Journal Name:	Current Journal of Applied Science and Technology
Manuscript Number:	**Ms_CJAST_42299**
Title of the Manuscript:	**Molecular Detection of Antimicrobial Peptide Genes and Identification of Novel Antifungal Compounds of Bacillus sp. against Fusarium oxysporum f. sp cubense Causing Wilt of Banana**
Type of the Article	**Original Research Article**

General guideline for 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.
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SDI Review Form 1.6

PART 1: Review Comments

	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)*
Compulsory REVISION comments	**The issue addressed by the article falls into one of the biggest concerns today is the search for alternative approaches to find an effective strategy to combat phytopathogens such as *Fusarium*** **Important: English should be carefully revised; there is a lot of error of synthesis and conjugation.** **Title: what do you mean by novel antifungal molecules??** **Most of the antifungal molecules you cited are already known for their antifungal activity. You have to specify where the novelty is.** **1. Introduction:** - **References used are not very current** - **Author must clarify the purpose of the work as well as the interest and the importance of its problematic** - **This entire paragraph must be reformulated;** (In this perspective, Bacillus species were 43 explored as an effective production of antifungal and antimicrobial peptide genes against 44 fuarium wilt of banana. An objective of the present study includes (i) Isolation and 45 characterization of Bacillus spp from banana rhizosphere (ii) Detection of diverse antibiotic 46 genes (iii) Identification of antifungal compounds). **2. Material and methods:** - **Author should specify Sampling site and its environmental conditions** - **the methods used are not detailed, author must specify some working conditions, for example:** • **The method applied for isolation of pathogen and its different culture conditions such as: culture media with composition and pH value.** • **The method applied for isolation of *Bacillus* strains with its different conditions: temperature and time of incubation, culture media with composition and pH value.** • **Protocol of production of metabolites from *Bacillus* strain.** • **There are no repetitions for bioassay tests.** • **No precision about positive control.** • **Absence of operatory conditions of GC/MS.** **3. Results and discussion:** - **it is better to organize the discussion in the same way as material and methods (with titles);** - **results are not well discussed;** - **references used are not very current;** - **What the author mean by incubation at 20 27 ± 2◦C ???** - **Author talk only about one *Bacillus* strain; *B. cereus*. Since he have do PCR**	

	amplification of 16S-rRNA region of twenty *Bacillus* isolates (figure 1), why he don't talk about the other species? - **This paragraph should be reworded**; The isolate B18 inhibited the growth of mycelium up to 58.89% comparative to 110 the control (Table 1). It was confirmed through 16s rRNA and sequenced shows 100% 111 similarity in NCBI database, so identified as Bacillus cereus (MH046059). - **Some parts are not discussed especially the first one;** - **There are no mass spectra presented for each antifungal compound;** - **The figure 2 showed chromatograms of antifungal compound separation only. There is no data coming from MS analysis;** - **There is no figure about antimicrobial biosynthetic genes through PCR;** - **There is no details for identification of antifungal molecules; 1-dodecane, heptadecane, pyrrolidine, 1-tetradecene and tetradecane;** - **Are these molecules totally pure or not, if yes explain the method of purification?** - **It is better to complete this work, if possible, by *in vivo* experiments (application of antimicrobial and antifungal molecules to treat banana contaminated with *Fusarium oxysporium*)** **4. Conclusion:** **The conclusion should be reformulated; it must show the strong points of the work.** **5. References :** - **Names of authors of the first reference must be corrected: Ashwani Kumar, Surender, S., Sandeep, J., Parvin, K.** - **There are not enough bibliographical references** - **Author must add other recent references** - **Less than 50% of references are from 2010 and over**	
Minor REVISION comments	- ***Basillus sp* ends with a point** - ***Fusarium* not *fusarium* (exp: last paragraph in introduction, in abstract)** - **In many references "et al" are written not in italic** - **All species names should be written in italics**	
Optional/General comments		

Reviewer Details:

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