Synthesis of Jerantinine E

Significance: Jerantinine E was isolated in 2008 from *Tabernaemontana corymbosa*. This Aspidosperma alkaloid shows potent cytotoxic activity against human KB cells. The authors report the first synthesis of racemic jerantinine E. Separation of (+)- and (−)-jerantinine E allowed for further biological evaluation. Additionally, investigations into the mode of action revealed potent inhibition of tubulin polymerization.

Comment: The synthesis commenced with an organo-lithium addition to Weinreb amide B. Treatment of the resulting ketone D with copper (II) triflate resulted in a formal homo-Nazarov cyclization, which gave tetracyclic intermediate E as a single diastereomer. A double-alkylation sequence of F followed by selective demethylation of G afforded jerantinine E in 17 steps from A and 16% overall yield.