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Total Synthesis of Aburatubolactam A
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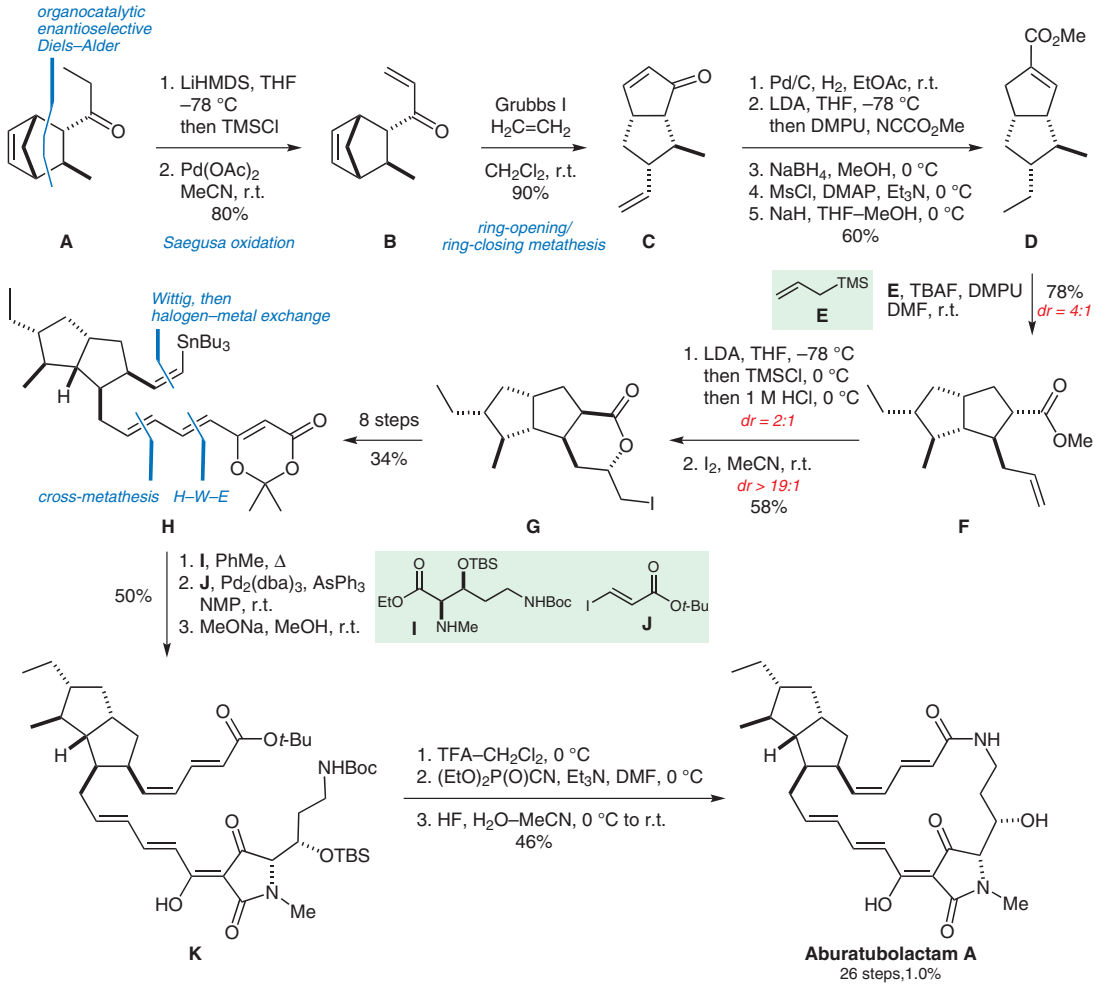
Synthesis of Aburatubolactam A



Significance: Aburatubolactam A was isolated from the culture broth of a *Streptomyces sp*. and displays a variety of biological activities such as cytotoxicity, antimicrobial activity and inhibition of superoxide generation. This synthesis features a ring-opening/ring-closing metathesis to construct the bicyclo[3.3.0]octane subunit and a late-stage macrolactamization.

Comment: A was synthesized by an organocatalytic, enantioselective Diels–Alder cycloaddition (er = 28:1). Allylation of **D** occurred with complete *exo* selectivity but gave predominantly the unwanted *trans*-diastereoisomer. Deprotonation/protonation led to a 2:1 mixture in favor of the desired *cis*-isomer which was separated after iodolactonization.

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Category
Synthesis of Natural Products and Potential Drugs

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