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| Book Name: | [**Chemistry and Biochemistry: Research Progress**](https://www.bookpi.org/bookstore/product/chemistry-and-biochemistry-research-progress-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_5732** |
| Title of the Manuscript:  | **Synthesis and structural features of the curcumin: A multitargeted component of Turmeric** |
| Type of the Article | **Book Chapter** |

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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 *(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 manuscript provides an exploration of the structural and pharmacological properties of curcumin and its derivatives. It contributes meaningfully to the ongoing discourse on plant-derived bioactives, particularly in the context of multi-targeted drug discovery. Its detailed discussion on synthesis, degradation pathways, structural activity relationships, and potential biomedical applications makes it a valuable reference for researchers in medicinal chemistry, pharmacognosy, and drug development. The manuscript's inclusion of structural modifications and their impact on biological activities broadens its relevance and could guide future design of curcumin-based therapeutics. |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | The title is informative but could benefit from refinement for clarity and grammar such as “**Synthesis and Structural Features of Curcumin: A Multi-Targeted Bioactive Compound from Turmeric**” |  |
| 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 captures the general scope but lacks coherence and precision. To improve on it,1. Clarify the central objectives.
2. Include highlights from structural analysis.
3. Condense repetitive phrases such as "multi-parametric features... site of attraction".

See this:“Curcumin, the principal bioactive compound in turmeric, exhibits diverse biological activities due to its unique chemical structure. This paper reviews the synthesis, structural characteristics, and biological implications of curcumin and its derivatives. Special attention is given to tautomeric forms, degradation behavior, and structure-activity relationships (SAR) that influence antioxidant, anti-inflammatory, and anticancer properties. Despite promising pharmacological profiles, issues related to stability and bioavailability persist, necessitating further structural optimization and mechanistic studies.” |  |
| **Is the manuscript scientifically, correct? Please write here.**  | The manuscript is largely scientifically accurate but requires improvements in organization, clarity, and grammar. Several claims are supported by appropriate references, but the transitions between sections could be improved. The structure-activity relationship section is strong and well-referenced, though the discussion would benefit from clearer comparative summaries and tabulated insights. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.****-** | The references are recent and sufficient, with most published after 2018. A few earlier citations are foundational and acceptable. However, formatting consistency (especially punctuation and journal names) should be revised to comply fully with APA or journal-specific style. It may also benefit from citing additional mechanistic or clinical studies on curcumin’s anti-inflammatory and anticancer pathways |  |
| Is the language/English quality of the article suitable for scholarly communications? | The manuscript requires significant language editing. The grammar is inconsistent, and certain phrases are awkward or unclear. However, I have read through and done edits. Author(s) are advised to accept edits.  |  |
| Optional/General comments |  |  |

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| **PART 2:**  |
|  | Reviewer’s comment | Author’s comment *(if agreed with the 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 detail)* |  |

**Reviewer details:**

**Precious Ojo Uahomo, University of Port Harcourt, Nigeria**