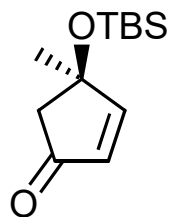


# Synthesis Challenge #85

AG Wegner

7.5.2020

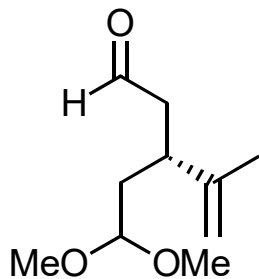


↓ 1-5

A



B



↓ 6-9

C



D

- 1) VinylMgBr, Cu\*Br, TMSCl, HMPA/THF
- 2) LiTMP, TESCl, THF, -78°C
- 3) DDQ, HMDS, PhMe, 23°C
- 4) NaBH<sub>4</sub>, CeCl<sub>3</sub>\*7H<sub>2</sub>O, MeOH, -78°C
- 5) TBAF, THF, 60°C

- 6) Br<sub>2</sub>CHPPh<sub>3</sub>Br, *t*BuOK, THF
- 7) *n*-BuLi, THF, -78°C, then TMSCl, then HCl, H<sub>2</sub>O/THF/dioxane
- 8) CBr<sub>4</sub>, PPh<sub>3</sub>, CH<sub>2</sub>Cl<sub>2</sub>, 0°C
- 9) *n*-BuLi, THF, -78°C, then CO<sub>2</sub>, -78°C, then TBAF

Please, provide a synthesis of C

B + D

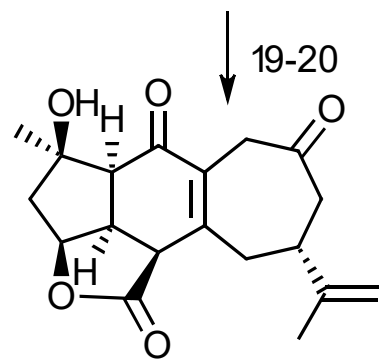
↓ 10-13



↓ 14-15



↓ 16-18



10) DIC, DMAP, CH<sub>2</sub>Cl<sub>2</sub>, 0°C  
11) 140°C, xylenes  
12) VO(acac)<sub>2</sub>, TBHP, CH<sub>2</sub>Cl<sub>2</sub>/PhH  
13) Cp<sub>2</sub>TiCl<sub>2</sub>, Mn<sup>0</sup>, collidine\*HCl,  
1,4-cyclohexadiene, THF, 23°C  
13b) IBX, MeCN

14) *m*-CPBA, CH<sub>2</sub>Cl<sub>2</sub>, 0 to 23°C  
15) Ph(CH<sub>3</sub>)<sub>2</sub>SiH, [RuCp\*(MeCN)<sub>3</sub>]PF<sub>6</sub>

16) *hν* (350 nm), PhH, 23°C  
17) TiCp<sub>2</sub>Cl<sub>2</sub>, Mn<sup>0</sup>, collidine\*HCl,  
1,4-CHD, THF, 23°C  
18) Hg(OAc)<sub>2</sub>, AcOOH/AcOH, 23°C

19) *o*-NO<sub>2</sub>PhSeCN, *n*-Bu<sub>3</sub>P, THF, 23°C,  
then H<sub>2</sub>O<sub>2</sub>, 0 to 23°C  
20) CuI, NIS, PhMe, 90°C