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| Book Name: | [**Medical Science: Recent Advances and Applications**](https://bookstore.bookpi.org/product/medical-science-recent-advances-and-applications-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_6041** |
| Title of the Manuscript:  | **Anticancer Efficacy of Garlic Bioactive Constituents: Allicin and Z-Ajoene** |
| 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.** | I find this chapter to be a valuable contribution to the field of natural product-based cancer therapeutics. The detailed breakdown of the molecular mechanisms through which allicin and Z-ajoene exert anticancer activity helps bridge basic biochemical insights with translational implications. I particularly appreciate the integration of nanotechnology approaches, which are critical for enhancing bioavailability of labile phytochemicals. Moreover, the dual focus on both allicin and Z-ajoene provides a more comprehensive understanding of garlic’s chemopreventive potential, which I believe can stimulate future clinical investigations. |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | The current title is generally appropriate. However, I think it would be more precise and engaging if slightly revised to better reflect the dual mechanistic focus and translational angle.Suggested title:"Anticancer Mechanisms and Therapeutic Potential of Garlic-Derived Allicin and Z-Ajoene" |  |
| 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 is fairly comprehensive and highlights key mechanisms of action for both allicin and Z-ajoene. However, I think it could benefit from some restructuring for clarity. Specifically:* Add a sentence summarizing the significance of the nanoformulation approach.
* Include a clear closing statement summarizing the clinical or translational importance.
* Consider breaking up the long sentences for better readability.

Suggested addition:"These findings highlight the promise of allicin and Z-ajoene as adjuncts or alternatives to traditional chemotherapeutics, meriting further clinical exploration." |  |
| **Is the manuscript scientifically, correct? Please write here.**  | Yes, the manuscript is scientifically sound and well-structured. The biochemical mechanisms described—such as ER stress induction, Wnt/β-catenin pathway inhibition, and redox modulation—are in line with current literature. I appreciate the use of both molecular and preclinical evidence, as well as the comparative analysis between allicin and Z-ajoene. However, I would suggest clarifying certain mechanisms (e.g., protein thiolation and the specific role of nanocage formulations) for readers less familiar with redox biochemistry or computational modeling. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.****-** | The references are largely sufficient and include many recent and relevant publications from 2022–2025, which is commendable. However, I suggest including a few more primary studies, especially clinical trials (if available), to strengthen the translational claims. One additional source that could be cited is:* Amagase H. (2006). Clarifying the real bioactive constituents of garlic. J Nutr, 136(3 Suppl):716S-725S. (for background on OSCs)
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| Is the language/English quality of the article suitable for scholarly communications? | Yes, the English language quality is generally good and suitable for publication. However, a few sentences are quite long and complex, which could benefit from restructuring for clarity. Also, terms like “sick cells” should be replaced with more appropriate scientific phrasing, such as “targeted cancerous tissues.” Minor proofreading is recommended to smooth out some awkward phrasing. |  |
| Optional/General comments |  |  |

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| **PART 2:**  |
|  | **Reviewer’s comment** | **Author’s Feedback** (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)* |  |

**Reviewer details:**

**Kirolos Eskandar , Egypt**