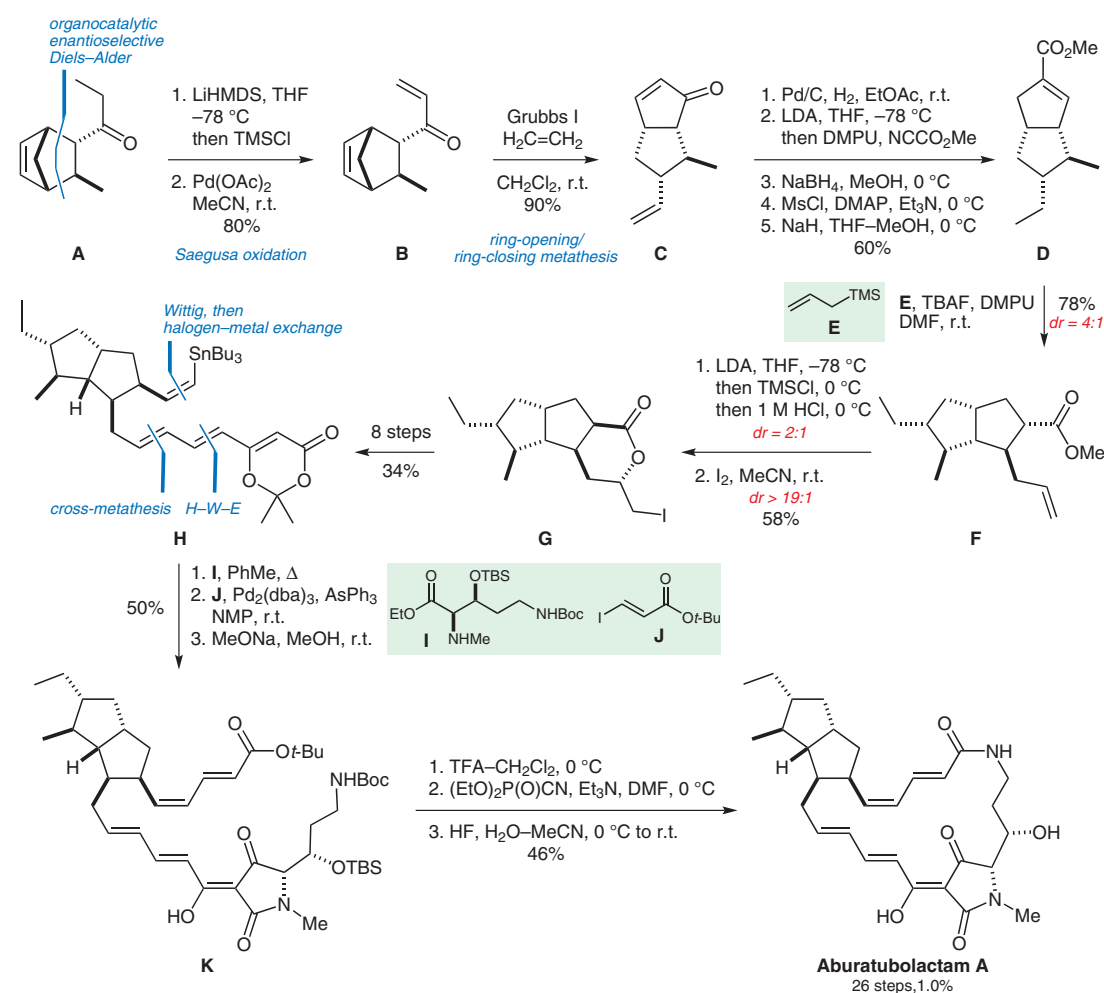


Synthesis of Aburatubolactam A



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.