

Molecular identification of three entomopathogenic fungi infecting the brown plant hopper pest in Indonesia

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Abstract	<p>Background Brown plant hopper (<i>Nilaparvata lugens</i> Stal.) a very damaging pest to rice crops. One of the efforts to control it is the use of entomopathogenic fungi (EPF). Three fungal local isolates found in Indonesia were effective in controlling the brown plant hopper pest. This study aimed to molecularly identify the 3 fungal isolates. Molecular identification is very important to get the exact identity of these fungi. The accuracy of EPF identification will greatly determine the success of control. Molecular identification is based on a partial genetic analysis of the internal transcribed spacer (ITS) locus of ribosomal fungal DNA. Result Morphology of the local isolates named J22 and J60 were identified as <i>Paecilomyces</i> sp., while the isolate J34 was identified as <i>Beauveria</i> sp. The results of molecular identification of the isolates J22 and J60 were identified as the fungi <i>Lecanicillium saksenae</i> and <i>Simplicillium</i> sp., while isolate J34 was identified as <i>Myrothecium</i> sp. The results of literature search showed that the 3 fungi have never been previously reported to infect the brown plant hopper. Conclusion In Indonesia, 3 types of EPF, namely <i>L. saksenae</i>, <i>Simplicillium</i> sp., and <i>Myrothecium</i> sp., were found having the potential to control the brown plant hopper pest.</p>
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