later in the paper.  2] Add a sentence about the main compounds studied (e.g., caffeic acid and rutin), as they are central to the review's discussion.  3] Minor rephrasing for grammar and flow will improve readability. | 1] “This is a narrative review which synthesizes findings from peer-reviewed in vitro and in vivo studies published between 2014 and 2024, evaluating the effects of *Carica papaya* leaf extract and its active compounds—particularly caffeic acid and rutin—on UVB-induced skin damage, inflammation, and pigmentation” already added. 2] Sentences on the main compound has been added.  3] Grammatical improve has been done. |
| Is the manuscript scientifically, correct? Please write here. | Yes, the manuscript is scientifically sound and generally well-supported by relevant studies. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Yes, the references are sufficient |  |
| Is the language/English quality of the article suitable for scholarly communications? | The manuscript requires language improvement. | Language improvement has been done to the manuscript. |
| Optional/General comments | The paper is informative and highly relevant to cosmeceutical science, but structure and formatting need polishing. |  |

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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)* | This narrative review is based solely on previously published literature and does not involve human or animal subjects; therefore, ethical clearance was not required. |