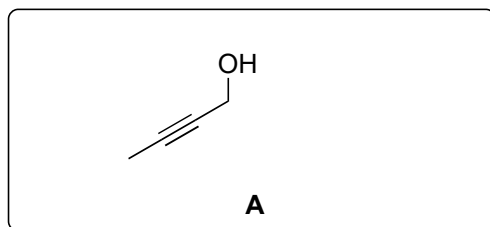


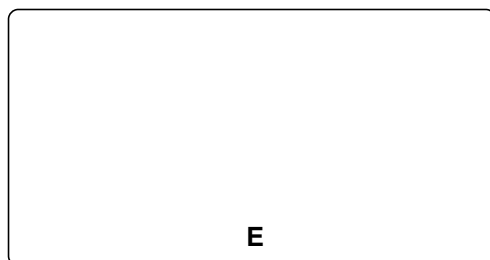
Total Synthesis of Isodihydrokoumine

Jeff K. Kerkovius and Michael A. Kerr

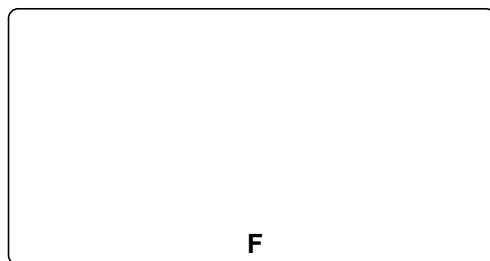
J. Am. Chem. Soc. **2018**, *140*, 8415



1-6



7-9



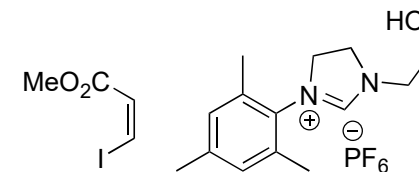
- 1) $n\text{-Bu}_3\text{SnH}$, $\text{Pd}(\text{PPh}_3)_4$, then **B**
- 2) vinylmagnesiumbromide, $\text{Cu}(\text{OTf})_2$, **C**, DMPU, TMSCl
- 3) LAH
- 4) PPh_3 , DIAD, Boc-NH-OBoc
- 5) TFA, then NEt_3 , Na_2SO_4 , **D**
- 6) PhMe, reflux

- 7) Mg, MeOH
- 8) $(\text{COCl})_2$, DMSO, DCM, *then* NEt_3 , then $(\text{MeO})_3\text{CH}$, PPTS, MeOH
- 9) SmI_2

1) Name?

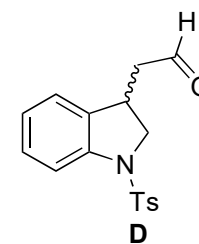
- 4) Name? Mitsunobu
- 5) Which functional group is formed?
- 6) Name?

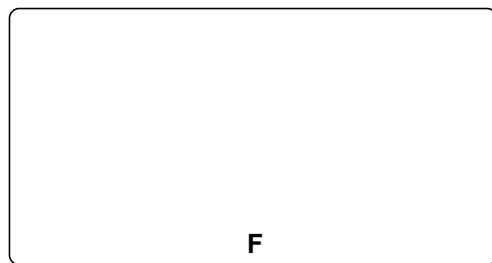
8) Name?



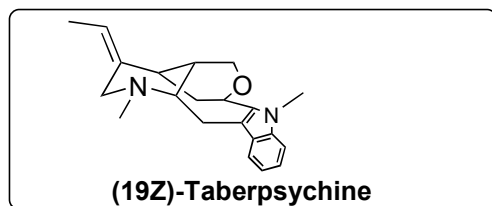
B

C



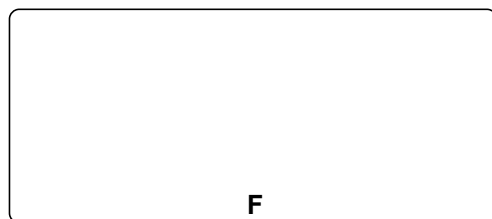


10–11

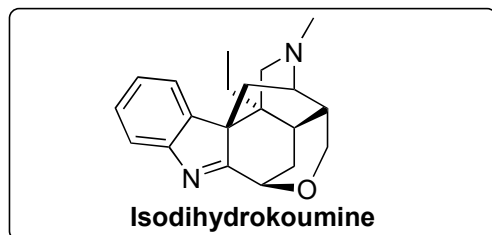


10) $\text{BF}_3 \cdot \text{OEt}_2$, MeCN
11) CH_2O , NaBH_3CN

10) Mechanism?



12–13



10') NaI, TMSiCl
11') CH_2O , NaBH_3CN

10') Mechanism?