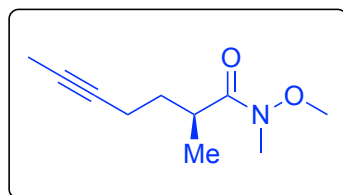
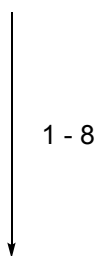
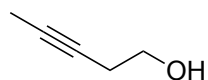


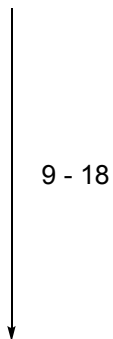
Divergent Total Syntheses of Elisapterane and Relevant Diterpenoids Assisted by In Silico Structure Reassignment

C.-H. Liu, H. Gong, Y. Sheng, W. Wang, Q. Xia, and H. Ding

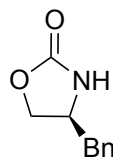
J. Am. Chem. Soc. **2025**, *147*, 33136–33152



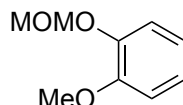
A



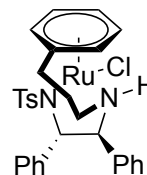
- 1) I₂, PPh₃, imidazole
- 2) diethyl malonate, NaH
- 3) LiCl, DMSO/H₂O, 160 °C
- 4) LiOH
- 5) **1**, Et₃N, PivCl
- 6) NaHMDS, MeI
- 7) LiOH, H₂O₂, H₂O
- 8) CDI, MeNHOMe•HCl



1



2

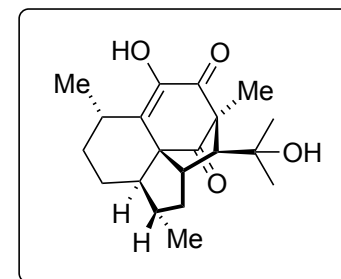


3

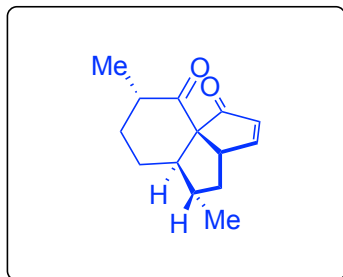
- 9) **2**, *n*-BuLi, TMEDA then **A**
- 10) *p*-TSA•H₂O
- 11) **3**, HCO₂H, Et₃N, 60 °C
- 12) Pd/CaCO₃, H₂
- 13) PIFA, Na₂CO₃, HFIP
- 14) UHP, TFAA
- 15) Sml₂ (excess), HMPA then MeOH
- 16) *t*-BuOK
- 17) TsNHNH₂•HCl, NaOAc then NaBH₃CN, AcCl then NaOAc•3H₂O
- 18) TPAP (4 equiv), NMO

- 3) Name of the reaction?
Krapcho decarboxylation

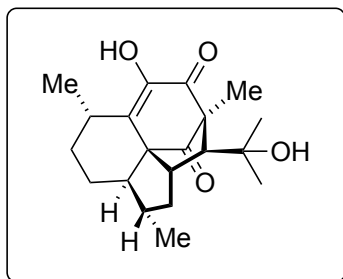
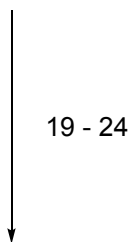
- 13) *Hint*: ODI-[5+2] cycloaddition.
- 15) Name of the reactions?
Pinacol coupling + Grob fragmentation
- 16) *Hint*: epimerization.
- 18) Name of the reaction?
Ley-Griffith oxidation



elisapterosin C



B



elisapterosin C

- 19) $\text{CuBr} \cdot \text{Me}_2\text{S}$, HMPA, *iso*-propenylMgBr then NCCOMe
- 20) K_2CO_3 , MeI
- 21) LDA, TMSCl
- 22) $\text{Co}(\text{acac})_2$, PhSiH_3 , O_2 then PPh_3 then TfOH
- 23) OsO_4 , py
- 24) $p\text{-TSA} \cdot \text{H}_2\text{O}$, 90°C

- 21) *Hint*: New ring formation.
- 22) Name of the reaction?
Mukaiyama hydration