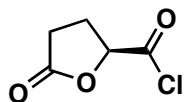
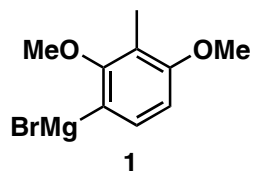
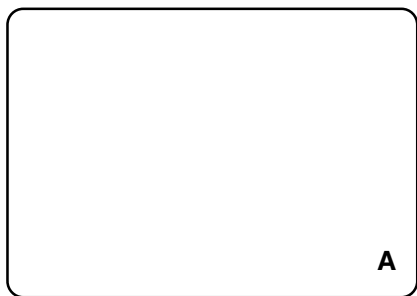


Total Synthesis of Elisapterosin B

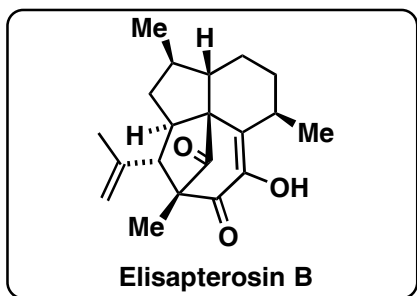
N. Waizumi, A. R. Stankovic, V. H. Rawal, *J. Am. Chem. Soc.* **2003**, *125*, 13022–13023.



1–7

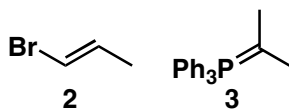


8–17



- 1) ZnCl_2 , $\text{Pd}(\text{Cl})_2(\text{PPh}_3)_2$, **1**
- 2) cat. TsOH, $\text{HC}(\text{OMe})_3$, then *t*-BuOK
- 3) NaHMDS, MeI
- 4) DIBAL-H
- 5) Seyferth–Gilbert homologation
- 6) MsCl, 2,6-lutidine
- 7) CaCO_3 , MeOH, 50 °C

- 8) AgNO_3 , NBS, then TsNHNH_2 , AcONa
- 9) **2**, *t*-BuLi, then ZnCl_2 , $\text{Pd}(\text{Cl})_2\text{dppf}$
- 10) DIBAL-H
- 11) **3**
- 12) NaSEt
- 13) O_2 , cat. Salcomine
- 14) toluene, 80 °C
- 15) $\text{RhCl}(\text{PPh}_3)_3$, H_2
- 16) LiI, lutidine
- 17) CAM, then NEt_3 , py



Step 1: Please name the reaction.

Step 5: Please name the reactants.

Step 13: What is the structure of Salcomine?

Step 16: Please name the catalyst.

