

## Biocontrol and applied extension of antifungal bacterium *Burkholderia lata* CAB13001 for anthracnose control on pepper

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**Purpose:** The anthracnose caused by *Colletotrichum acutatum* was found to be high virulent to the fruits and leaves on pepper. To control the pepper anthracnose, antifungal bacterium, CAB13001 strain which was isolated from natural soil, was selected as useful antifungal agent.

**Methods:** Antifungal bacterium was selected as the strain that inhibited pathogen's growth on PDA (Potato Dextrose Agar) and by testing in vitro bioassay. And also, the CAB13001 strain identified 16S rDNA sequencing.

**Results and Conclusions:** Their antagonistic activity against pathogens as *Sclerotinia cepivorum*, *Botrytis cinerea* and *Stemphylium* sp. was remarkable superior as well as *Colletotrichum acutatum*. In vitro bioassay using the green pepper fruit, CAB13001 strain suppressed the lesion development of Anthracnose disease, and its control value compared to the untreated one was 82.4% on pepper fruit in field test. Therefore, it can be applied to control Sclerotinia rot, Leaf blight, Gray mold and White rot disease of various vegetables including garlic, shallow, onion and lettuce based. By the way, as analysis of the nucleotide sequence of the gene 16S rDNA, this antagonistic bacterium was identified *Burkholderia lata*.