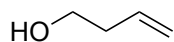


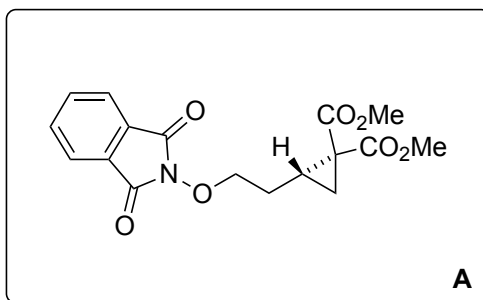
Total Synthesis of (-)-Allosecurinine

Andrew B. Leduc, Michael A. Kerr

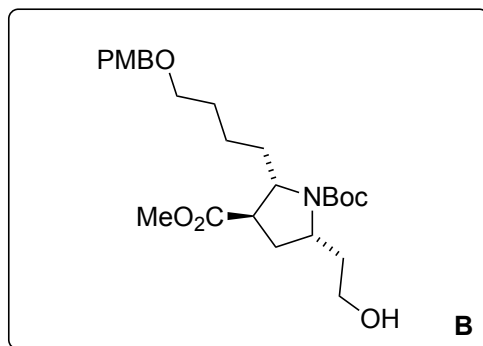
Angew. Chem. Int. Ed. **2008**, *47*, 7945–7948.



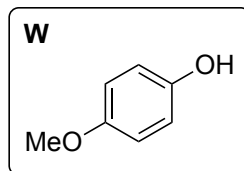
1 – 7



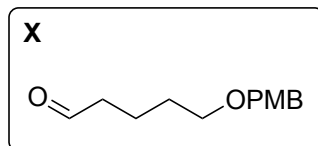
8 – 12



- 1) **W**, PPh₃, DIAD
- 2) K₃[Fe(CN)₆], K₂CO₃, (DHQD)₂PHAL, K₂OsO₂(OH)₄
- 3) MsCl (2.5 equiv.), NEt₃
- 4) dimethylmalonate, NaH
- 5) CAN
- 6) TsCl, DABCO
- 7) *N*-hydroxyphthalimide, DBU

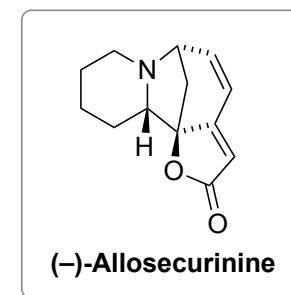
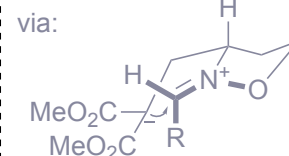
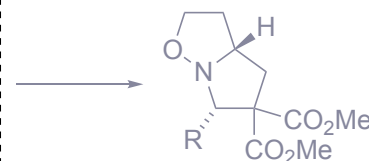
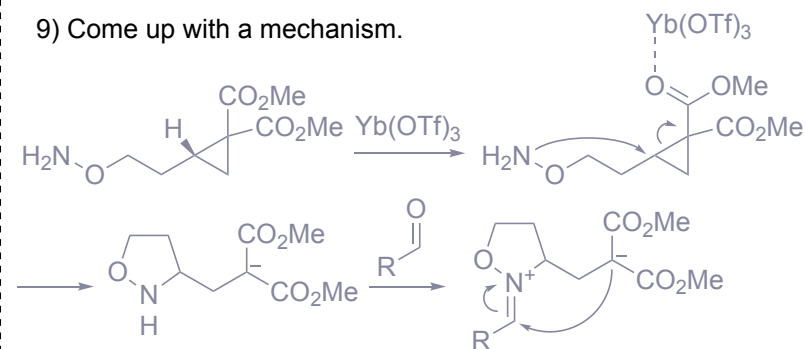


- 8) N₂H₄·H₂O
- 9) Yb(OTf)₃, then **X**
- 10) Pd(OH)₂, H₂, Boc₂O
- 11) NaCN (5 equiv.), wet DMSO, 140 °C (mixture obtained)
- 12) TMSCHN₂



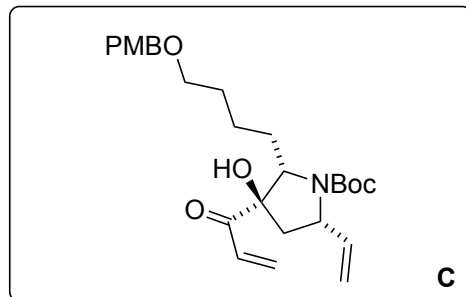
- 2) Name the reaction.
Sharpless asymmetric dihydroxylation

- 9) Come up with a mechanism.

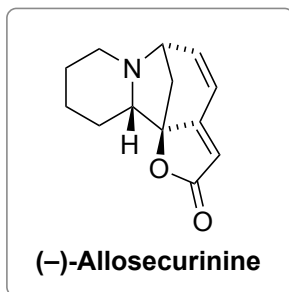


see: *J. Am. Chem. Soc.* **2008**, *130*, 4196.

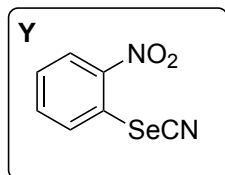
13 – 18



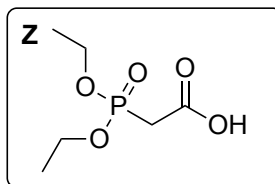
19 – 24



- 13) PBU_3 , **Y** then H_2O_2
- 14) KHMDS then Davis oxaziridine
- 15) CaCl_2 , NaBH_4
- 16) IBX, DMSO
- 17) vinylmagnesium bromide
- 18) IBX, DMSO



- 19) DCC, **Z**
- 20) LiBr , NEt_3
- 21) Hoveyda-Grubbs II
- 22) DDQ
- 23) MsCl , NEt_3
- 24) TFA then silica gel



13) Name the reaction.

Grieco elimination

21) Structure of HG II?

