# Modular Solid-Phase Synthesis of Antiprotozoal Barnesin Derivatives.

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## Projects

Modular synthetic approaches towards natural sphingoid base-type signaling molecules Details

Organic synthetic method development and total synthesis of microbial derived natural products Details

Synthesis of bio-active molecules and their derivatives, and Evaluation of their bio-activities Details

### Abstract

Here, we applied and optimized a solid support (SP)-based Horner-Wadsworth-Emmons reagent to prepare SP-bound vinylogous amino acids. Subsequent SP-based peptide synthesis, global deprotection, and chemical modifications yielded 14 lipodipeptides carrying vinylogous amino acids, including the natural product barnesin A (1). Biological evaluation revealed that several synthesized derivatives show micromolar to nanomolar inhibitory activity against papain-like cysteine proteases, human cathepsin L, and rhodesain.

### Identifier

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