The First Total Synthesis of (±)-Saudin


**Synthesis of (±)-Saudin**

**Significance:** Saudin is a diterpenoid that was isolated from *Cluytia richardiana* in 1985. It possesses a highly oxidized rearranged labdane skeleton and exhibits potent noninsulin dependent hypoglycemic activity. In 1999, Winkler and Doherty reported the first total synthesis of (±)-saudin by photochemical [2+2] cycloaddition of diene I.

**Comment:** A Michael addition–aldol addition cascade of A and B afforded C. Irradiation of I gave cyclobutane J as a single diastereomer. The furyl substituent was introduced by ketene acetal triflate formation and Stille cross-coupling. The natural product was obtained by treating M first with aqueous base and then with acid.

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**Category:** Synthesis of Natural Products and Potential Drugs

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