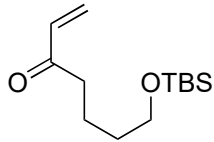
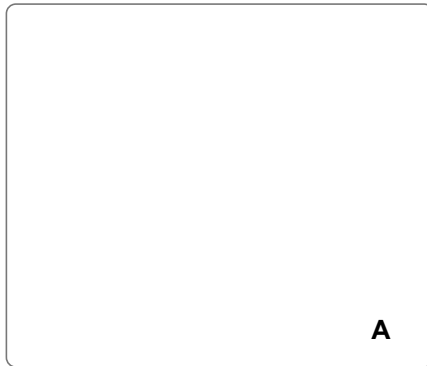


Concise Total Synthesis of Peyssonoside A

Chesnokov, G. A.; Gademann, K. *J. Am. Chem. Soc.* **2021**, *143*, 14083-14088.

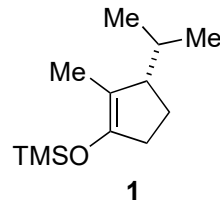


1 - 4

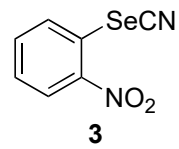
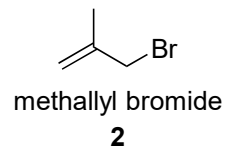


5 - 9

- 1) $\text{BF}_3 \cdot \text{OEt}_2$, *i*-PrOH, **1**
- 2) NaOMe then TBSCl, Im-H
- 3) NaBH_4 , $\text{CeCl}_3 \cdot 7\text{H}_2\text{O}$
- 4) ZnEt_2 (0.5 h) then CHI_3



- 5) TMSCl, Im-H
- 6) *t*-BuLi, CuCN then **2**
- 7) TBAF (3 eq.)
- 8) **3**, PBU_3
- 9) *m*-CPBA, Et_3N

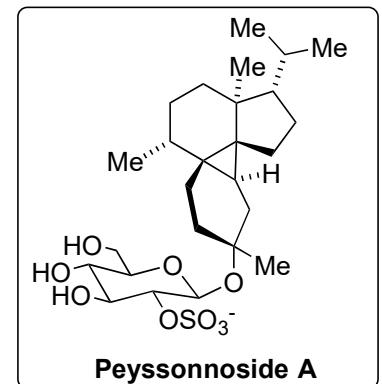


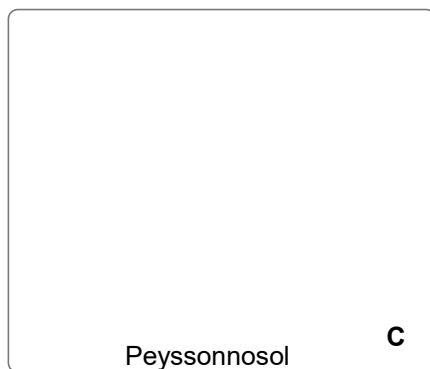
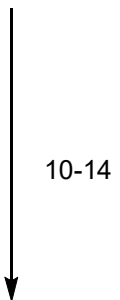
1) - 4) Name of the reactions?

Hint: Step 2: Partial desilylation was observed during the NaOMe step

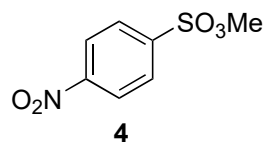
4) Selectivity of the reaction? Transition state?

8) + 9) Name of the reaction?



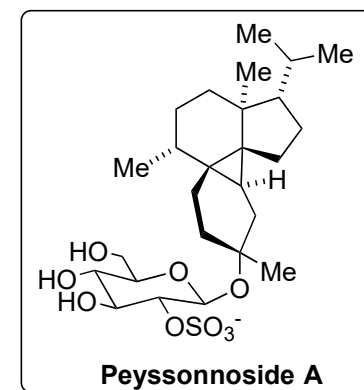


- 10) HG-II
- 11) TPAP, NMO
- 12) PhSiH₃, **4**, Fe(acac)₃, NaHCO₃
- 13) Ph₃PMeBr, KO^t-Bu
- 14) H₂, Rh/Al₂O₃

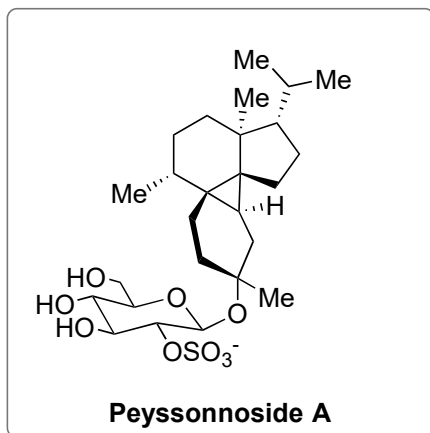


11) - 12) Name of the reactions?

12) Can you propose a mechanism?



15-18



- 15) AgOTf, **5**
- 16) KOH
- 17) Py•SO₃, Pyridine
- 18) H₂, Pd(OH)₂/C

