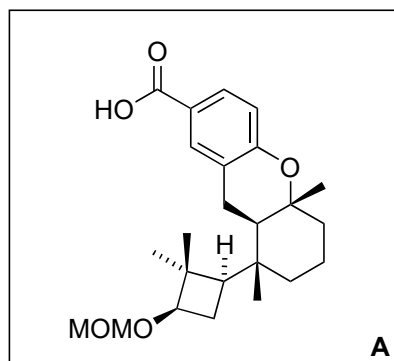
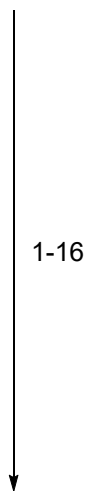
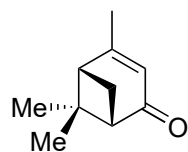
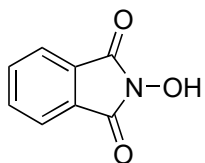


Total Synthesis of the Nominal Structure of (+)-Talaromyolide D

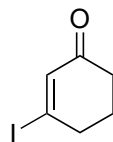
B. Qin, A. Szyperek, M. Tomanik *J. Am. Chem. Soc.* **2025**, *147*, 34, 31221–31227.



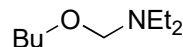
- 1) NaIO₄, RuCl₃·3H₂O
- 2) *m*-CPBA, 50 °C
- 3) **1**, EDC, DMAP
- 4) **2**, NiCl₂·6H₂O, 2,2'-bpy, AgNO₃, (+)-Mg/(-)-RVC
- 5) Ni(acac)₂, AlMe₃ then **3** then *m*-CPBA



1

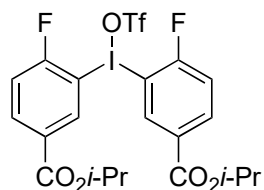


2

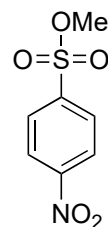


3

- 6) Pd/C, H₂
- 7) 4M HCl, 100 °C
- 8) NH₂OMe·HCl
- 9) MOMCl, *i*-Pr₂NEt
- 10) Pd(OAc)₂, Ag₂CO₃, PivOH, **4**
- 11) Ti(O-*i*Pr)₄, EtMgBr
- 12) B(OH)₃
- 13) Ph₃PMeBr, *t*-BuOK
- 14) Fe(acac)₃, PhSiH₃, **5**
- 15) NaH, DMF, 90 °C
- 16) LiOH



4



5

2) Name of the reaction: Baeyer-Villiger oxidation

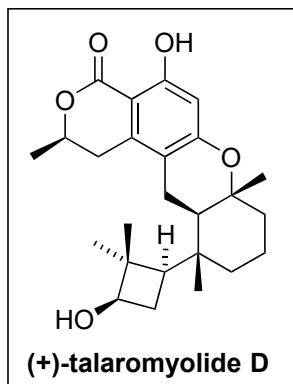
13) Name of the reaction: Wittig olefination

14) Name of the reaction: Mukaiyama hydration

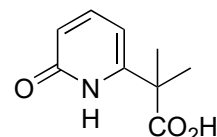
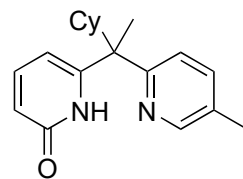
A



17-26



- 17) Pd(OAc)₂, KOAc, 1,4-benzoquinone, O₂, **6**, 110 °C *then* CH₂N₂
- 18) NaH, BnBr
- 19) LiOH
- 20) Pd(OAc)₂, **7**, CsOAc, H₂O₂, 60 °C *then* CH₂N₂
- 21) NaH, PhNTf₂
- 22) Pd(PPh₃)₄, LiCl, *n*-Bu₃Sn-allyl
- 23) PdCl₂, CuCl, O₂, DMF/H₂O
- 24) BH₃·DMS, (*S*)-*n*-Bu-CBS
- 25) 6M HCl, 50 °C
- 26) Pd/C, H₂



- 22) Name of the reaction: Stille coupling
- 23) Name of the reaction: Wacker-Tsuji oxidation
- 24) Name of the reaction: Corey-Bakshi-Shibata reduction