

Symbiotic Streptomyces provide antibiotic combination prophylaxis for wasp offspring.

Kroiss J, Kaltenpoth M, Schneider B, Schwinger MG, Hertweck C, Maddula RK, Strohm E, Svatos A (2010) Symbiotic Streptomyces provide antibiotic combination prophylaxis for wasp offspring. *Nat Chem Biol* 6(4), 261-263.

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Abstract

Beewolf digger wasps cultivate specific symbiotic bacteria (*Streptomyces* spp.) that are incorporated into the larval cocoon for protection against pathogens. We identified the molecular basis of this protective symbiosis in the natural context and demonstrate that the bacteria produce a 'cocktail' of nine antibiotic substances. The complementary action of all symbiont-produced antibiotics confers a potent antimicrobial defense for the wasp larvae that parallels the 'combination prophylaxis' known from human medicine.

Beteiligte Forschungseinheiten

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Identifier

doi: 10.1038/nchembio.331

PMID: 20190763