

Review Form 3

Journal Name:	Journal of Complementary and Alternative Medical Research
Manuscript Number:	Ms_JOCAMR_129508
Title of the Manuscript:	Nanotechnology-Based Antiviral Therapies: Current Advances and Applications in Emerging Viral Diseases
Type of the Article	Review Article

General guidelines for the Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

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PART 1: Comments

	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
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 is highly significant for the scientific community as it explores the intersection of nanotechnology and antiviral therapies, a rapidly advancing field with immense potential for improving global healthcare. By addressing key topics like vaccine delivery, therapeutic platforms, and diagnostics, it highlights cutting-edge innovations essential for combating emerging and re-emerging viral threats.	
Is the title of the article suitable? (If not please suggest an alternative title)	At first glance, the title <i>"Nanotechnology-Based Antiviral Therapies: Current Advances and Applications in Emerging Viral Diseases"</i> appears relevant as it aligns with the manuscript's overall themes. However, the article primarily focuses on COVID-19 and SARS-CoV-2 while providing limited exploration of other viral diseases like Zika or Ebola. To ensure consistency, the manuscript should either expand and equally treat sections on other viral diseases or remove them entirely and revise the title to reflect its predominant focus on COVID-19. A more specific alternative title could be: "Nanotechnology in COVID-19 and SARS-CoV-2: Advances in Antiviral Therapies and Applications."	
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 comprehensive and provides an effective summary of the manuscript. However, it could benefit from brief mentions of the challenges and limitations, such as scalability, cost, and ethical considerations, to present a balanced perspective. Adding a sentence about regulatory and ethical dimensions, as well as examples of viral diseases mentioned in the introduction, would enhance its depth and provide a well-rounded overview.	
Is the manuscript scientifically, correct? Please write here.	The manuscript is scientifically accurate and grounded in contemporary research.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	The references are sufficient and recent, supporting the manuscript's scientific claims effectively. However, arranging the references in alphabetical order could be better for easier navigation.	

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<p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>The manuscript is well-written in scholarly English, suitable for academic publication. Minor adjustments in stylistic consistency and sentence structure could improve readability.</p>	
<p>Optional/General comments</p>	<p>The following improvements are recommended:</p> <ul style="list-style-type: none"> • Introduction Section: Include more details on viral diseases and examples, such as SARS-CoV-2, Zika, and Ebola. Briefly explain why these are categorized as viral diseases to provide context for readers unfamiliar with virology. • Mechanisms Behind Antiviral Therapies: Before discussing limitations, describe how these therapies work, such as the mechanisms of traditional antivirals or nanoparticle-based solutions. This would provide readers with a foundational understanding before diving into their limitations. • Challenges with Conventional Therapeutics: Instead of listing challenges in bullet points, use short paragraphs to elaborate on each challenge (e.g., bioavailability, pharmacokinetics) with explanations and examples. This would allow readers to grasp the full scope of the challenges. • Carbon-Based Nanomaterials Section: The inherent antiviral properties (physical inactivation, chemical interactions, enhanced delivery) should be explained in short paragraphs to ensure clarity for readers less familiar with the subject. • General Explanatory Style: Replace bullet points with detailed discussions where appropriate to better explain scientific logic, reasoning, and mechanisms. <p>The manuscript provides a valuable contribution to the field of nanotechnology-based antiviral therapies. To improve its impact:</p> <ul style="list-style-type: none"> • Addressing the tendency to use bullet points by elaborating on key points in short paragraphs. • Adding more examples and scientific reasoning in sections like diagnostics and nanomaterial properties to enhance accessibility and depth. • Providing a clearer chronology of advancements in diagnostics to show progression in the field. • Considering restructuring sections on challenges and mechanisms for better flow and comprehension <p>could be beneficial.</p> <p>I did not identify any explicit ethical issues within the manuscript upon review.</p> <p>There is no declaration of competing interests in the manuscript.</p> <p><input type="checkbox"/> Misalignment Between Title and Content: The title suggests a broad discussion of emerging viral diseases, but the manuscript focuses heavily on COVID-19 and SARS-CoV-2. This inconsistency needs to be addressed by either broadening the content to cover other viral diseases equally or narrowing the title to reflect its actual focus.</p> <p><input type="checkbox"/> Insufficient Depth: The manuscript fails to provide adequate detail in key areas. For instance:</p> <ul style="list-style-type: none"> • The introduction lacks a comprehensive explanation of viral diseases and their examples. • The mechanisms of existing antiviral therapies are not well explained before their limitations are presented. • The antiviral properties of carbon-based nanomaterials are listed but not sufficiently elaborated on for clarity and scientific understanding. <p><input type="checkbox"/> Challenges with Conventional Therapeutics: Challenges are presented in bullet points without enough context or detail. Expanding these into short paragraphs that explain the scientific reasoning</p>	

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	<p>and mechanisms would improve the reader's understanding.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Diagnostic Advancements: The section on CRISPR lacks historical context and fails to provide additional examples. A brief chronology of advancements in nanotechnology-based diagnostics leading to CRISPR would highlight the progress in the field. <input type="checkbox"/> Lack of Emphasis on the Topic's Importance: While the topic is timely and critical, the manuscript does not sufficiently emphasize its global importance or highlight why nanotechnology is transformative in combating viral diseases. This undercuts the manuscript's potential impact. <input type="checkbox"/> Ethical and Regulatory Issues: Specific guidelines or protocols referred to are not cited, leaving this section incomplete. Adding references and elaborating on these issues would strengthen the manuscript's credibility. <input type="checkbox"/> Structural and Reference Issues: References are not organized alphabetically, and some areas lack sufficient citation. Reorganizing the references and ensuring they are comprehensive would improve accessibility. <input type="checkbox"/> Writing Style and Format: Overreliance on bullet points instead of detailed explanatory paragraphs detracts from the manuscript's academic rigor and readability 	
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PART 2:

	<u>Reviewer's comment</u>	<u>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)</u>
<u>Are there ethical issues in this manuscript?</u>	<u>(If yes, Kindly please write down the ethical issues here in details)</u>	

Reviewer Details:

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