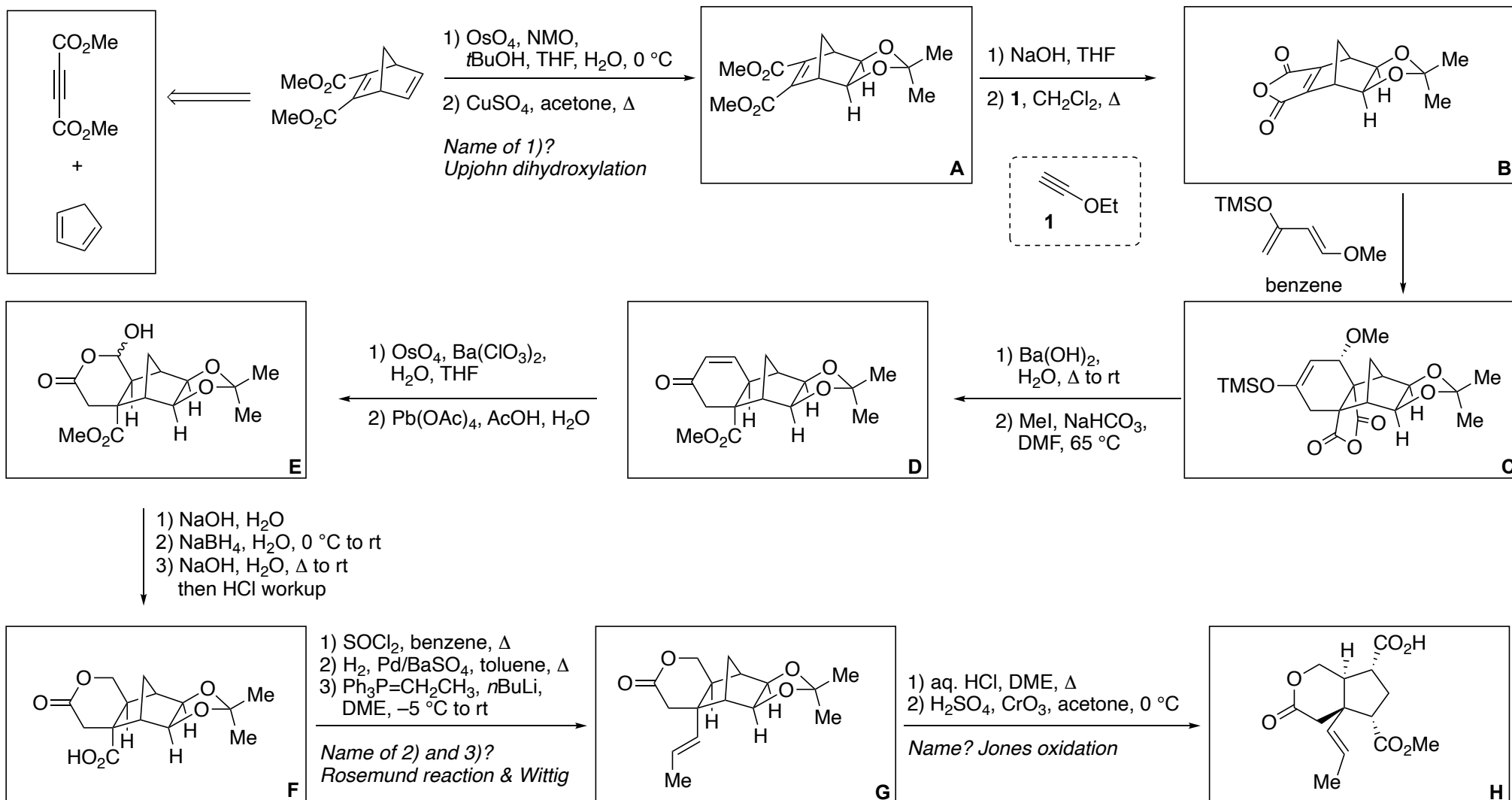
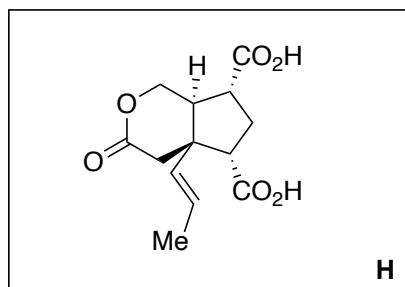




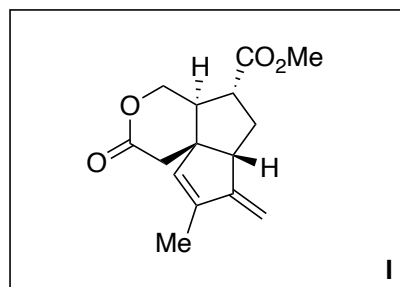
Pentalenolactone

S. Danishefsky, M. Hirama, K. Gombatz, T. Harayama, E. Berman, P. F. Schuda, *J. Am. Chem. Soc.* **1979**, *101*, 7020–7031.



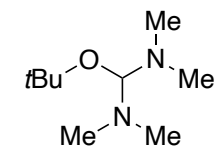
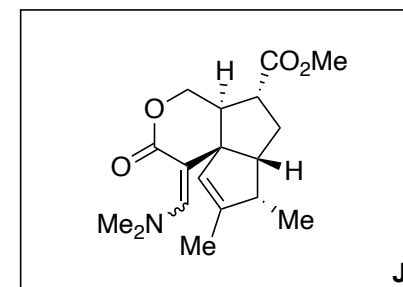


- 1) H₂SO₄, MeOH, 0 to 5 °C
- 2) SOCl₂, benzene, Δ then AlCl₃, CH₂Cl₂, 0 °C to rt
- 3) BrPh₃PMe, NaH, DMSO, 10 °C



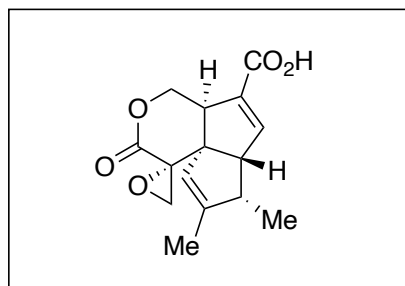
- 1) H₂, RhCl(PPh₃)₃, benzene
- 2) **2**, rt to 96 °C

Name of 1)?
Wilkinson hydrogenation

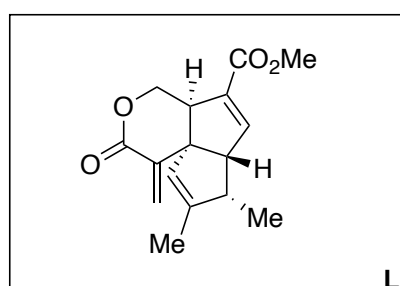


Name of reagent?
Bredereck's reagent

- 1) SiO₂, CH₂Cl₂, H₂O
- 2) NaBH₄, MeOH, 0 °C
- 3) MsCl, pyridine, 0 °C to rt
- 4) DBU, benzene



- 1) DIBAL-H, DME, benzene, -78 °C
- 2) VO(acac)₂, tBuOOH, benzene, Δ
- 3) H₂SO₄, CrO₃, acetone, 0 °C
- 4) KOH, THF, 0 °C to rt



- 1) LDA, then PhSeCl, THF, -78 °C

- 2) NaIO₄, MeOH, H₂O

