

Review Form 3

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| Journal Name: | Microbiology Research Journal International |
| Manuscript Number: | Ms_MRJI_126622 |
| Title of the Manuscript: | Efficacy of Zinc oxide nanoparticles against anthracnose and southern blight disease of green gram |
| Type of the Article | Original Research Article |

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) |
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| 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. | The title indicates that this study investigates the use of zinc nanoparticles (ZnNP) in conjunction with plant extracts to inhibit anthracnose and southern blight diseases in green gram. However, the research solely assesses the antifungal activity of ZnNP against two strains of fungi <i>in vitro</i> , without presenting any evidence to support the claim that ZnNP effectively inhibits diseases. The scientific rigor of the manuscript is insufficient, and therefore, it is recommended that this submission be rejected. | |
| Is the title of the article suitable? (If not please suggest an alternative title) | The title is inappropriate as it does not accurately reflect the focus of the study, which only investigated the inhibitory effects of zinc nanoparticles (ZnNP) infused with plant extracts on 2 pathogenic fungi, including <i>Colletotrichum lindemuthianum</i> and <i>Sclerotium rolfsii</i> . However, the research does not address the direct control of anthracnose and southern blight diseases in planta or in field conditions. | |
| 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 fine. | |
| Are subsections and structure of the manuscript appropriate? | I have no idea in this part. However, it can be fix after the revision will be completed. | |
| 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. | The introduction lacks sufficient background information necessary for reader comprehension. The statement, "Numerous fungal diseases frequently hinder the ability of the affected plants to germinate, kill them, or significantly lower their capacity for production," requires further elaboration. Specifically, it is important to discuss how the two fungal strains mentioned <i>Colletotrichum lindemuthianum</i> and <i>Sclerotium rolfsii</i> affect mung bean plants and to clarify the underlying mechanisms involved in these interactions. Additionally, "various nanoparticles can be used against seedborne pathogens" should be substantiated with scientific evidence outlining the mechanisms by which these nanoparticles exert their antifungal effects. It is insufficient for the authors to merely reference previous studies without considering the mechanisms. The rationale behind the author's choice of four specific types of plant extracts for synthesizing zinc nanoparticles (ZnNP) is unclear and requires further explanation. The manuscript should provide a scientific basis for selecting these particular plant extracts over others. The methodology lacks clarity regarding the source and characteristics of the ZnNPs used in the study. It is unclear whether the ZnNPs were commercially sourced or synthesized by the authors. If the latter, details of the synthesis protocol should be provided, including any references to standard procedures or previous studies that informed their synthesis method. Furthermore, information about the size of the nanoparticles is missing, raising concerns about consistency across samples. The authors should specify the nanoparticle size and provide data on the uniformity of the samples. Additionally, the criteria or standard used to define these particles as "nanomaterials" should be clarified to ensure transparency and reproducibility. These methodological details are essential to support the scientific | |

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| | rigor of the study. The data presentation in Table 1 and Figure 1, as well as in Table 2 and Figure 2, is duplicate, as both display the same information. Using a single format will streamline the presentation, making it easier for readers to interpret the results without unnecessary repetition. Furthermore, the study solely assesses the inhibitory effect of ZnNPs against <i>Colletotrichum lindemuthianum</i> and <i>Sclerotium rolfsii</i> . While the experiment includes two distinct fungal pathogens, officially, it just only one <i>in vitro</i> experiment. | |
| Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. | Several references in the manuscript are outdated, such as Vincent's study from 1927. | |
| Minor REVISION comments Is the language/English quality of the article suitable for scholarly communications? | The English quality should be improved. | |
| Optional/General comments | The manuscript lacks sufficient scientific rigor and depth to warrant publication. The methods section also lacks clarity, which provides limited scientific content. In light of these issues, I recommend rejecting this manuscript. | |

PART 2:

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| | 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? | <i>(If yes, Kindly please write down the ethical issues here in details)</i> | |

Reviewer Details:

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| Name: | Le Thanh Khang |
| Department, University & Country | Quy Nhon University, Vietnam |