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Total Synthesis and Absolute Stereochemistry of Seragakinone A *Angew. Chem. Int. Ed.* **2011**, *50*, 2297-2301.

Synthesis of ent-Seragakinone A

Significance: Seragakinone A was isolated from an unidentified marine fungus, which is in symbiosis with rhodophyta *Ceratodictyon spongiosum*, and was shown to exhibit both antifungal and antibacterial properties. The relative structure was determined using X-ray crystal structure analysis and extensive spectroscopic studies; however, the absolute stereochemical configuration was not determined.

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Comment: Installation of the stereogenic center at C5a ($\mathbf{D} \to \mathbf{E}$) was obtained via a pinacol-type rearrangement, which proceeded rapidly in high yield and with efficient transfer of stereochemistry. The benzoin cyclization to afford ketol \mathbf{J} installed the stereocenter at C^* with excellent diastereoselectivity, which was verified by X-ray crystal structure analysis.

Category

Synthesis of Natural Products and Potential Drugs

Key words

ent-seragakinone A

pinacol rearrangement

aldol reaction

benzoin formation

