

Total Synthesis of (+)-Rubriflordilactone A

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Cameron McConnell

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11/24/15

Introduction

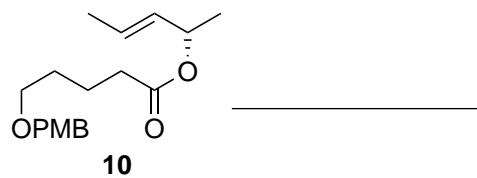
(+)-Rubriflordilactone A and its related family of

Scheme 1: Retrosynthetic Analysis of Rubriflordilactone A

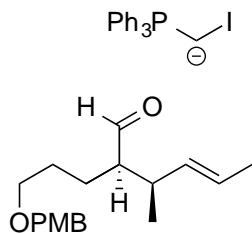
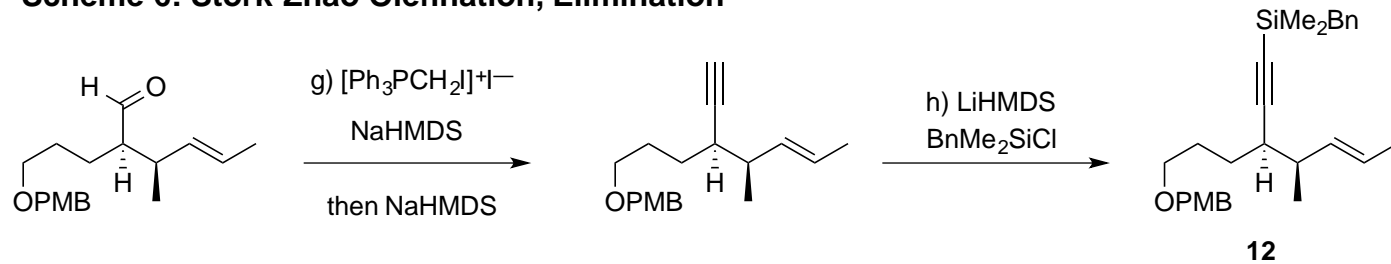
Scheme 2: Preparation of acid 9

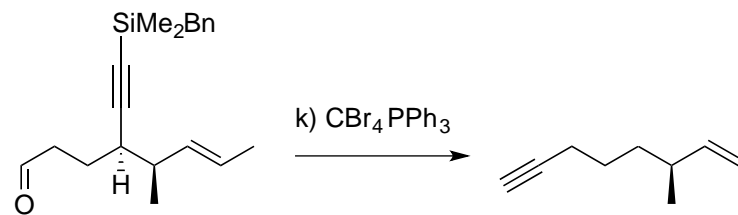


Scheme 4: Ireland-Claisen Rearrangement

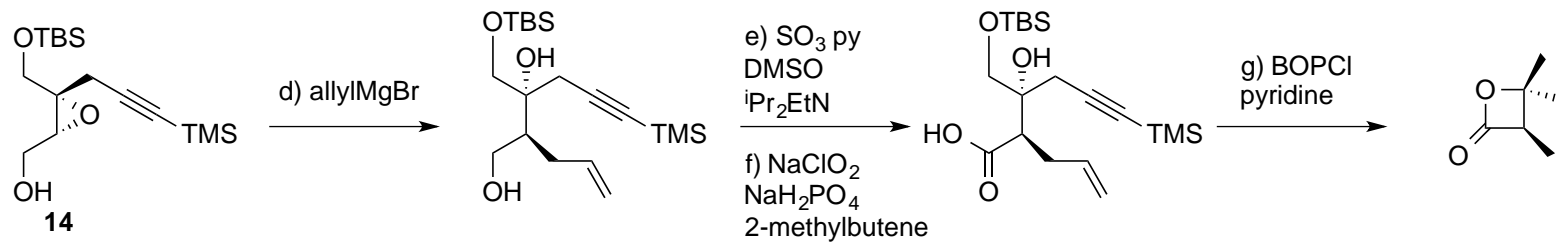


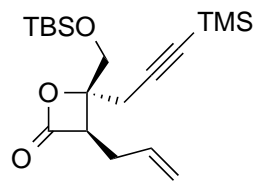
Scheme 6: Stork-Zhao Olefination, Elimination





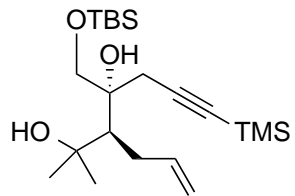
Scheme 9: Preparation of beta-lactone 15



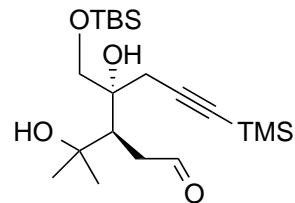


15

h) MeMgBr

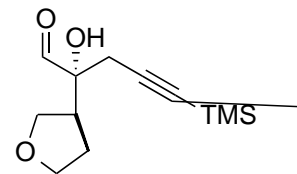


i) OsO₄,
NaIO₄

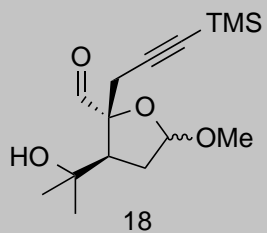
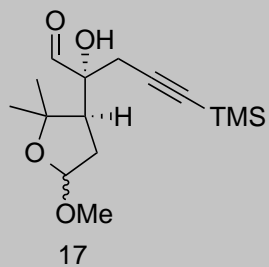


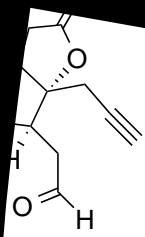
j) CSA
MeOH

k) SO₃ py
iPr₂EtN
DMSO

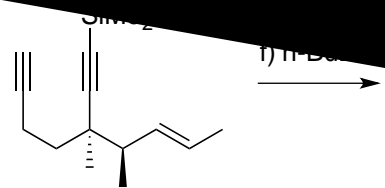


Scheme 11: Convergence of Lactones 17 and 18





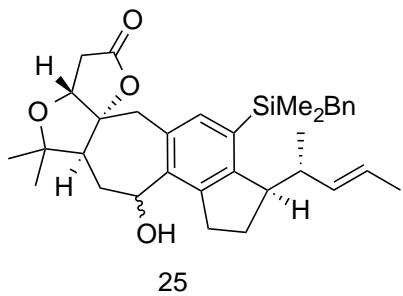
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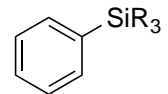
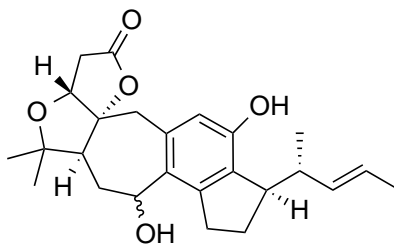
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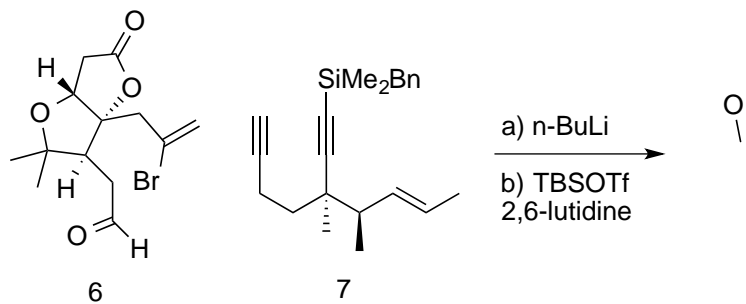
1) H₂O





h) TBAF
then H₂O₂,
KHCO₃, MeOH





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