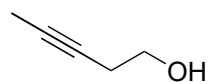


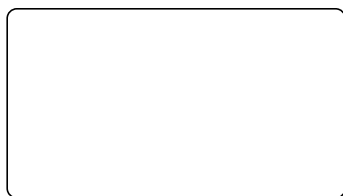
Divergent Total Syntheses of Elisapterane and Relevant Diterpenoids Assisted by In Silico Structure Reassignment

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

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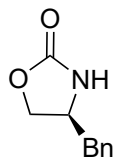
1 - 8



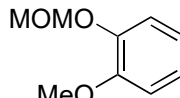
A

9 - 18

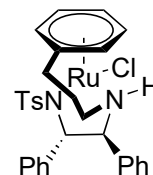
- 1) I₂, PPh₃, imidazole
- 2) diethyl malonate, NaH
- 3) LiCl, DMSO/H₂O, 160 °C
- 4) LiOH
- 5) **1**, Et₃N, PivCl
- 6) NaHMDS, MeI
- 7) LiOH, H₂O₂, H₂O
- 8) CDI, MeNHOMe•HCl



1



2

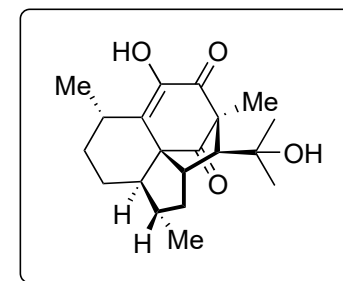


3

- 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, NaOAc•3H₂O
- 18) TPAP (4 equiv), NMO

3) Name of the reaction?

- 13) *Hint*: ODI-[5+2] cycloaddition
- 15) Name of the reactions?
- 16) *Hint*: epimerization
- 18) Name of the reaction?



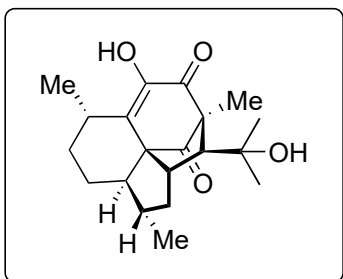
elisapterosin C



B



19 - 24



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*-TSA $\cdot\text{H}_2\text{O}$, 90 °C

22) Name of the reaction?