

Isolation, synthesis and bioactivity studies of phomactin terpenoids

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(S)-(+)-carvone

1-4



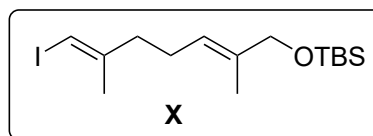
5-9



10-16

- 1) mCPBA
- 2) Cp_2TiCl_2 , Zn
- 3) $(\text{PhS})_2$, $n\text{-Bu}_3\text{P}$
- 4) $[\text{Rh}(\text{cod})\text{OH}]_2$, MeOH, 60 °C

- 5) $(\text{NH}_4)_6\text{Mo}_7\text{O}_{24} \cdot 4 \text{H}_2\text{O}$, H_2O_2
- 6) MeLi
- 7) Burgess reagent
- 8) SeO_2 , 80 °C
- 9) **X**, tBuLi

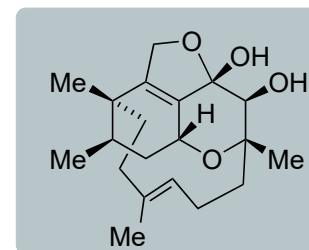


- 10) SEMCI, TBAI, DIPEA
- 11) TBAF
- 12) MsCl, Et_3N , then LiBr
- 13) NaHMDS
- 14) Na(Hg), Na_2HPO_4
- 15) TBAF, MS 4Å
- 16) MnO_2 , then NaBH_4 , $\text{CeCl}_3 \cdot 7 \text{H}_2\text{O}$

- 2) come up with a mechanism
- 4) come up with a mechanism

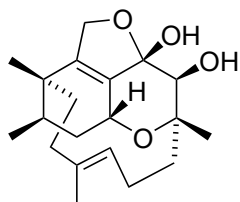
7) structure and synthesis of Burgess name 2 further dehydrating agents

10) structure and synthesis of SEMCI?





17-20



Phomactin A

- 17) $\text{VO}(\text{OEt})_3$, TBHP (excess)
18) $\text{Me}_4\text{NBH}(\text{OAc})_3$ CsOAc, 18-crown-6
19) DMP, NaHCO_3 then NaOMe
20) Red-Al[®]