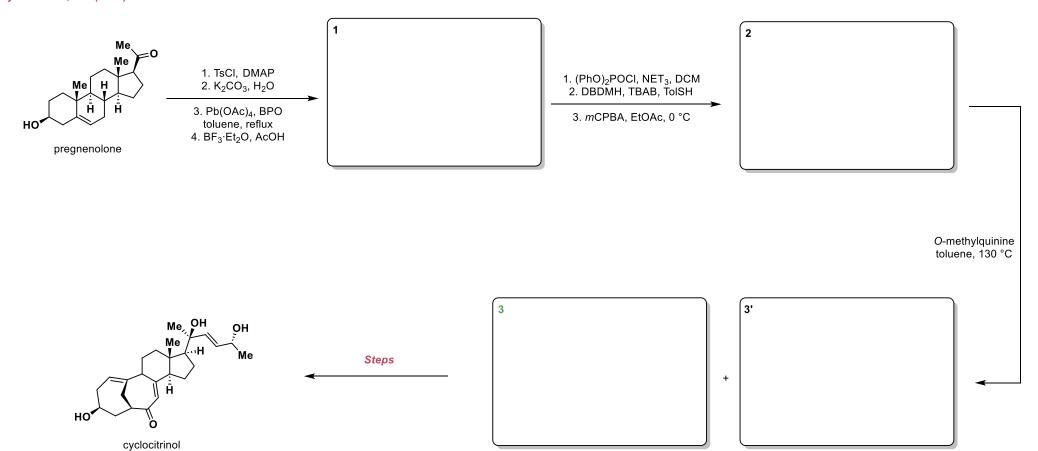
Biomimetic Total Synthesis of Cyclocitinol and (–)-Longithorone A

Cyclocitrinol, Gui (2018)

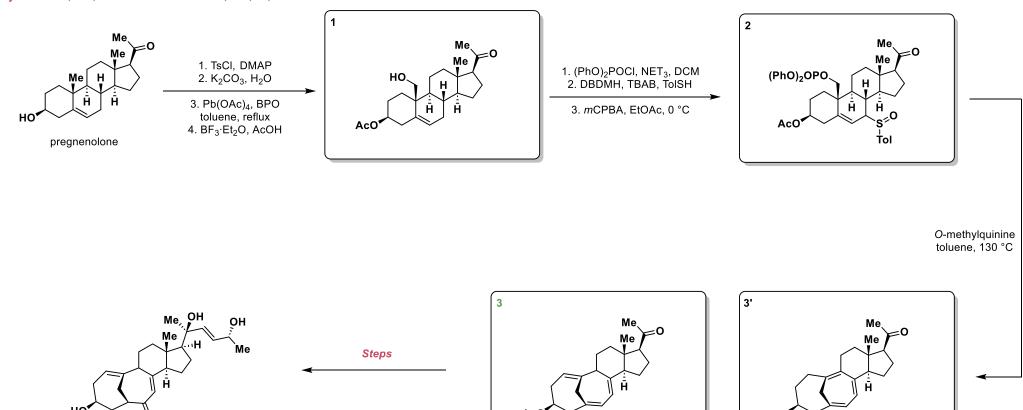


(-)-Longithorone A, Shair (2002) 1. Zn, Pd(PPh₃)₄, THF, RT 2. *n*BuLi, DMF, Et₂O, –78 °C to RT 3. BBr₃, DCM, –78 °C to RT 4. TBSOTf, *i*Pr₂NEt, DCM TMS' 1. $(Cy_3P)_2Cl_2RuCHPh$, ethylene 2. TBAF 1. *t*BuLi 2. TBAF 3. Pd/BaSO₄, quinoline, H₂ 4. TBAF 3. NaCNBH₃, TFA 4. TBSOTf, *i*Pr₂NEt 5. TBSCI, imidazole TBSO' 1. (Cy₃P)₂Cl₂RuCHPh, ethylene 2. TFA, Et₃SiH 1. *t*BuLi 2. TBAF 5. TBSCI, imidazole 3. PPTS 4. DMP 9 PhI(O) 1. Me₂AICI, - 20 °C 6 + 8 н онс 2. TBAF Мe (-)-longithorone

Solutions:

Cyclocitrinol, Gui, J. Am. Chem. Soc. 2018, 140, 30, 9413

cyclocitrinol



(-)-Longithorone A, Shair, J. Am. Chem. Soc. 2002, 124, 5, 773

1. Zn, Pd(PPh $_3$) $_4$, THF, RT 2. nBuLi, DMF, Et $_2$ O, -78 °C to RT

3. BBr₃, DCM, –78 °C to RT 4. TBSOTf, *i*Pr₂NEt, DCM

1. (Cy₃P)₂Cl₂RuCHPh, ethylene 2. TBAF 3. NaCNBH₃, TFA 4. TBSOTf, *i*Pr₂NEt

5. TBSCI, imidazole

1. (Cy₃P)₂Cl₂RuCHPh, ethylene 2. TFA, Et₃SiH 3. PPTS 4. DMP

PhI(O)

(–)-longithorone