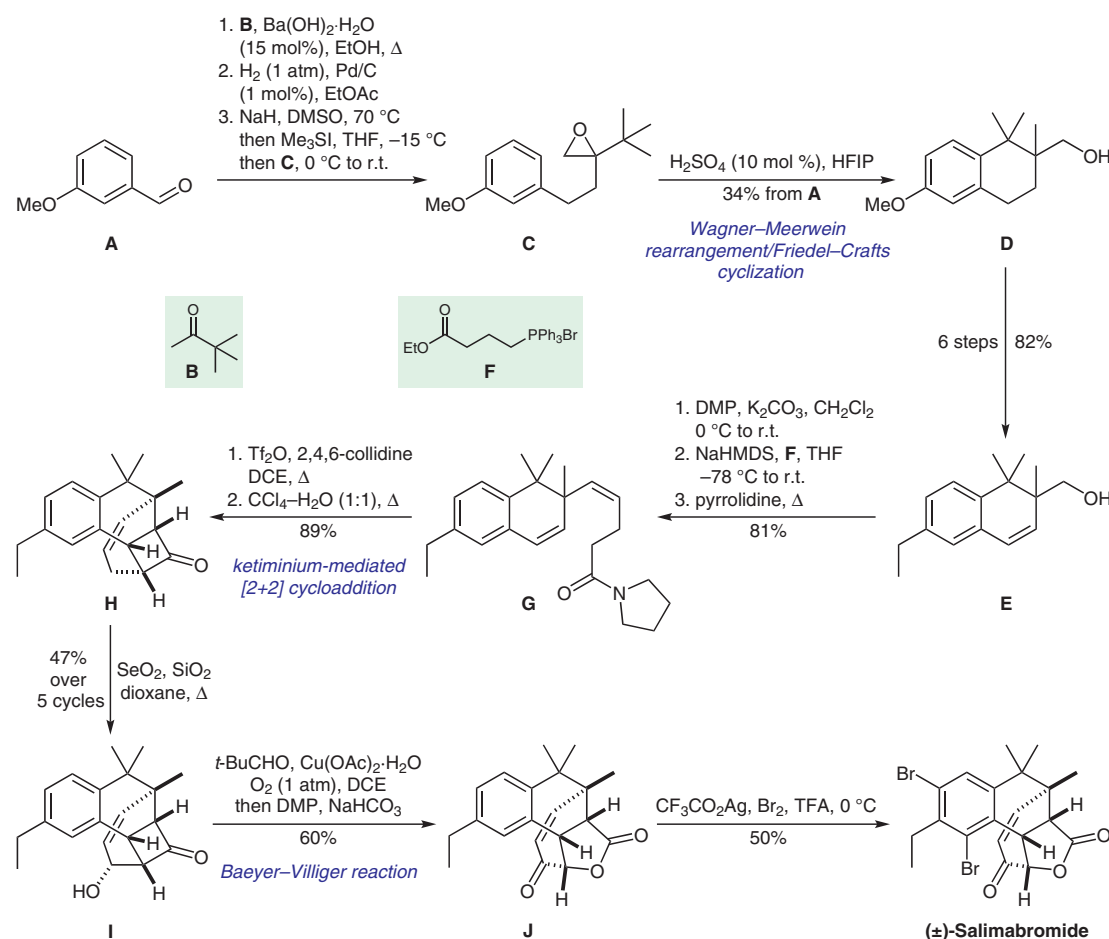


Total Synthesis of (±)-Salimabromide



Significance: Unlike their terrestrial counterparts, myxobacteria of marine origin have remained underexplored by the scientific community. Recently, the polyketide antibiotic salimabromide was isolated from obligate marine myxobacterium *Enhygromyxa salina*. Magauer's team mastered the challenges associated with the preparation of this structurally demanding and biologically potent secondary metabolite. Pivotal in their approach to this bridged tetracycle were a Wagner–Meerwein rearrangement/Friedel–Crafts cyclization, a [2+2] cycloaddition, and a Baeyer–Villiger reaction.

Comment: The authors commenced with the expedient preparation of ketone **C** from *m*-anisaldehyde and pinacolone. Following epoxidation and treatment with catalytic acid, Wagner–Meerwein rearrangement and cyclization were effected, furnishing primary alcohol **D**. This intermediate was further elaborated to amide **G**. The ketiminium derived from **G** underwent [2+2] cycloaddition to furnish **H** in excellent yield. Ultimately, allylic oxidation, Baeyer–Villiger reaction, and dibromination of the arene afforded (±)-salimabromide. An asymmetric route to intermediate **D** has been devised by the authors as well.