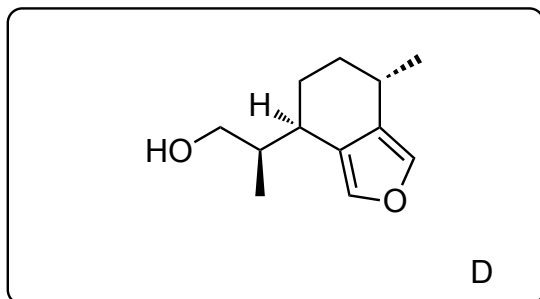
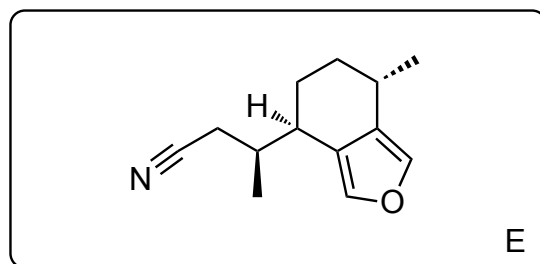


5-6



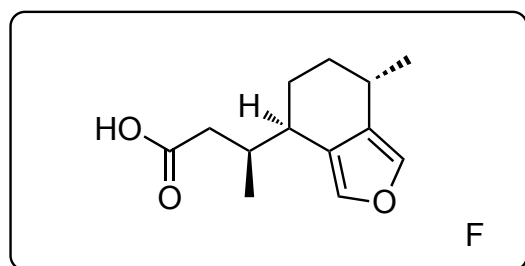
5) DIBAL-H, -78°C , then, SiO_2 ,
 CHCl_3
6) TBAF

7-8



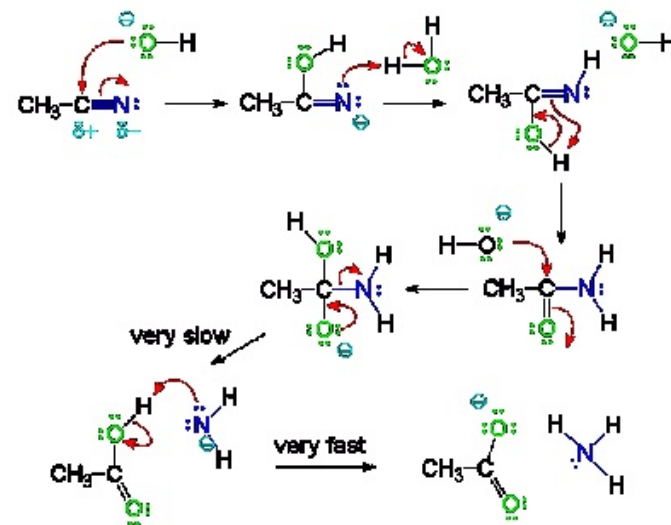
7) MsCl , DMAP, Pyr
8) KCN

9

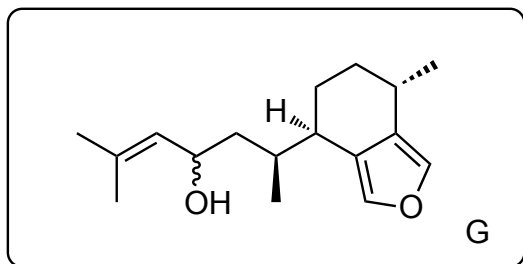


9) KOH , 130°C

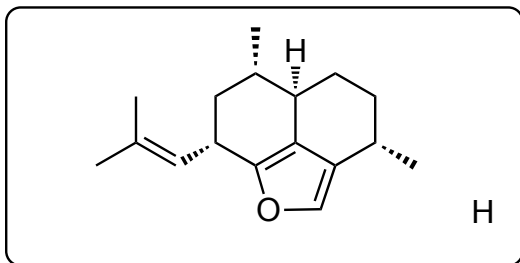
Please, provide mechanism for step 9)



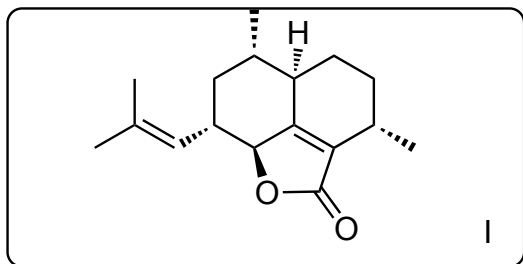
↓ 10-12



↓ 13



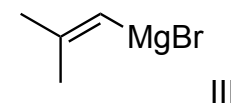
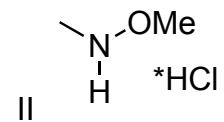
↓ 14-15



10) CDI, II
11) III, 0°C to rt
12) NaBH₄

13) La(OTf)₃, MeNO₂

14) *hν*, O₂, rose bengal, -78°C
15) NaBH₄



Please, provide mechanism for step 13)

Activation of the OH by the Lewis acid
La(OTf)₃,
Ringclosure via S_N1.