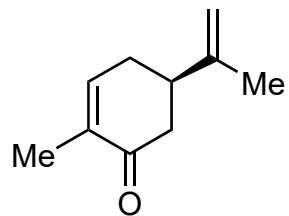
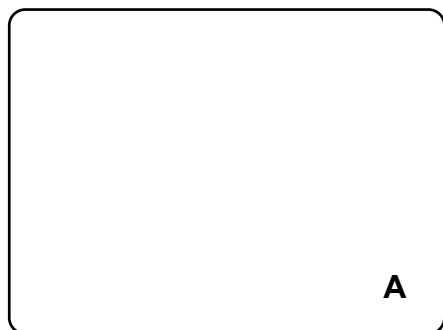


Synthesis of Eupalinilide E, a Promoter of Human Hematopoietic Stem and Progenitor Cell Expansion

T. C. Johnson, M. R. Chin, T. Han, J. P. Shen, T. Rana, D. Siegel
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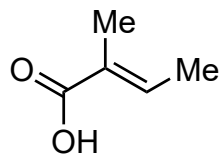


9-16



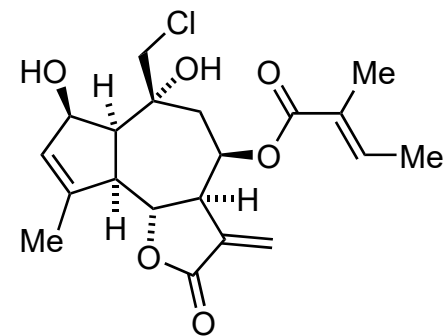
- 1) HBr, AcOH
- 2) Br₂, AcOH
- 3) *i*PrNH₂, Et₂O
- 4) AcOH (10% aq.), THF, 50 °C
- 5) LiAlH₄, Et₂O
- 6) Ac₂O, 150 °C
- 7) LiAlH₄, Et₂O
- 8) DMP, NaHCO₃, CH₂Cl₂

- 9) *n*-BuLi, tetravinyltin, -78 to 23 °C, then **A**, -78 °C then HMPA, propargyl bromide
- 10) *n*-BuLi, -78 °C then TMSCl
- 11) Pd(OAc)₂ (5 mol %), B₂pin₂, PhMe, MeOH then H₂O₂, NaOH, THF
- 12) (COCl)₂, DMSO, Et₃N
- 13) Et₂AlCl, CH₂Cl₂
- 14) tiglic acid, 2,4,6-TCBC, Et₃N, DMAP
- 15) TFA, CH₂Cl₂
- 16) CrO₃, 3,5-DMP, CH₂Cl₂



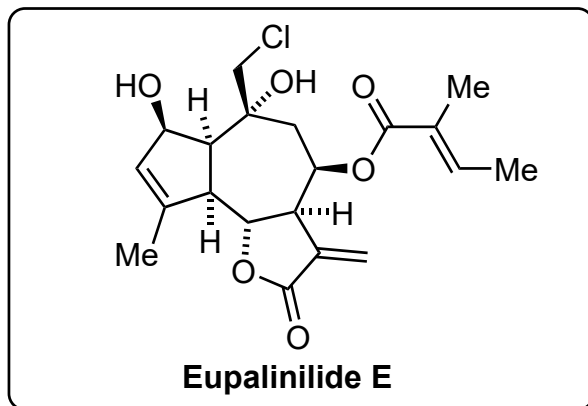
tiglic acid

- 1) Starting material name
- 2) *Hint*: after *step 2* you have a tri-Br compound
- 11) *Hint*: borylative enyne cyclization
- 12) Name reaction
- 14) Name reaction and structure of 2,4,6-TCBC



Eupalinilide E

17-20



- 17) $\text{Yb}(\text{OTf})_3$, NaBH_4 , MeOH/THF
- 18) $\text{Al}(\text{Osec-Bu})_3$, TBHP, CH_2Cl_2
- 19) LiCl , HCl , THF

17) Name reaction

