Bacterial alkaloids prevent amoebal predation.

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Abstract

Bacterial defense mechanisms evolved to protect against predation from nematodes, predatory bacteria or amoebae. We identified novel bacterial alkaloids (pyreudione A – D) that are necessary for protection of the producer, *Pseudomonas fluorescens* HKI0770, against amoebal predation. We describe the isolation, structure elucidation, total synthesis, and a proposed biosynthetic pathway for these structures. Generation of *P. fluorescens* gene deletion mutants, unable to produce pyreudiones, render the bacterium edible to a variety of soil-dwelling amoebae.

Involved units

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Topics

Amoebae-bacteria interactions

Identifier

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