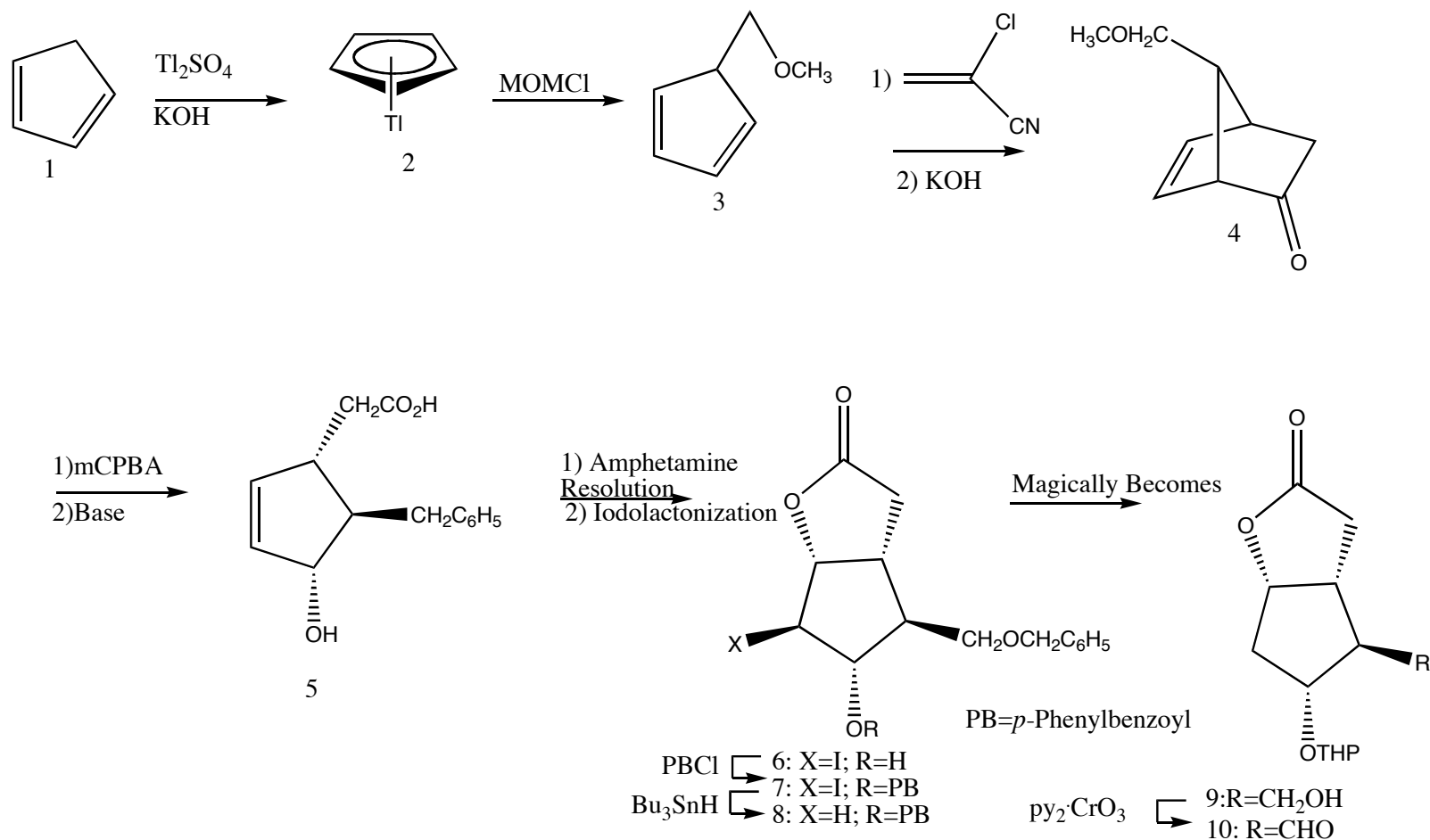


# JACS I Love '71

Dan O'Malley

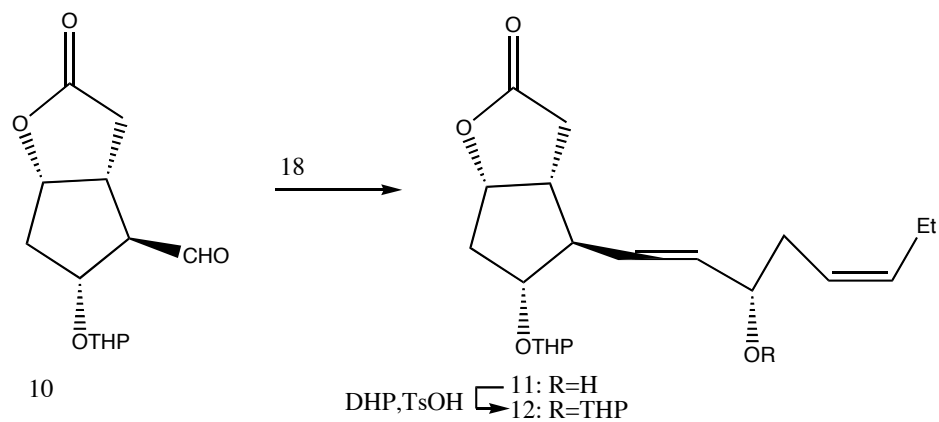
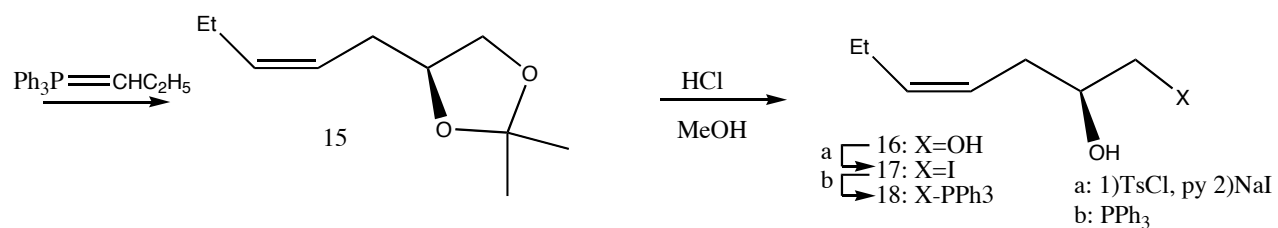
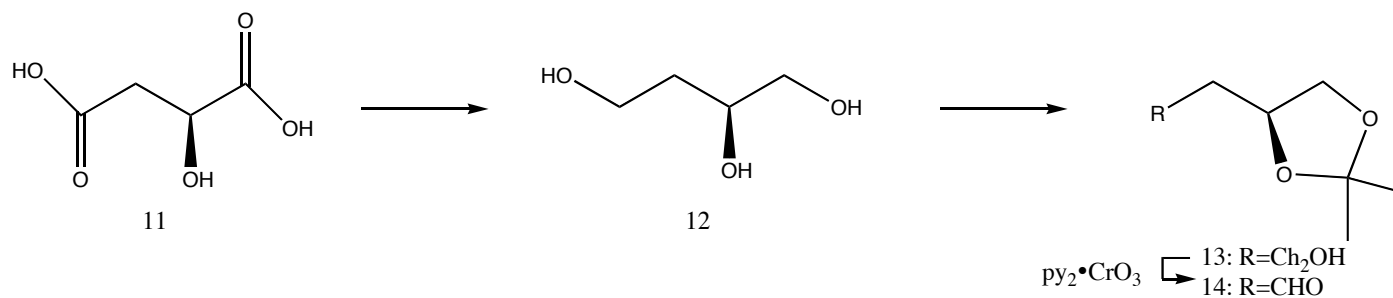
Baran Lab Group Meeting 9/10/2003

# Corey Prostaglandins E<sub>8</sub> and F<sub>3</sub> □

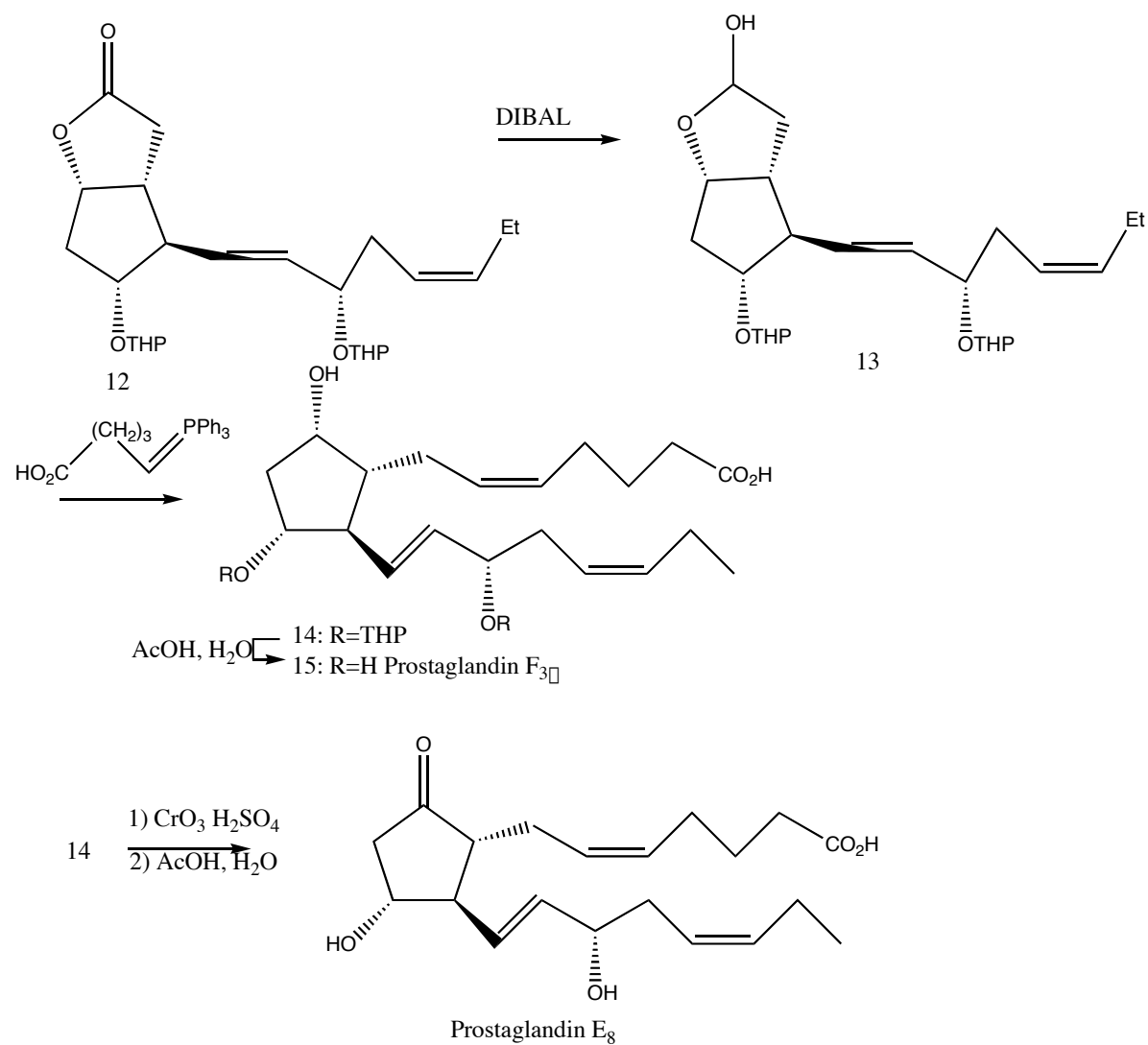


Corey et. Al. JACS 1971.1489-90, 1490-91, 1491-92.

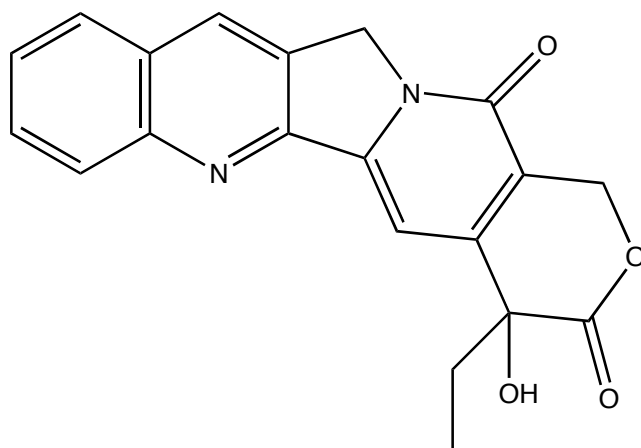
# Prostaglandins Part 2



# Prostaglandins Part 3



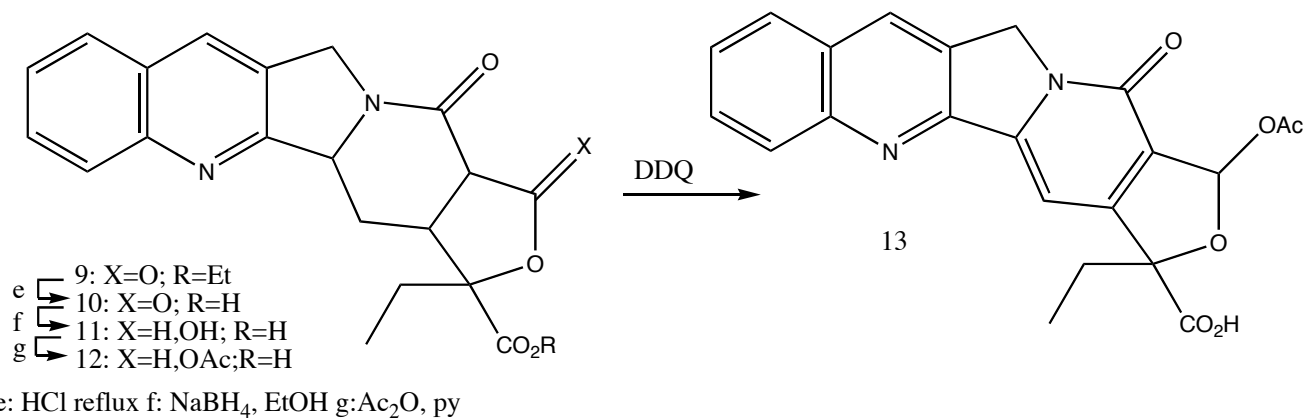
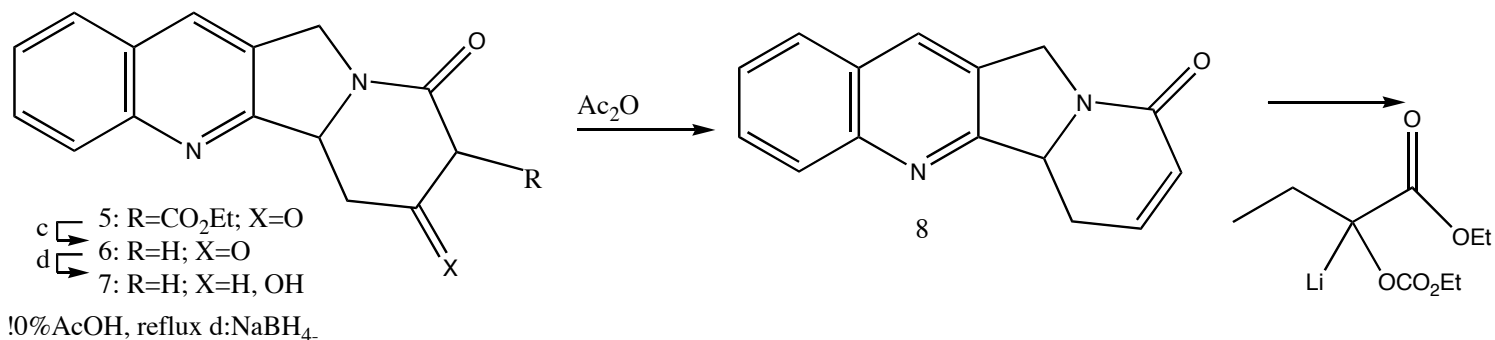
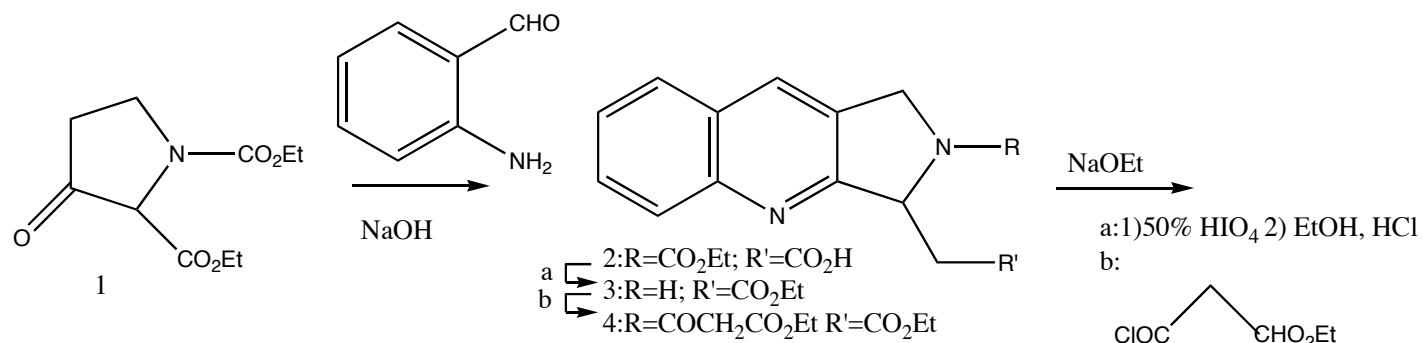
## 2 Syntheses of (±)-Camptothecin



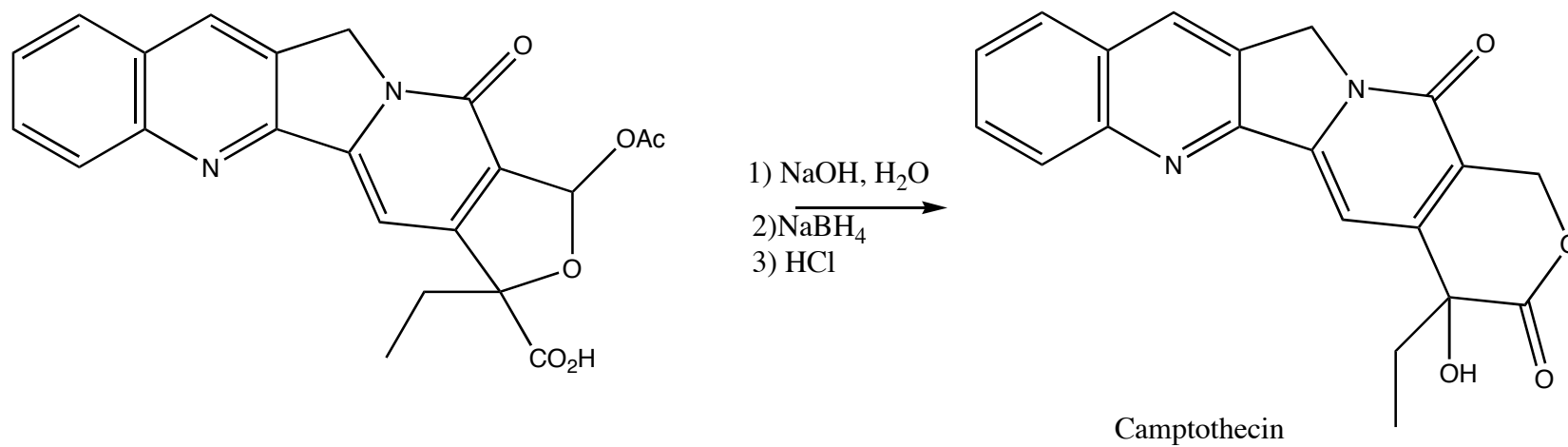
Camptothecin

Antitumor and antileukemia alkaloid  
from *Camptotheca acuminata* tree

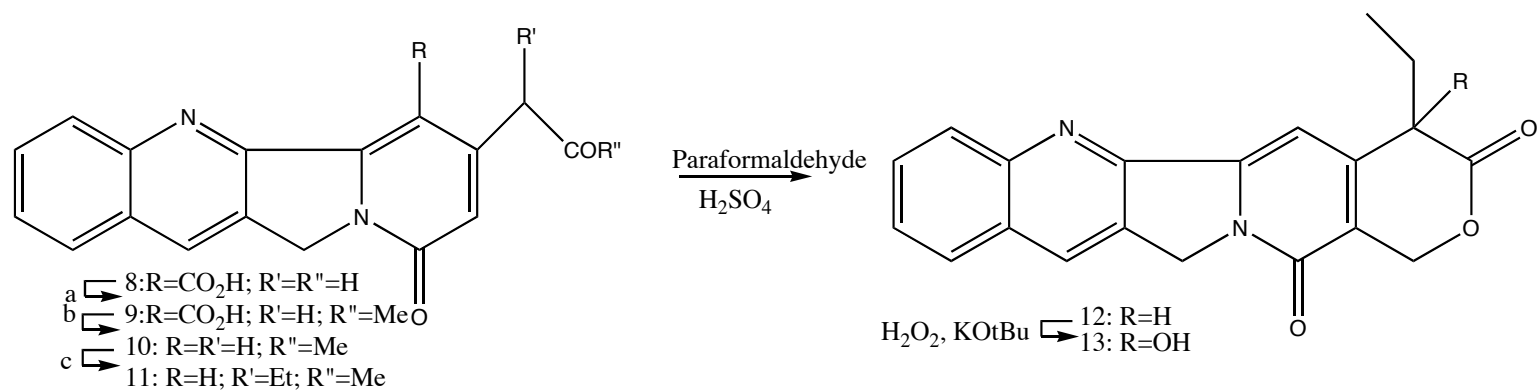
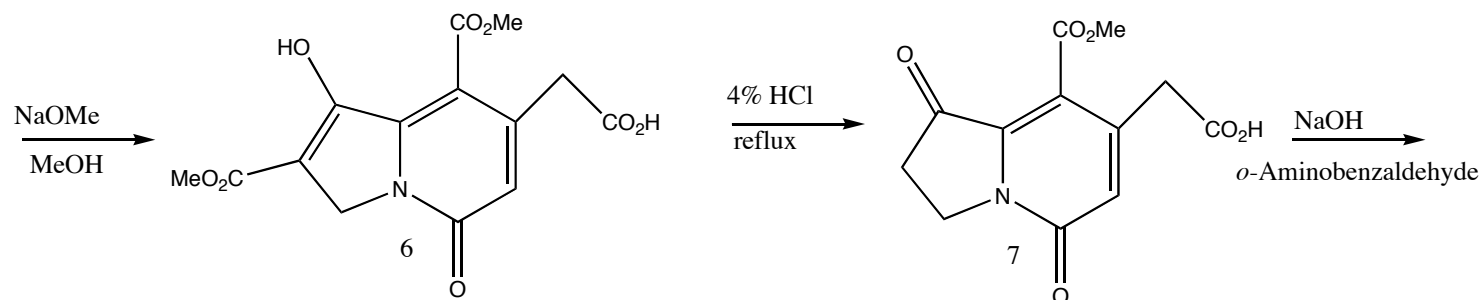
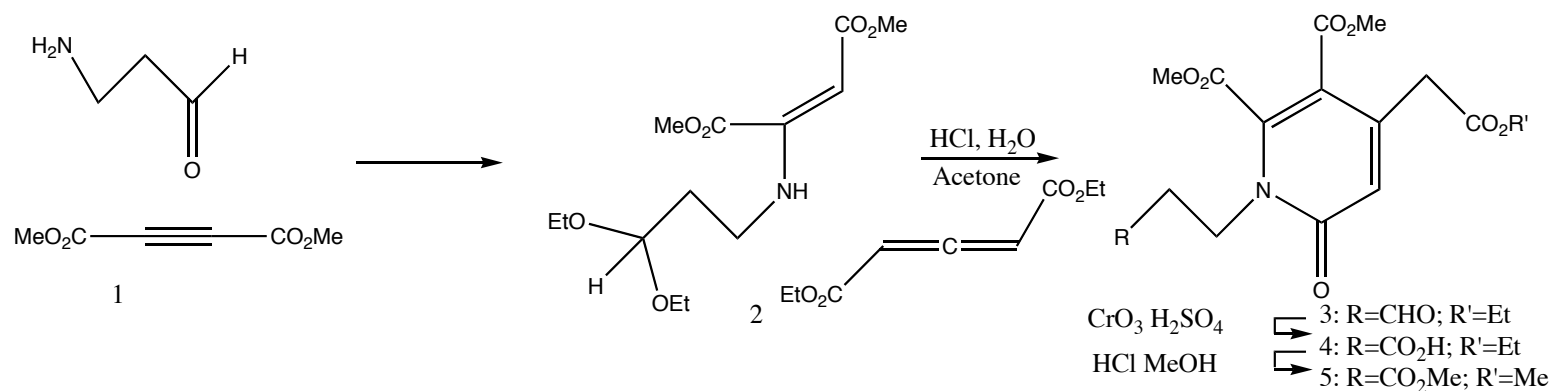
# Stork Camptothecin



# Stork Camptothecin part 2



# Danishefsky (+)-Camptothecin

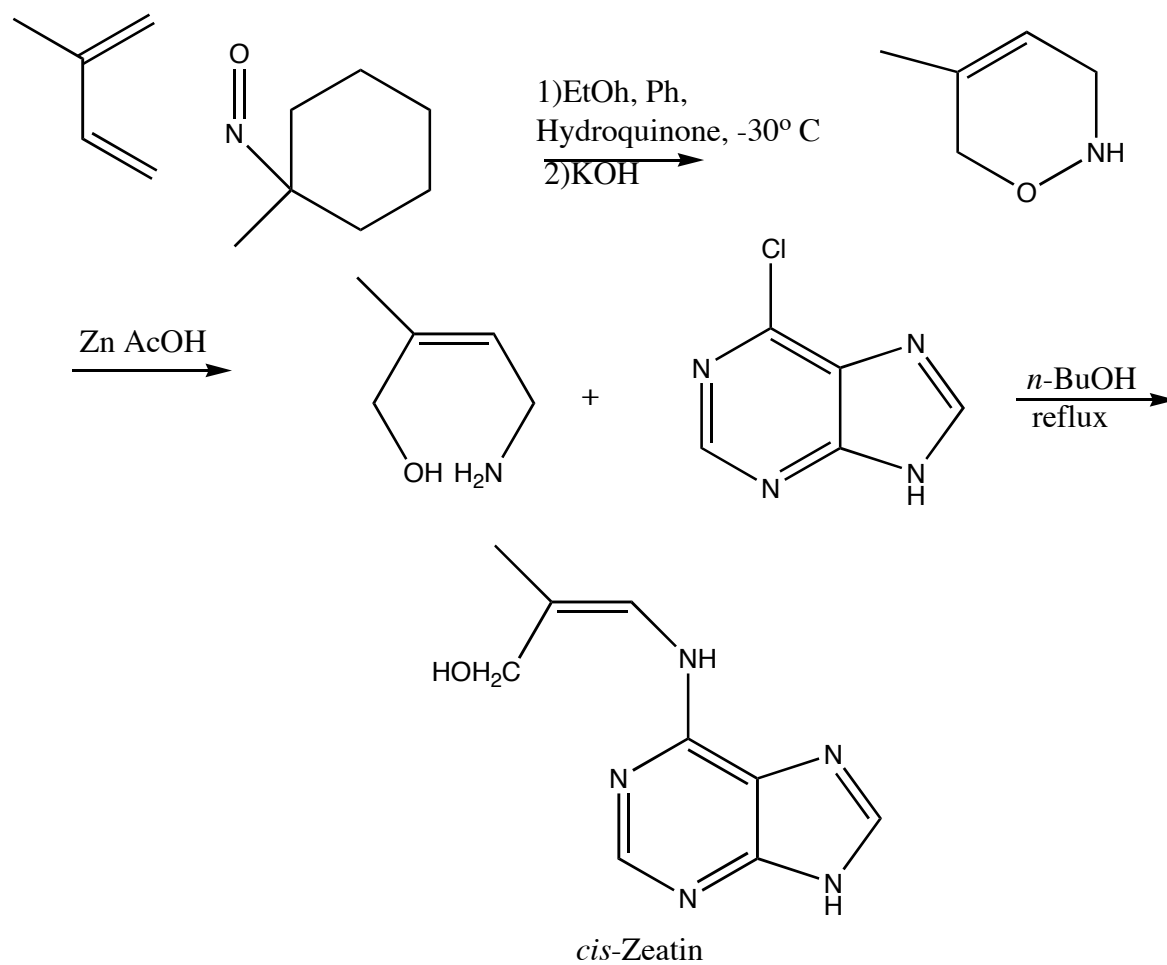


a: esterification b: CuO, heat c: NaH·DME, EtI

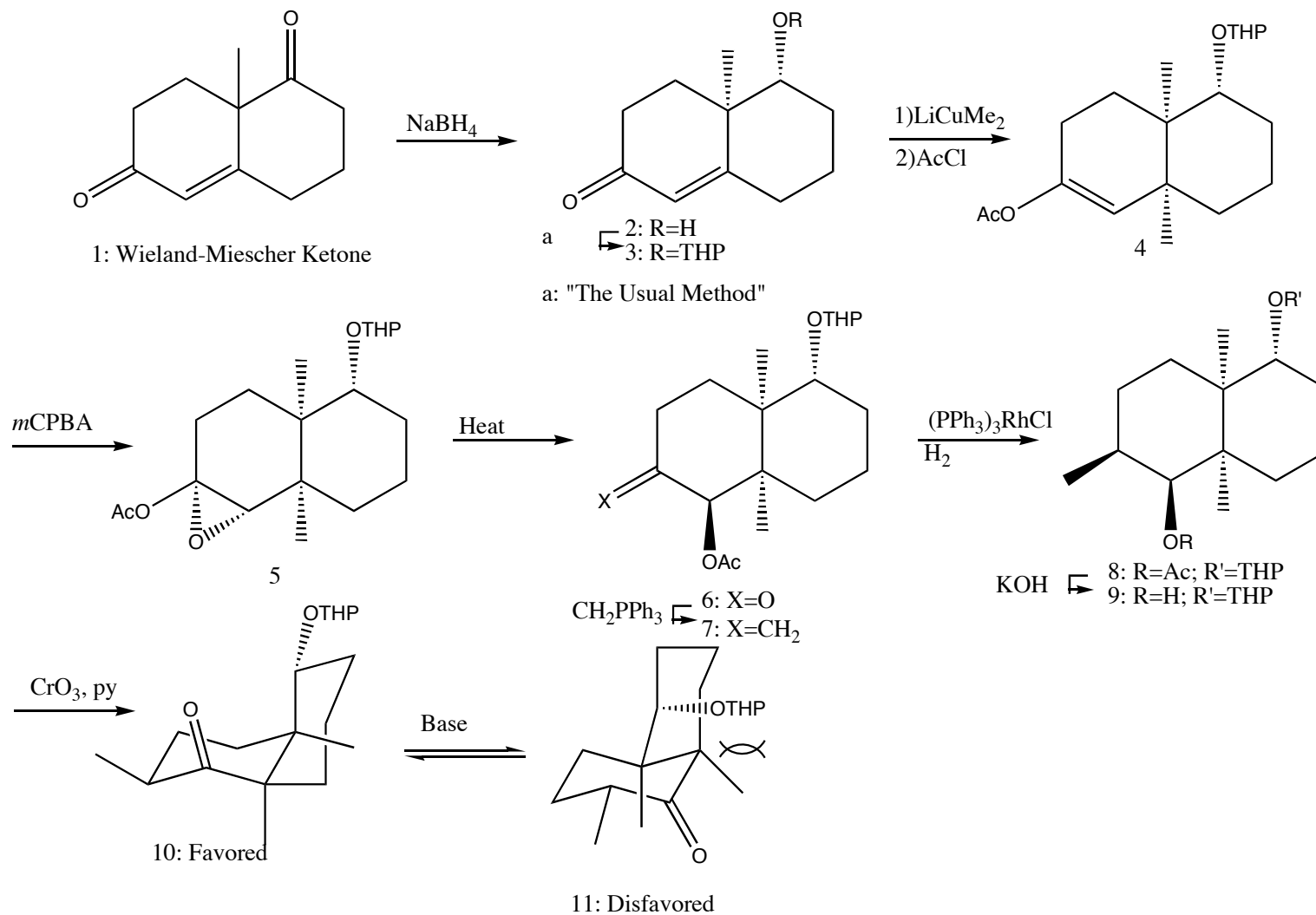
Danishefsky et. Al. JACS, 5577-78. (1971)



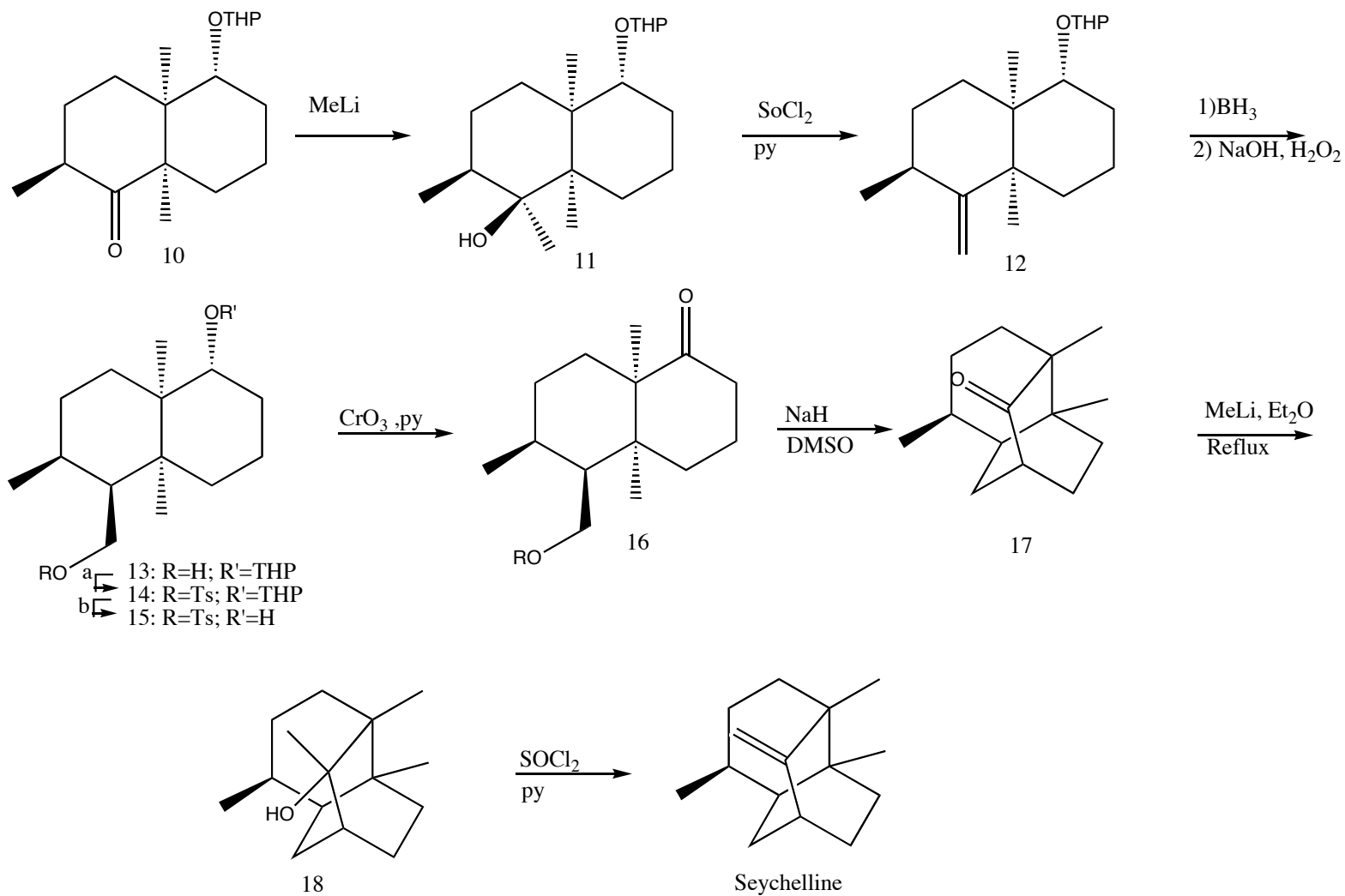
# *Cis*-Zeatin



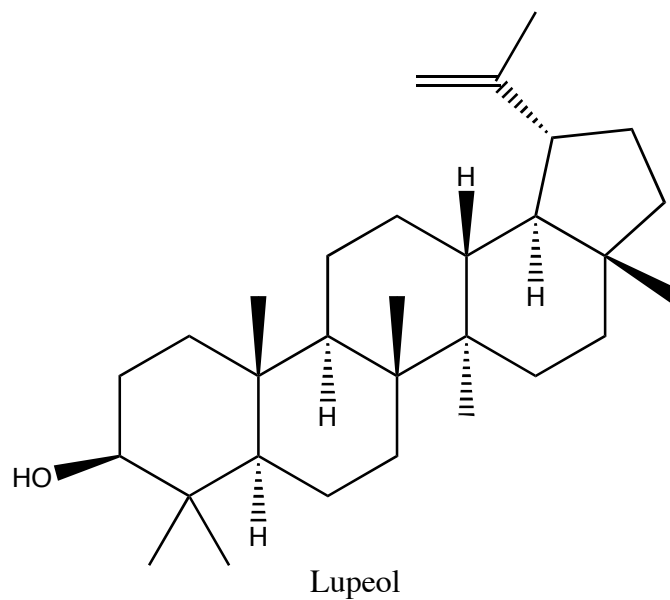
# (+)-Seychellene



# Seychelline Part 2

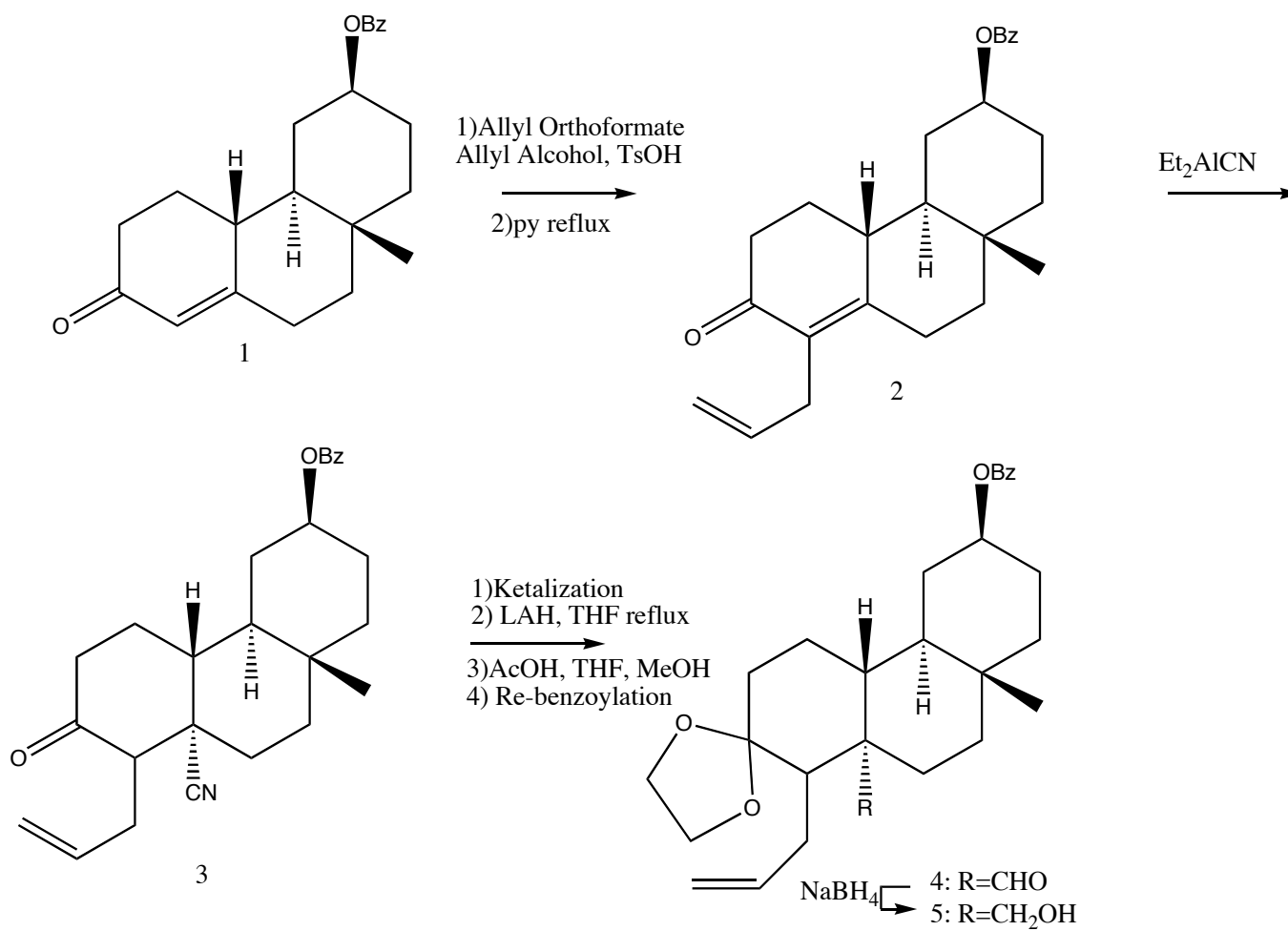


# Stork (±)-Lupeol

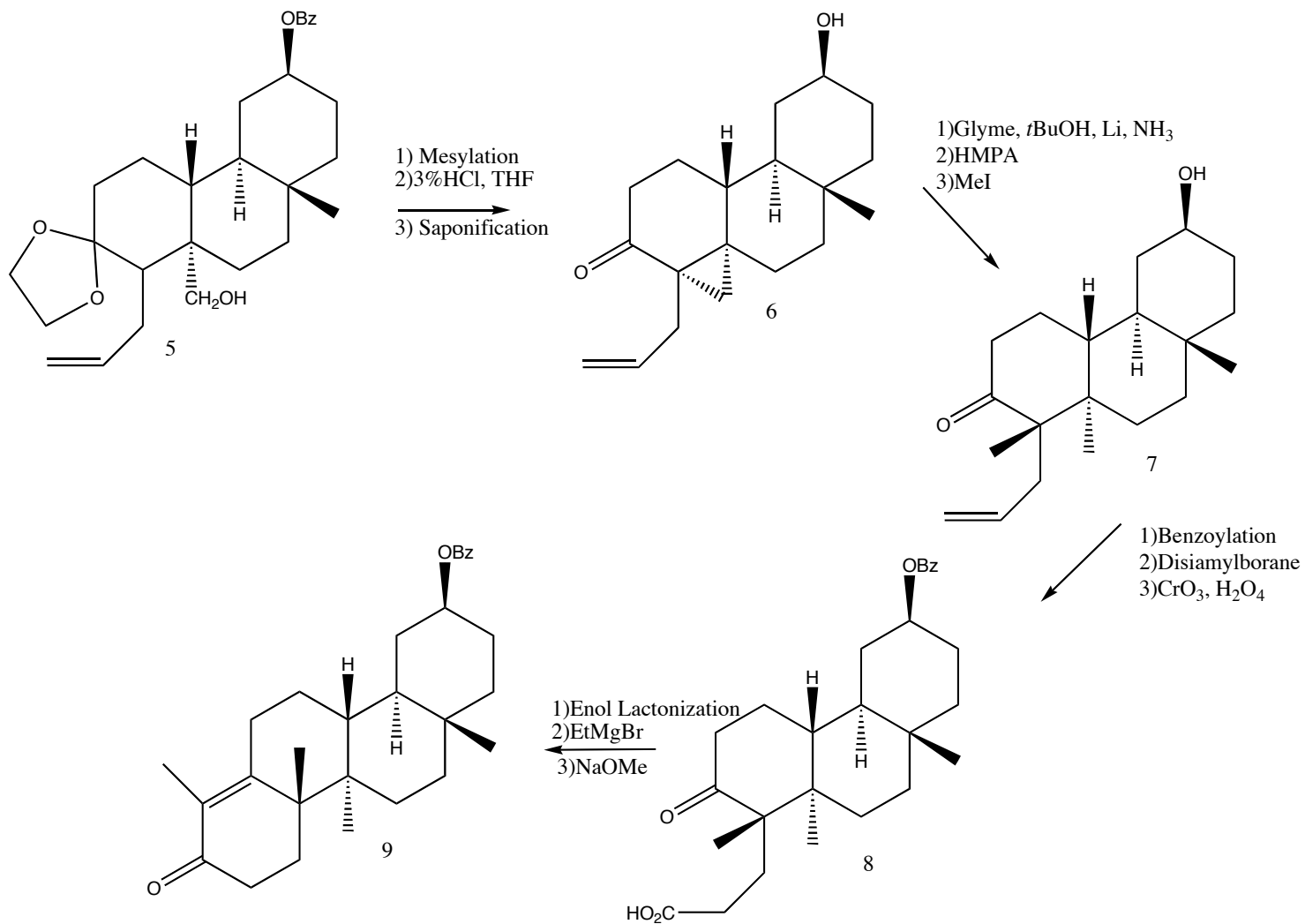


Pentacyclic Triterpene  
10 Asymmetric Centers

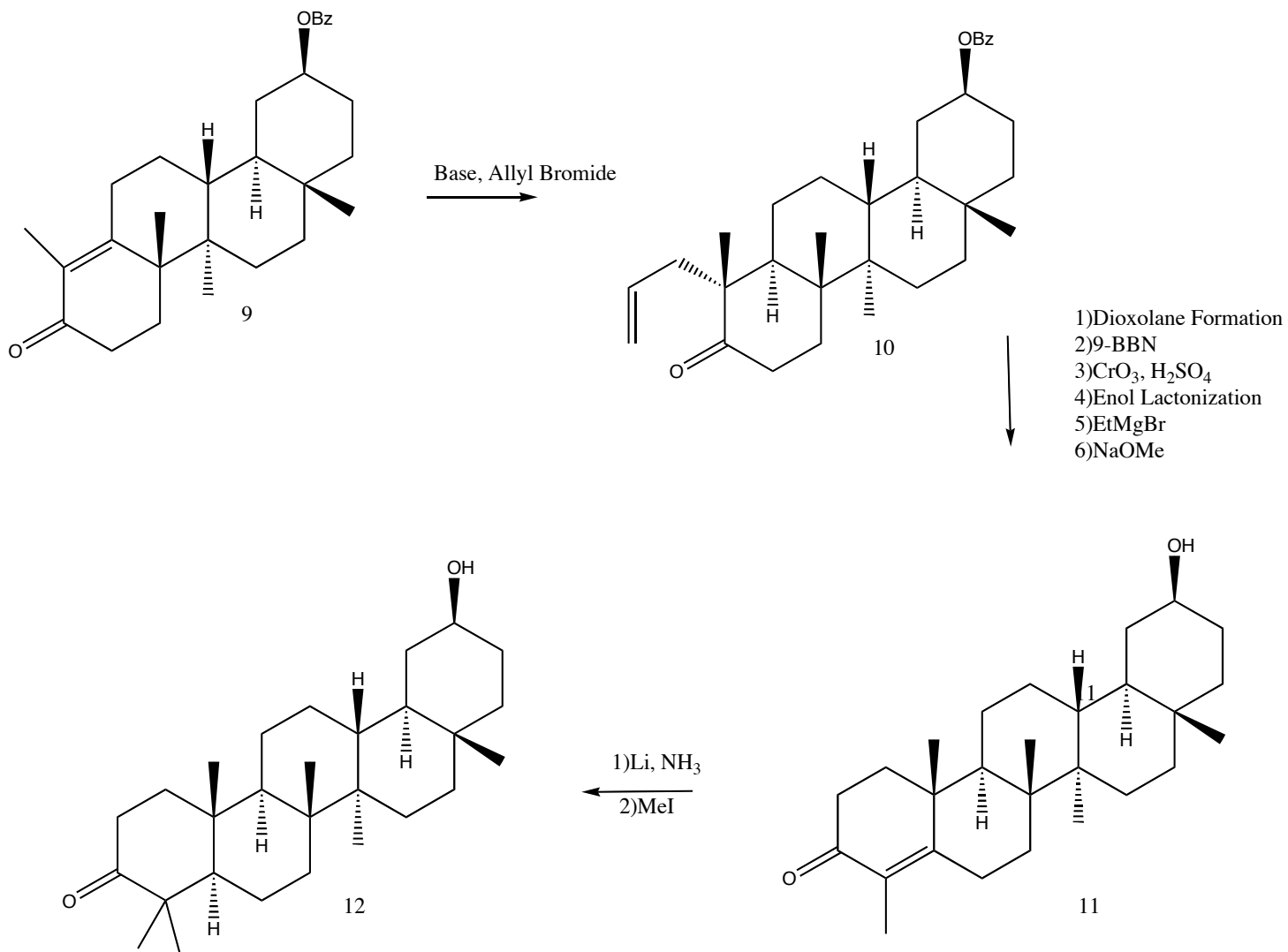
# Lupeol 1



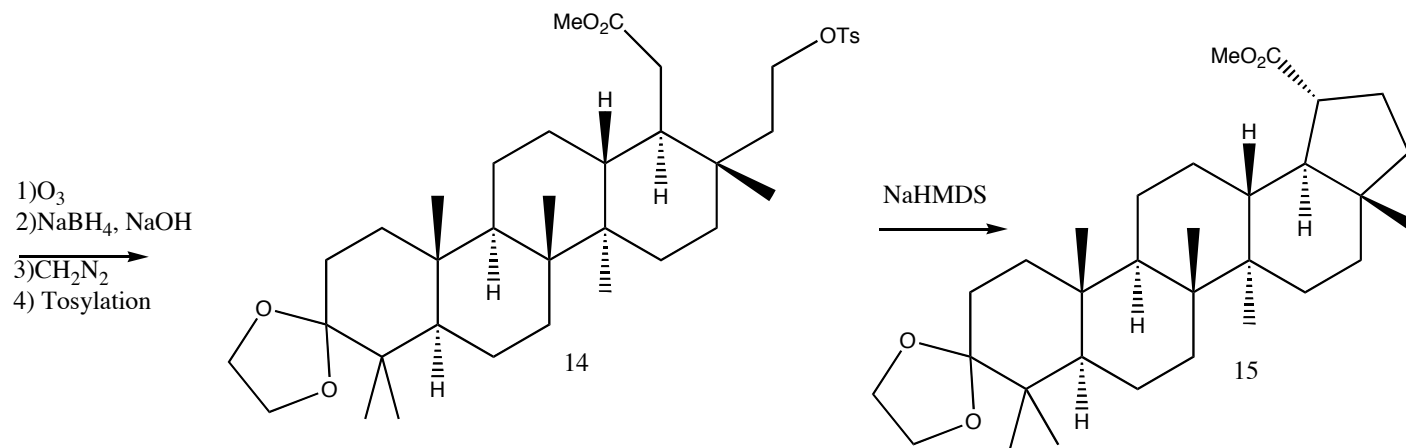
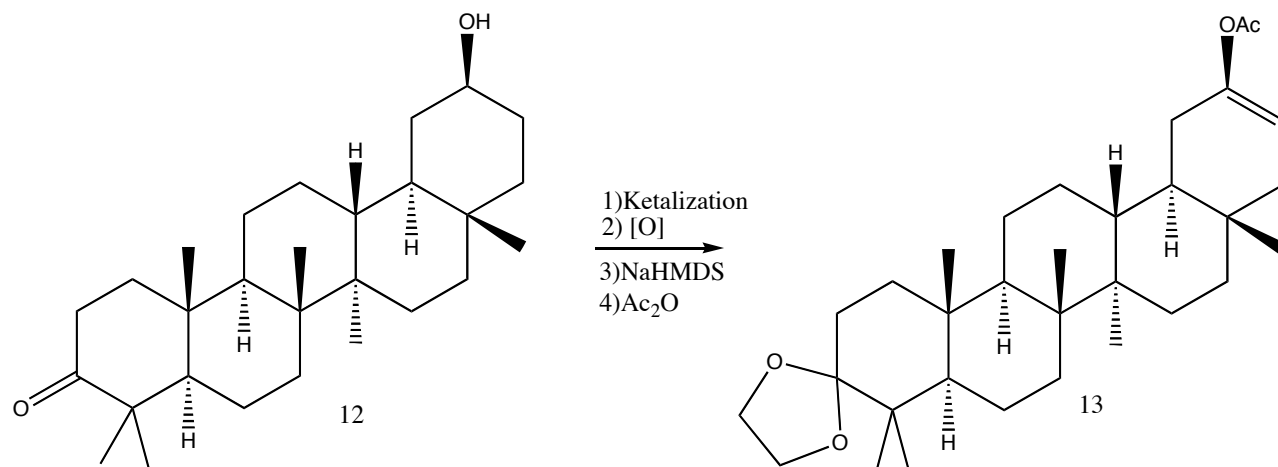
# Lupeol 2



# Lupeol 3

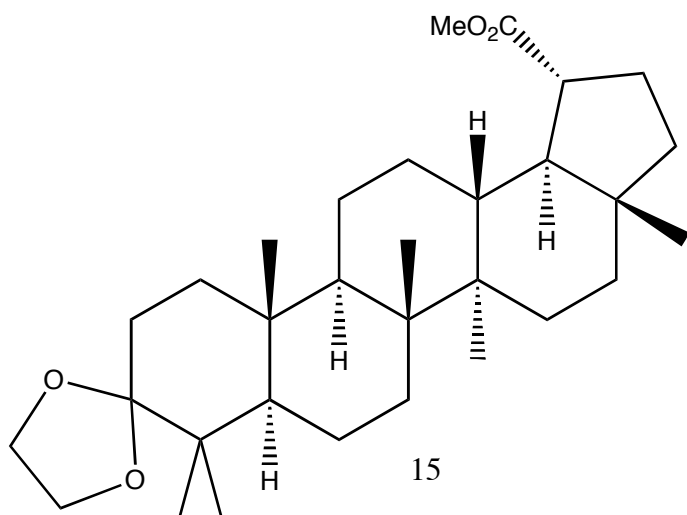


# Lupeol 4

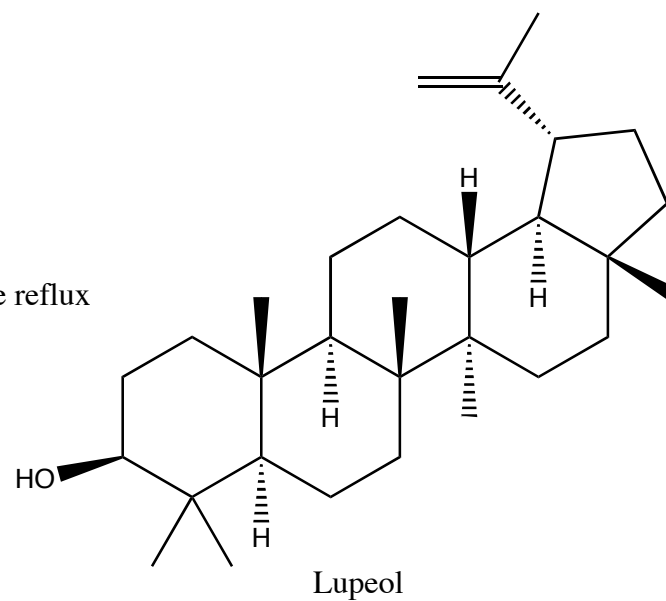




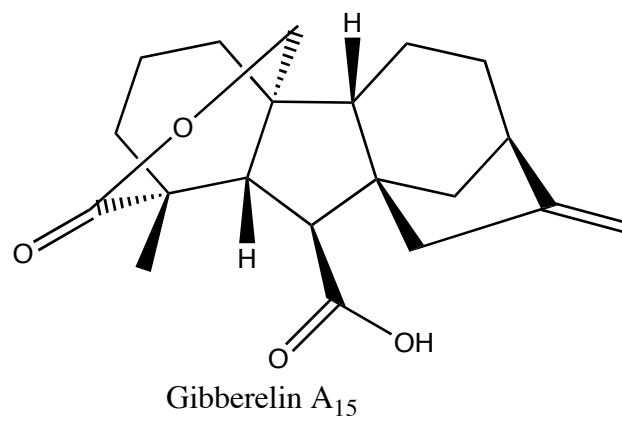
# Lupeol 5



1) MeLi, Dioxane reflux  
2)  $\text{POCl}_3$ , py  
3) deketalization  
4)  $\text{NaBH}_4$

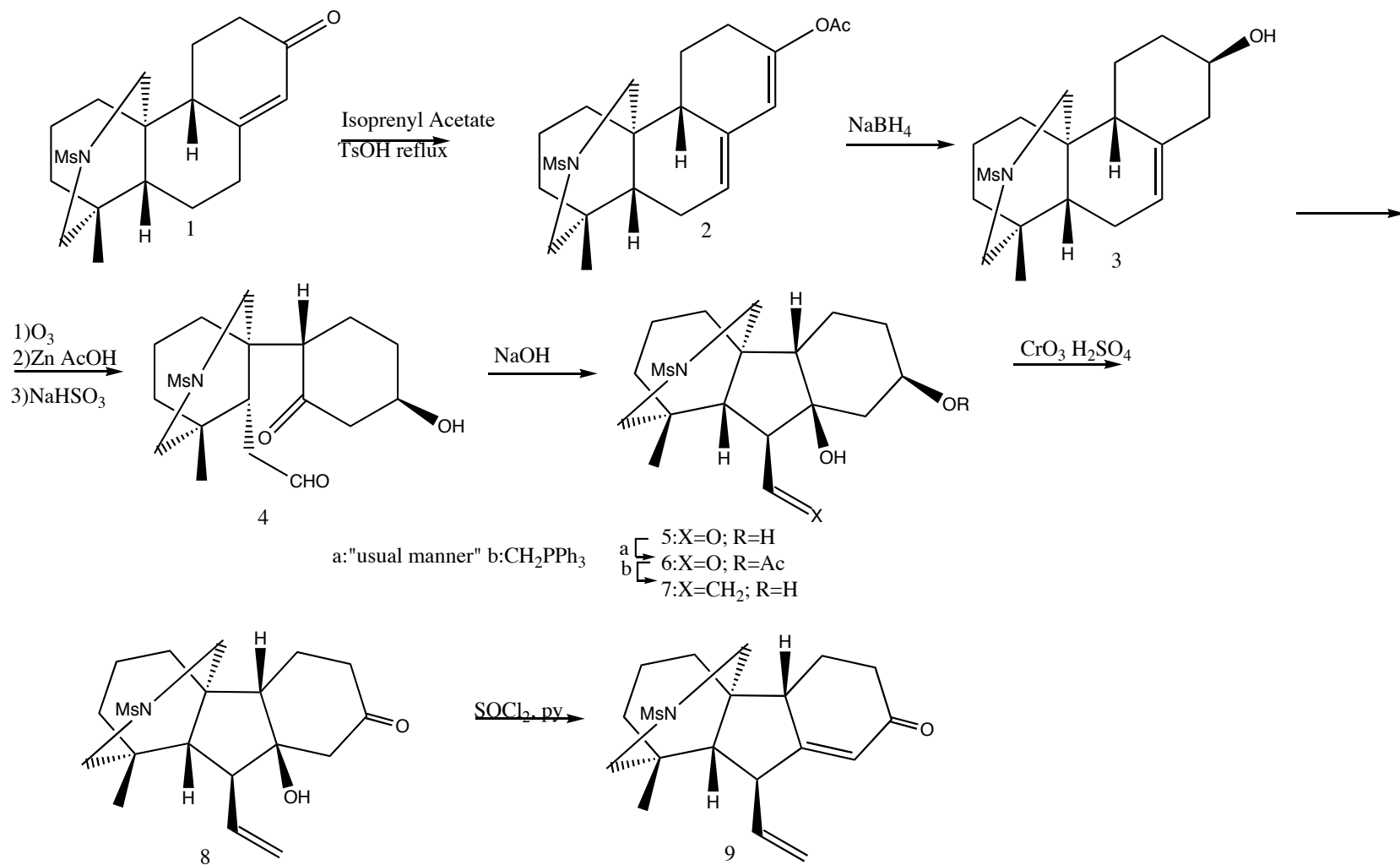


# (+)-Gibberelin A<sub>15</sub>

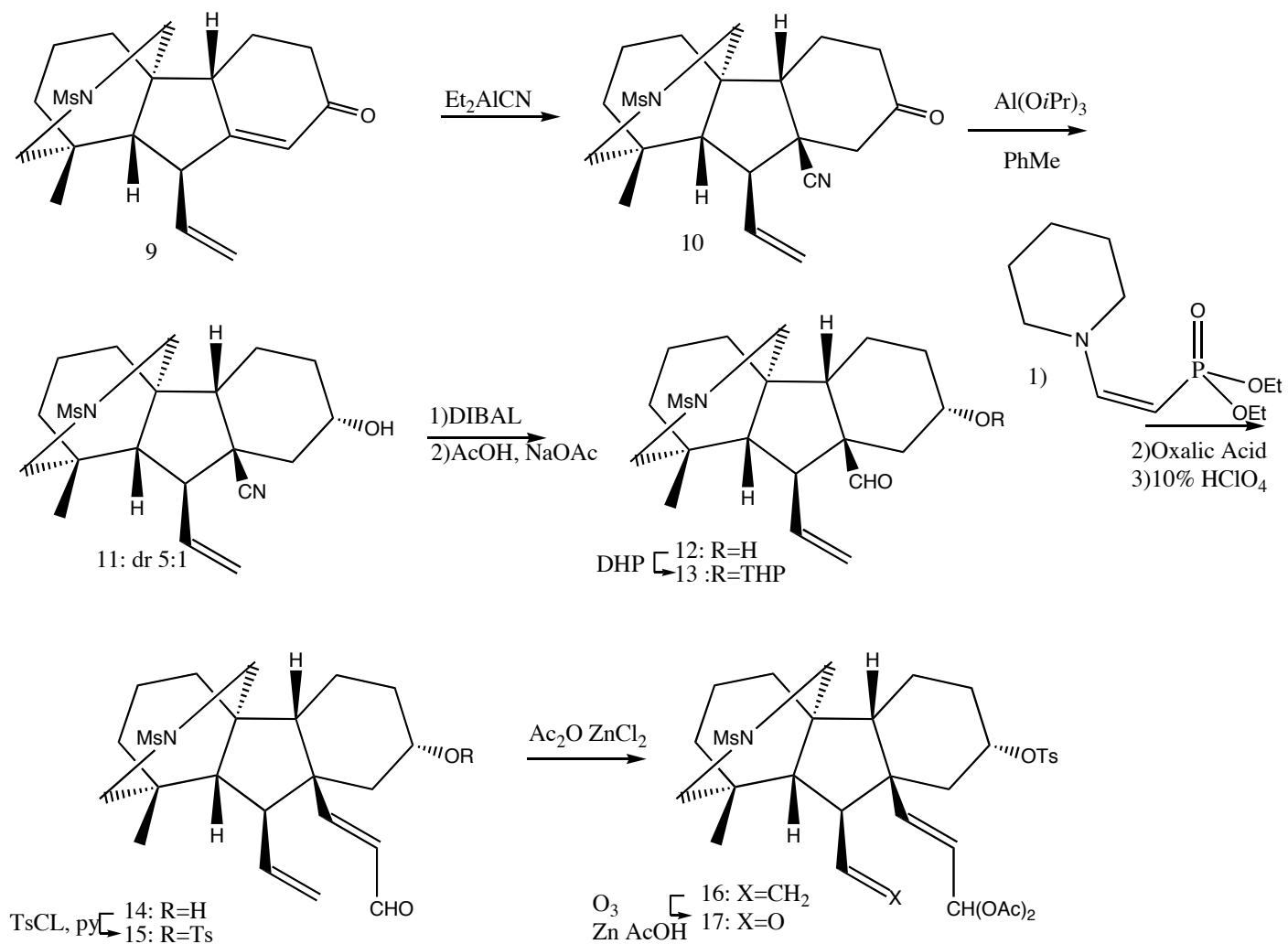


Nagata et. Al. JACS 1971 5740-58.

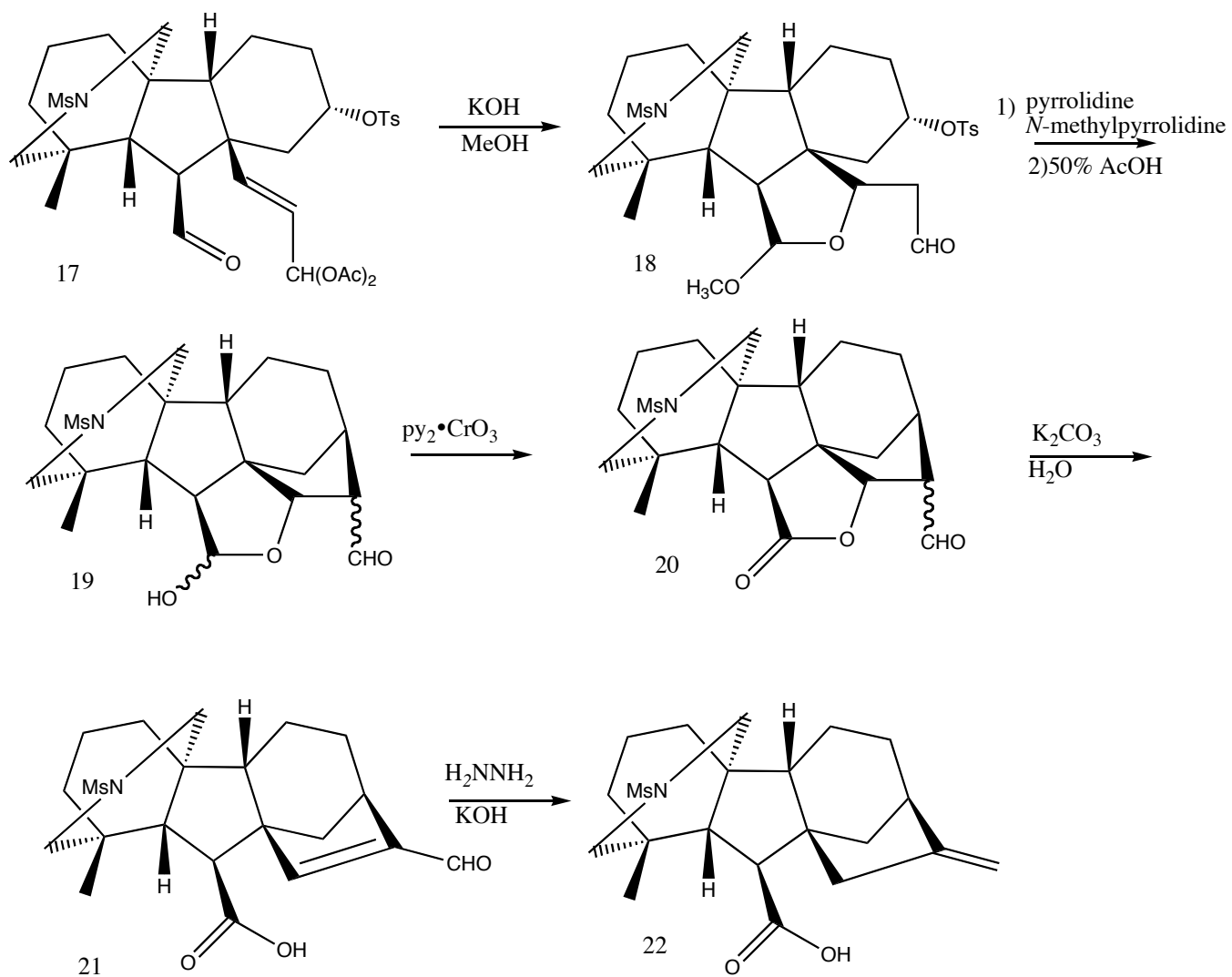
# Gibberelin 1



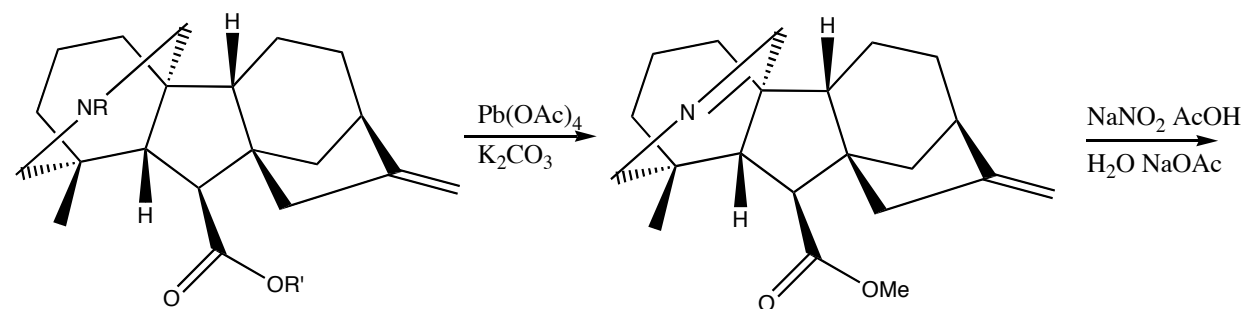
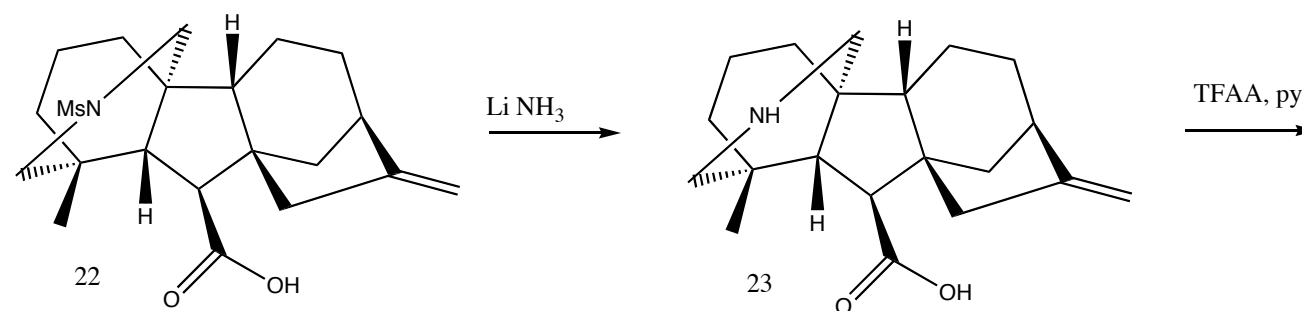
# Gibberelin 2



# Gibberelin 3

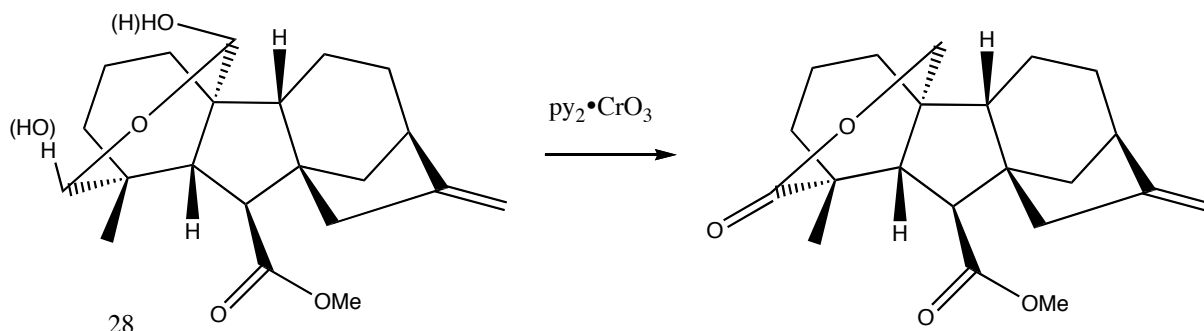


# Gibberelin 4



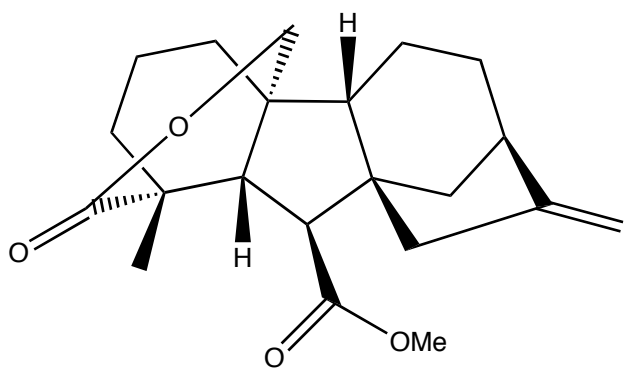
a  $\square$  24: R=CF<sub>3</sub>CO; R'=H  
 b  $\square$  25: R=CF<sub>3</sub>CO; R'=Me  
 26: R=H; R'=Me

a: CH<sub>2</sub>N<sub>2</sub>  
 b: K<sub>2</sub>CO<sub>3</sub>

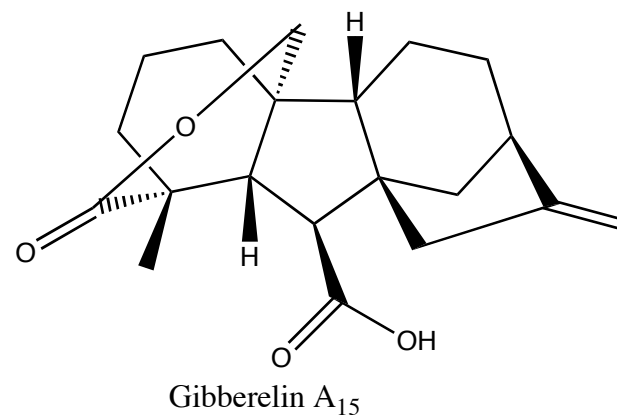
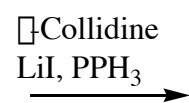


29: Regioisomers Separated

# Gibberelin 5

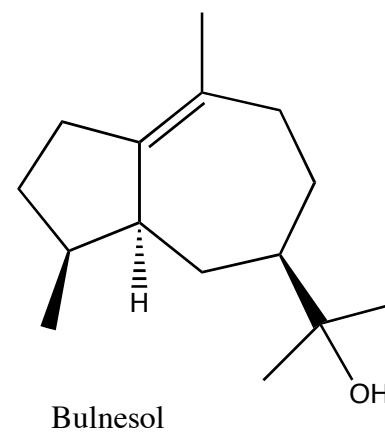
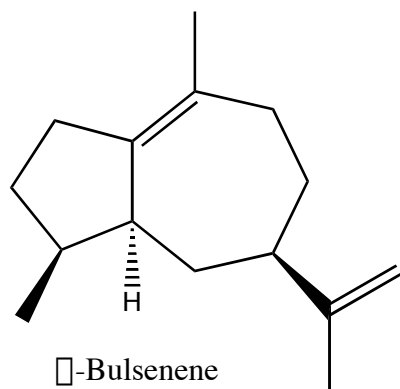


29



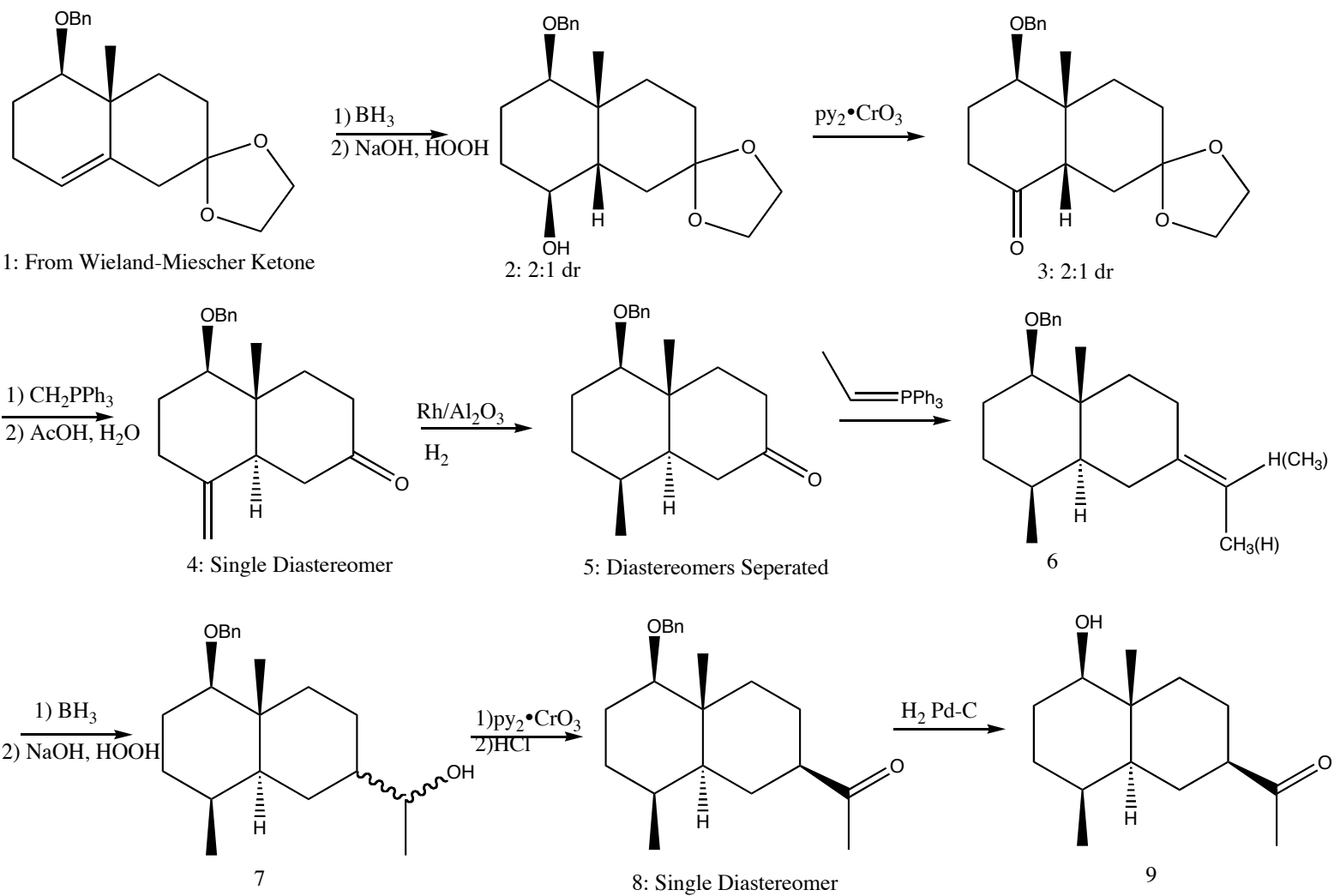
Gibberelin A<sub>15</sub>

# Heathcock (+)- $\square$ -Bulnesene and (+)-Bulnesol

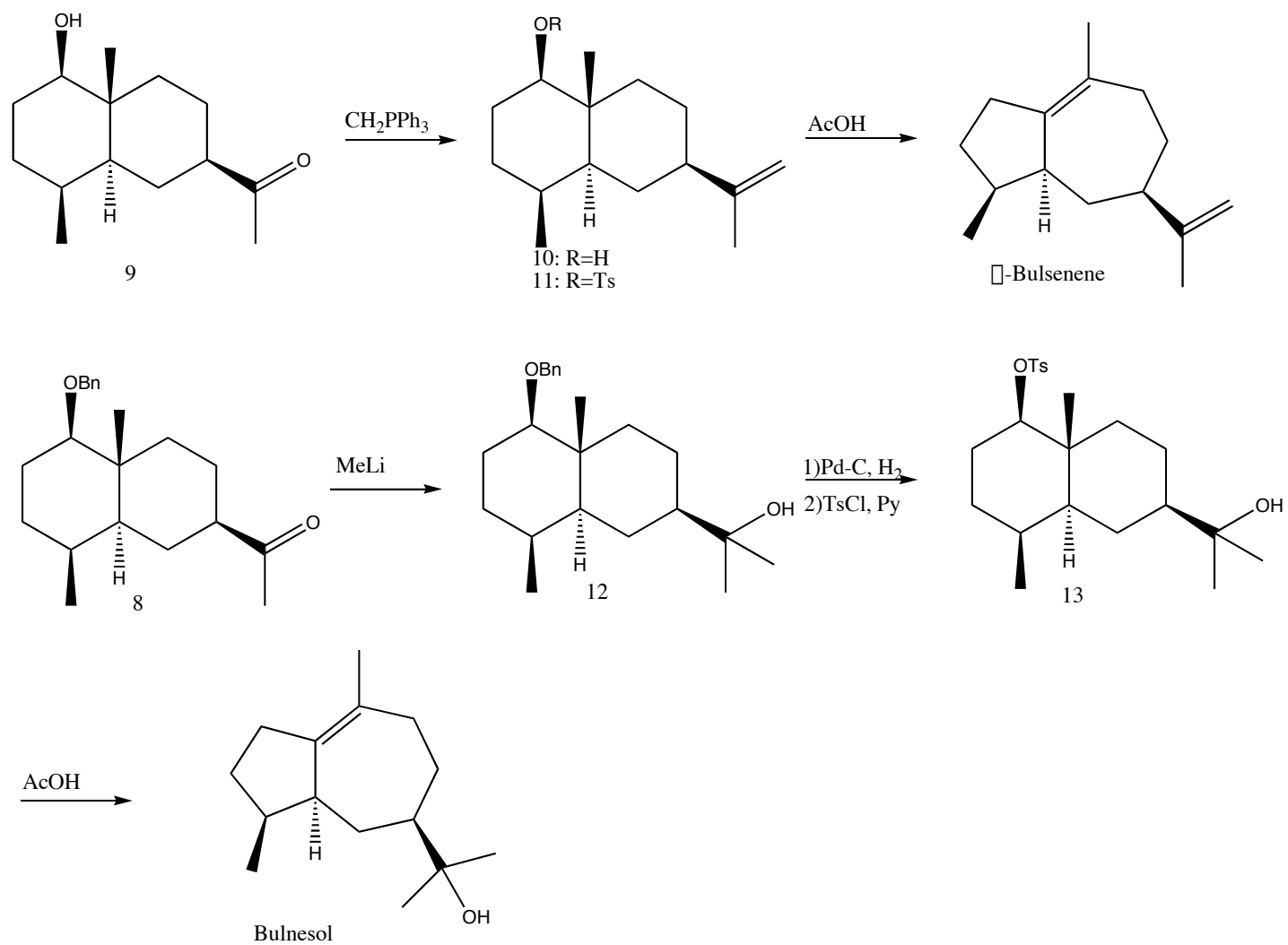




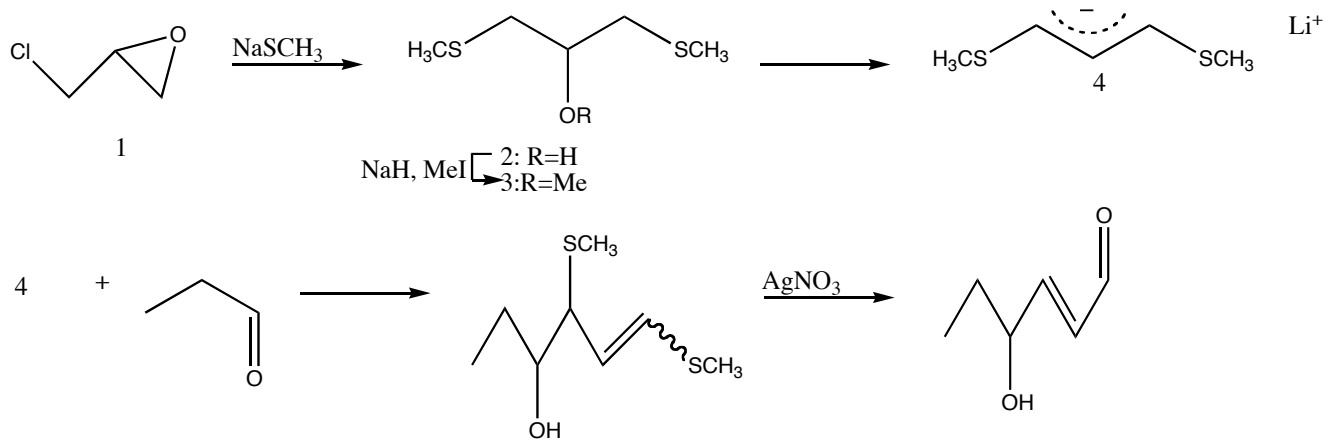
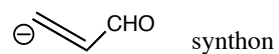
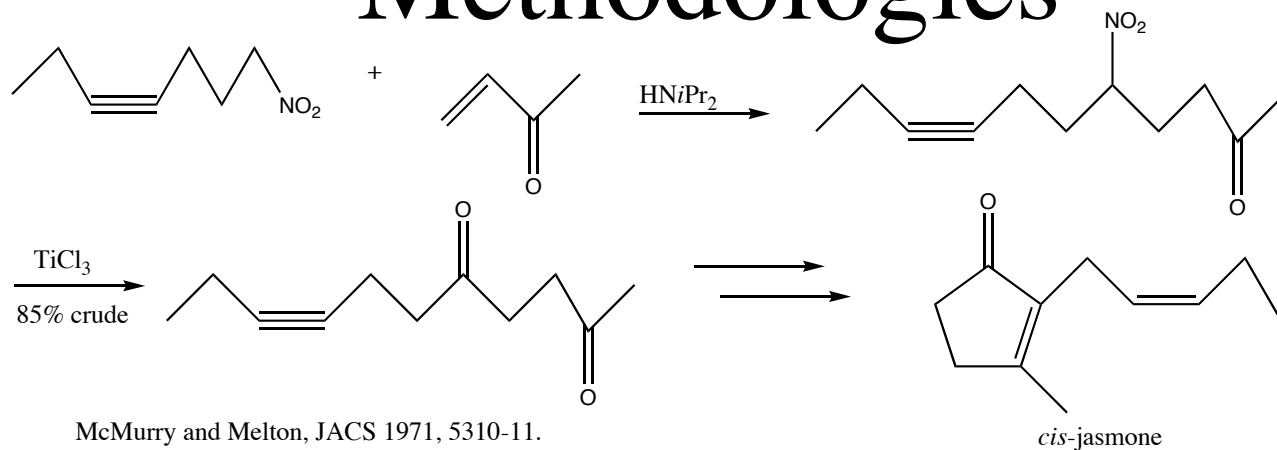
# Bulnesene 1



# Bulnesene 2



# Methodologies



Corey et. Al. JACS 1971 1724-1729