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Abstract:

Social insects like fungus growing termites (Odontotermes obesus), dwell in soil environments, therefore, they are constantly interacting with ento-mopathogens that commonly occur as saprophytes in soil. Fungus growing termites are in a nutritional symbiosis with a fungus Termitomyces. Termites cultivate Termitomyces on a fungus comb which they make from degraded plant matter. So, for the maintenance of this fungus comb, they go for for-aging and thereby can introduce entomopathogens from soil into the colony. An entomopathogen is a parasite of insects that kills or seriously disables them. However, despite of these apparent vulnerabilities, termites seem to cope with diseases remarkably well and such infections in the colony are rare. The potential mechanisms with which termites suppress these infec- tions however have remained unknown. In our study, we are trying to find out whether termites use any bacterial strains present in their colony as de- fensive symbionts against entomopathogens. Our invitro interaction assays using the isolated bacterial strains from the termite colony have suggested that some of these bacterial strains may have the potential to inhibit ento- mopathogens in culture.

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