

## **Comparison of Volatile Blends and Nucleotide Sequences of Two *Beauveria Bassiana* Isolates of Different Virulence and Repellency Towards the Termite *Macrotermes Michealseni*.**

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### **Abstract**

Isolates of the fungus *Beauveria bassiana* have different levels of virulence and repellency against the termite *Macrotermes michaelseni*. In the present study, we compared the volatile profiles and gene sequences of two isolates of the fungus with different levels of virulence and repellence to the termites. Gas chromatography-mass spectrometric analyses showed quantitative differences in the composition of volatiles of the two isolates. The repellencies of synthetic blends of 10 prominent components that mimicked the volatiles of each of the two isolates were significantly different. Subtractive bioassays showed that the repellency of each isolate was due to synergistic effects of a few constituents. As previously reported for isolates of *Metarhizium anisopliae*, some differences also were found in the nucleotide sequences of the two isolates of *B. bassiana*, suggesting a genetic basis for the observed intra-specific differences in their repellency and virulence against the termite.