Category

Synthesis of Natural Products and Drugs

Key Words

tetrahydropyrans
heteroannulation
allylsilanes

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Total Synthesis of (+)-Leucascandrolide A
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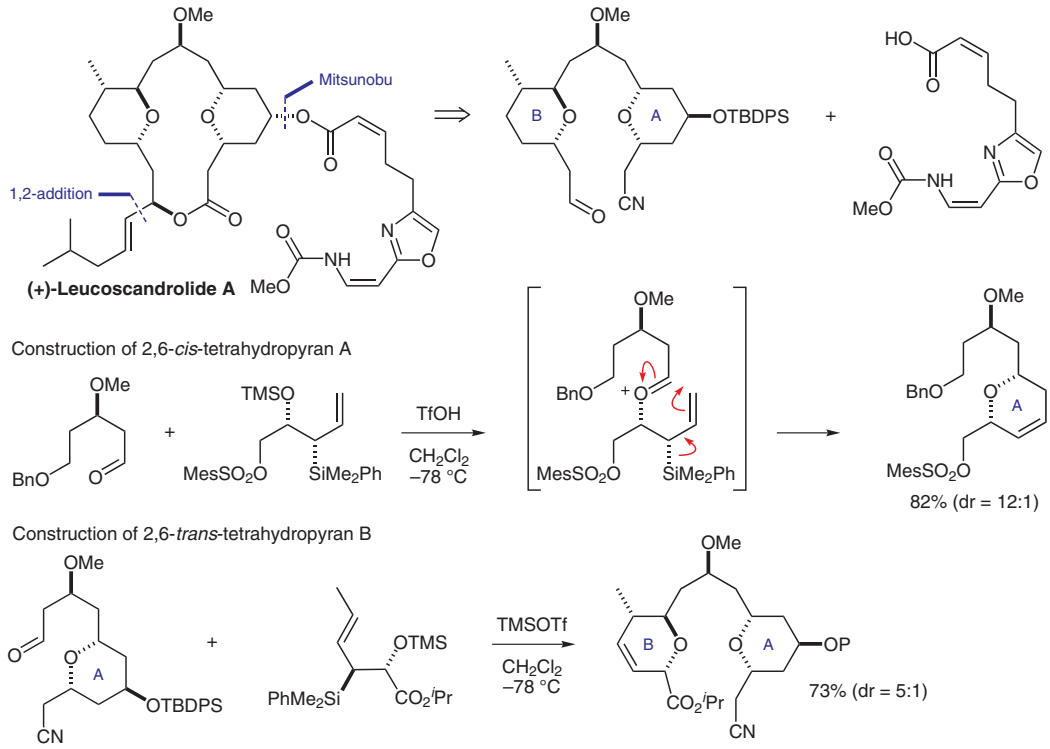

Significance: Leucascandrolide A (from a calcareous sponge *Leucascandra caveolata*) is cytotoxic towards various cancer cells and it inhibits the pathogenic yeast *Candida albicans*. It is probably a metabolite of opportunistic bacteria.

Comment: The *cis*- and *trans*-2,6-disubstituted tetrahydropyran rings A and B of the target were constructed using an intramolecular sila-Prins-type cyclization. The diastereoselectivity of the cyclization was controlled by steric and electronic effects in the homochiral allylsilane and crotylsilane.

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