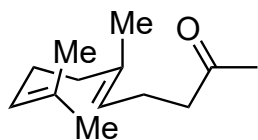


Total Synthesis of Isomalabaricane Triterpenoids
 Yaroslav D. Boyko, Christopher J. Huck, David Sarlah
 J. Am. Chem. Soc. **2019**, 141, 14131-14135



↓ 1-4



↓ 5-8



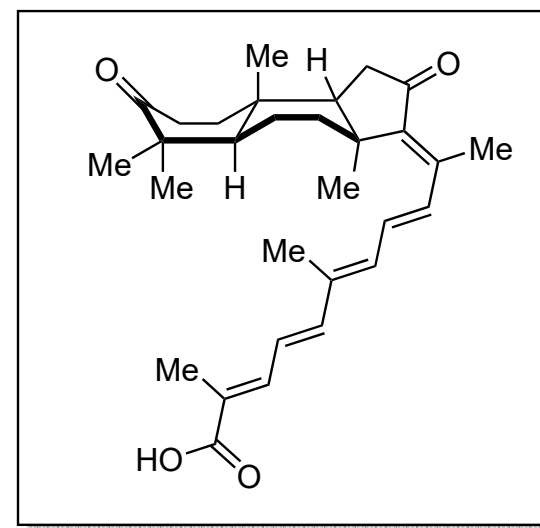
- 1) ToSMIC, t-BuOK
- 2) NBS, THF/H₂O *then* K₂CO₃, MeOH
- 3) Cp₂TiCl₂, Zn, THF *then* NaH₂PO₄
- 4) TIPSOTf, DCM

- 5) LDA, THF/DCM *then* LiClO₄, CaCO₃
- 6) C₂H₂, n-BuLi *then* PivCl
- 7) Selectfluor, Au(PPh₃)Cl, AgOTf *then* NH₂NHTs
- 8) MeOH, Et₃N *then* CatBH, CsOAc

1) What is the name of the starting material?

2) Name of reaction **1**

3) Name of reaction **7** and mechanism

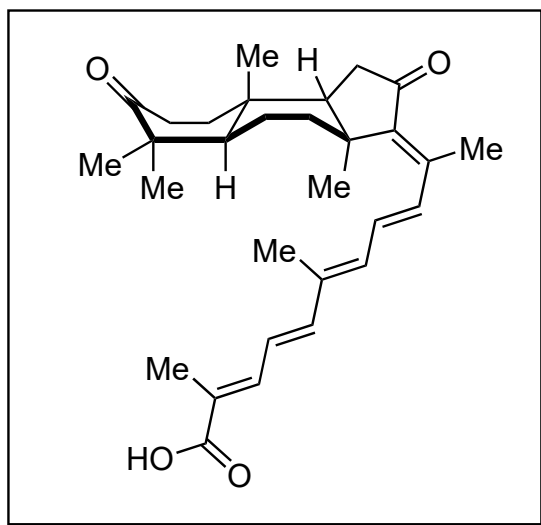


Rhabdastrellic acid A

9-11

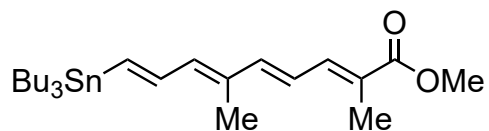


12-14



Rhabdastrellic acid A

- 9) Cp_2ZrCl_2 , $n\text{-BuLi}$ then CuOAc , AcCl
- 10) $\text{BH}_3 \cdot \text{Me}_2\text{S}$, TfOH then H_2O_2 , NaOH
- 11) IBX
- 12) $(\text{COBr})_2$, DMF
- 13) $\text{Pd}_2(\text{dba})_3$, Ph_3As , **1**
- 14) LiOH or Me_3SnOH
- 15) $h\nu$, 400 nm

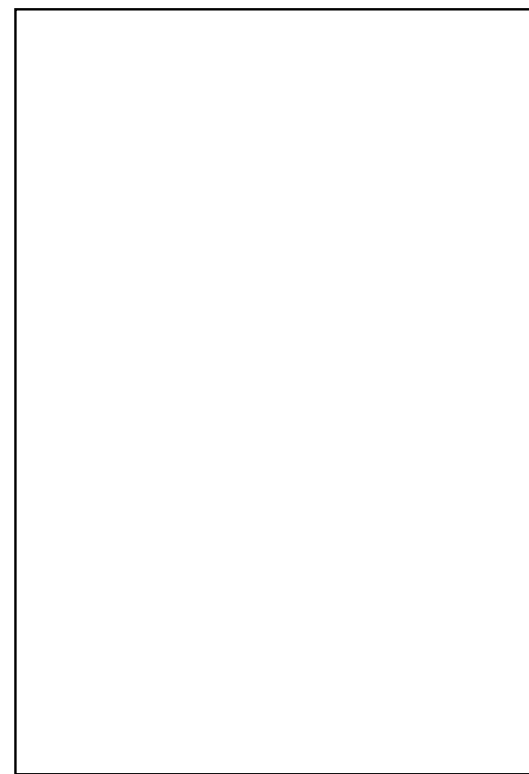
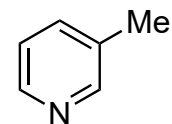


15

Bonus Step

How would you synthesize **1**?

Hint: They start from *3-picoline* but you can start from whatever SM you want



Stelletin E