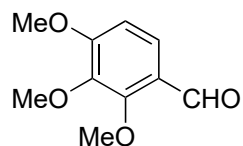


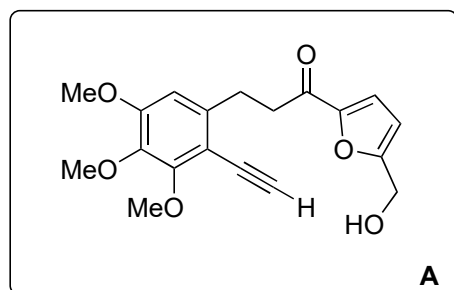
Asymmetric Total Syntheses of Colchicine, β -Lumicolchicine, and Alcolchicinoid *N*-Acetylcolchinol-*O*-methyl Ether (NCME)

B.Chen, X. Liu, Y.J. Hu, D.-M. Zhang, L. Deng, J. Lu, L. Min, W.-C. Ye, C.-C. Li
Chem. Sci. **2017**, *8*, 4961–4966.

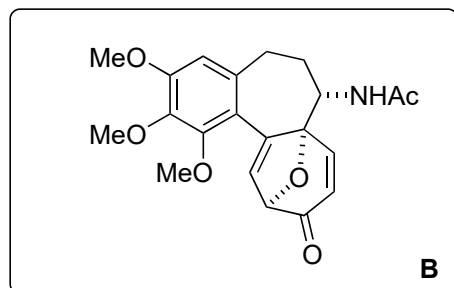
X. Liu, Y.-J. Hu, B. Chen, L.-Min, X.-S. Peng, J. Zhao, S. Li, H.N.C. Wong, C.-C. Li
Org. Lett. **2017**, *19*, 4612–4615.



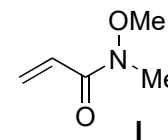
1-3



4-5



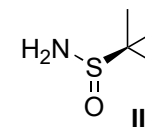
- 1) TsNH₂, CuSO₄ (2 equiv);
[RhCp*Cl₂]₂, AgSbF₆, **I** (2 equiv), NaOAc (2 equiv), 80 °C
- 2) Pd/C, H₂, MeOH
then K₂CO₃, Ohira–Bestmann reagent
- 3) Furfuryl alcohol, BuLi (2 equiv)



Mechanism of 1)

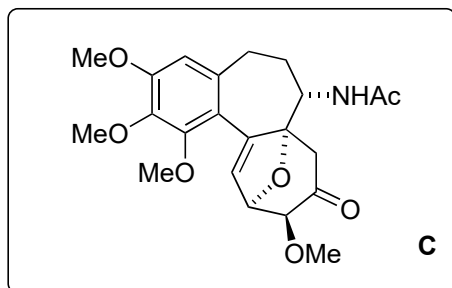
- 4) **II**, Ti(OBu)₄
then DiBAIH, then HCl, then Ac₂O
- 5) *m*CPBA, then Ac₂O, DMAP
then NaHCO₃; 120 °C

Name of **II**
Ellmann
auxilliary

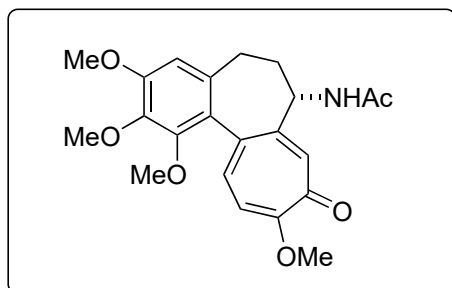


Mechanism of 5) and
name reaction

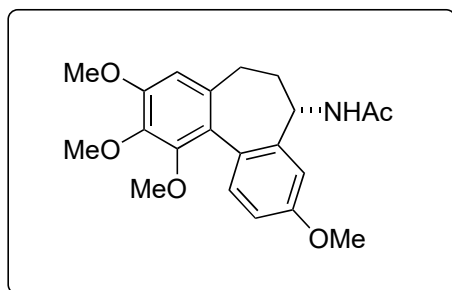
6-7



8



(-)-colchicine



NCME

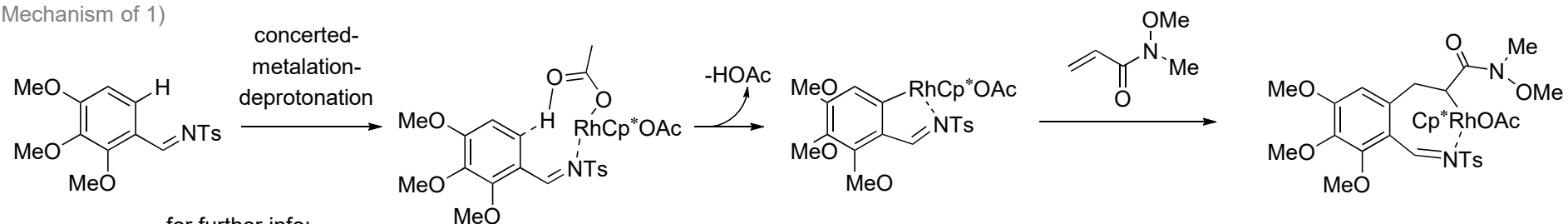
6) DIBALH, *then* NaH, MeI
7) PdCl₂, Cu(OAc)₂, CH₃CN/H₂O, air

8) Me₂EtN, TMSOTf

9) hv, 25 min
10) hv, 20 min

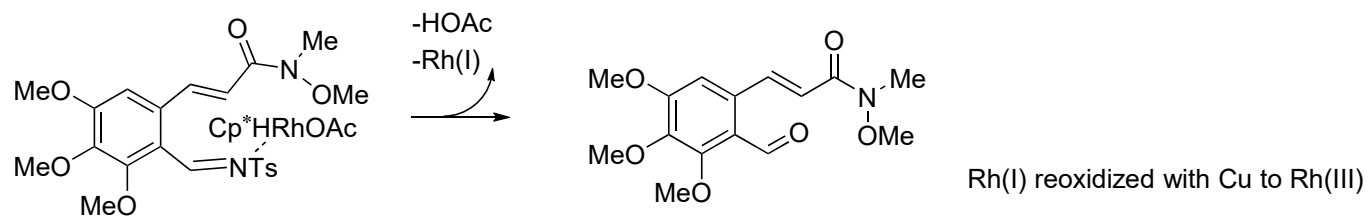
Mechanism of 9,10)

Mechanism of 1)



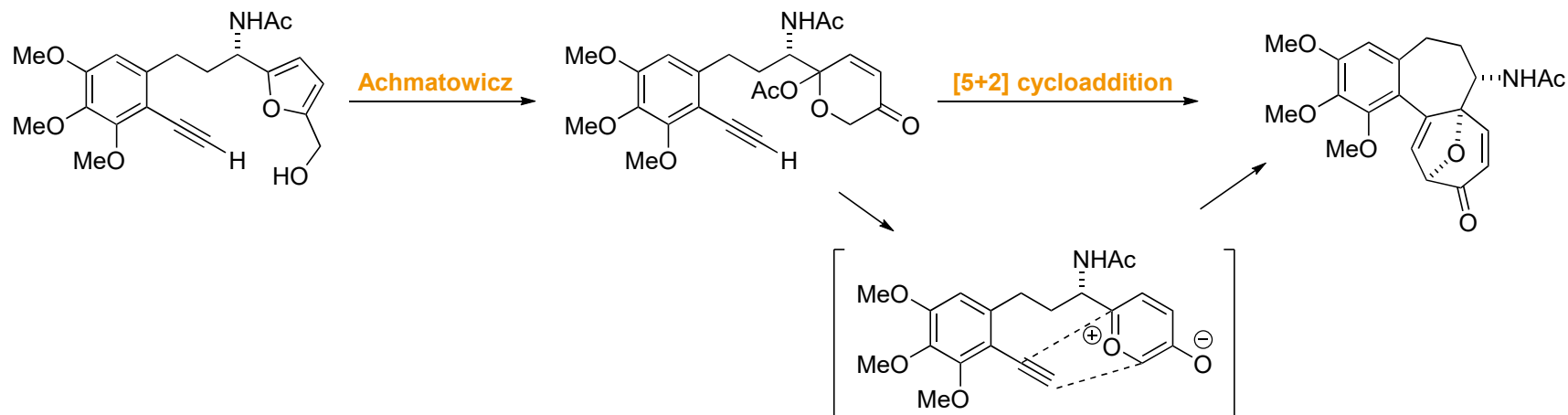
for further info:

Acc. Chem. Res., **2017**, *50*, 2799–2808



Rh(I) reoxidized with Cu to Rh(III)

Mechanism of 5)



Mechanism of 9,10)

