March 24, 2021

Prof. Siti Subandiyah

Editor-in-Chief

Indonesian Journal of Biotechnology

Dear Editor:

Please find enclosed our manuscript titled **Plant growth promotion activity of endophytic bacteria from sweet sorghum (*Sorghum bicolor* (L.) Moench)**, which we request you to consider for publication as a *Research Article* in Indonesian Journal of Biotechnology.

Renewable energy studies often focus on crops because they can be grown and used worldwide for numerous purposes, but in a world where population growth calls for rapid increases in crop production, we must rely on biotechnology to find new ways to promote plant growth with fewer synthetic fertilizers and pesticides. In the current study, we screened the endophytic bacterial populations living within sweet sorghum plants to better understand which organisms provide the most beneficial mechanisms leading to better growth and better health for the plants. Endophytic bacterial isolates were tested for their abilities to fix nitrogen, solubilize phorphorus, produce indole acetic acid (IAA) and ACC-deaminase, antagonism test for pathogen fungi, all of which yield products benefiting plant growth. Our findings indicate that 9 unique isolates were classified into 3 phyla and 6 different genera. The 16S rRNA gene sequence is stored in GenBank with the following accession numbers: MW666782, MW666784, MW667585, MW667586, MW683242, and MW683305. Nine isolates were positive for at least one of the measured characteristics; only three isolates were positive for all plant growth promoting characteristics. We believe that these three isolates may be of commercial interest with the potential to increase crop production, while decreasing the use of synthetic fertilizers.

This manuscript has not been published elsewhere and is not under consideration for publication by another journal. We have approved the manuscript and agree with submission to the Indonesian Journal of Biotechnology. There are no conflicts of interest to declare.

We believe that the findings of this study are relevant to the scope of your journal and will be of

interest to its readership.

We look forward to hearing from you at your earliest convenience.

Sincerely,

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