

Structure, properties, and biological functions of nonribosomal lipopeptides from pseudomonads.

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Abstract

Bacteria of the genus *Pseudomonas* are ubiquitous in nature. Pseudomonads display a fascinating metabolic diversity, which correlates with their ability to colonize an extremely wide range of ecological niches. As a result, these bacteria are a prolific source of natural products. Biosynthesis of the latter is often orchestrated by arrays of chemical signals arising from intraspecies communication or interspecies relationships with bacteria, fungi, amoebae, plants, and insects. Especially nonribosomal lipopeptides, which have diverse biological activities, play important roles in the lifestyle of pseudomonads. In this review, we will focus on the molecular structures, properties, biosynthetic pathways, and biological functions of pseudomonal lipopeptides. This review is not only addressed to bio/chemists rather it serves as a comprehensive guide for all researchers (micro/biologists, ecologists, and environmental scientists) working in this multidisciplinary field.

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Pierre Stallforth

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