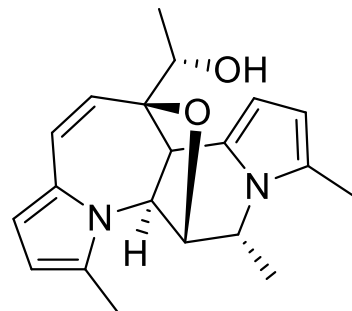
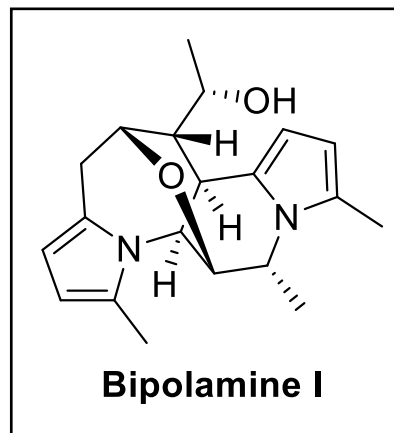


Total Synthesis of Bipolamine I

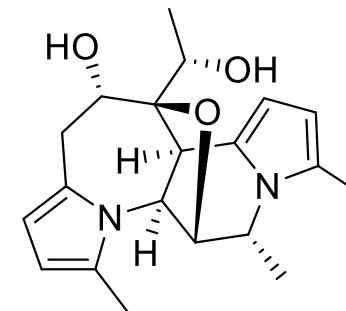
Xiang Qiu and Joshua G. Pierce*



Curvulamine



Bipolamine I



Bipolamine D

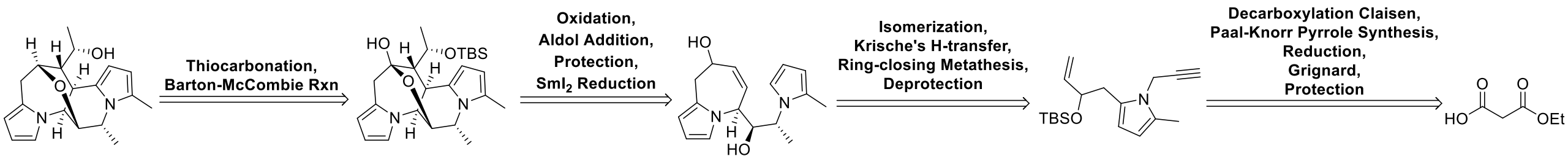
- Come from a family of polypyrrole alkaloids
- Bipolamines were found in a gene cluster known as *Bipolaris maydis* ATCC48331
- Bipolamines could have potential as antimicrobial agents with an increase of antibiotic resistance
- Pentacyclic structure and 7 stereogenic centers with 2 electron-rich pyrroles

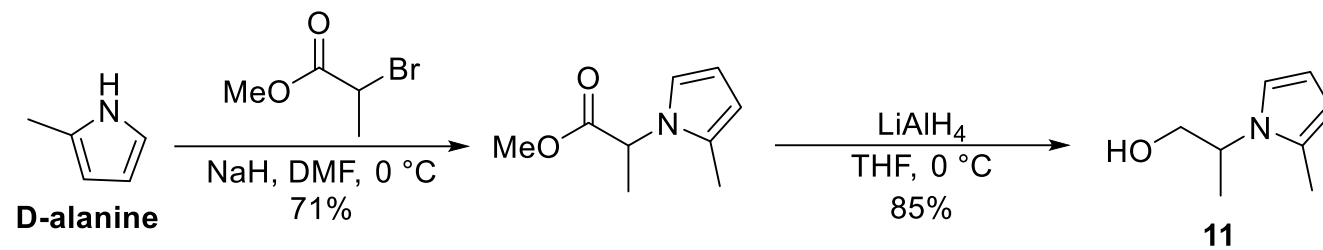
Jennifer LaPoff

Liu Group

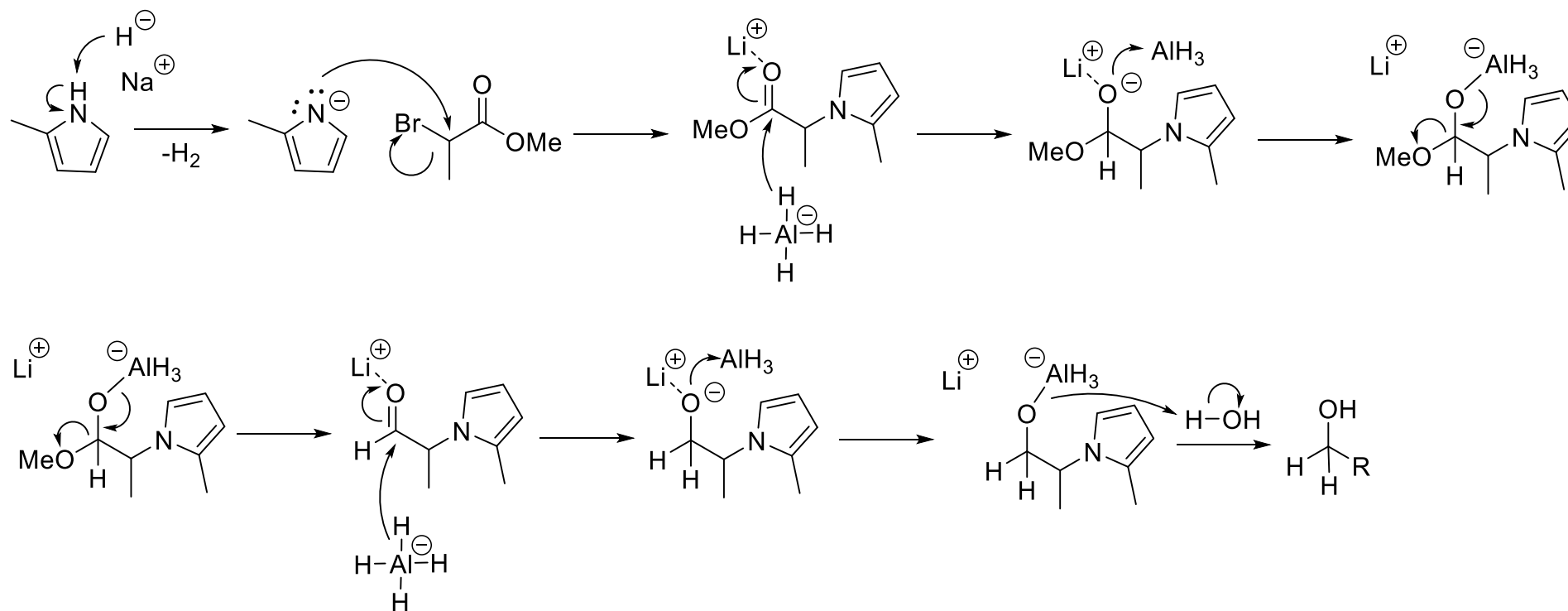
November 16th, 2022

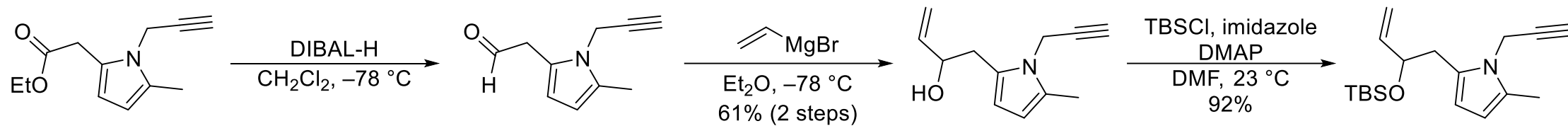
Retrosynthetic Analysis



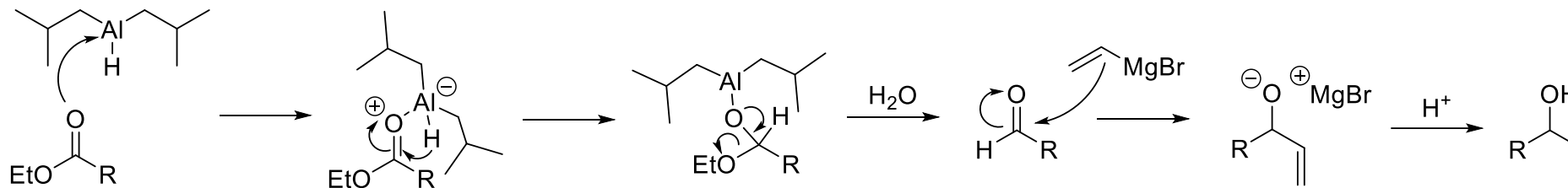


Substitution Reaction and Reduction of Ester

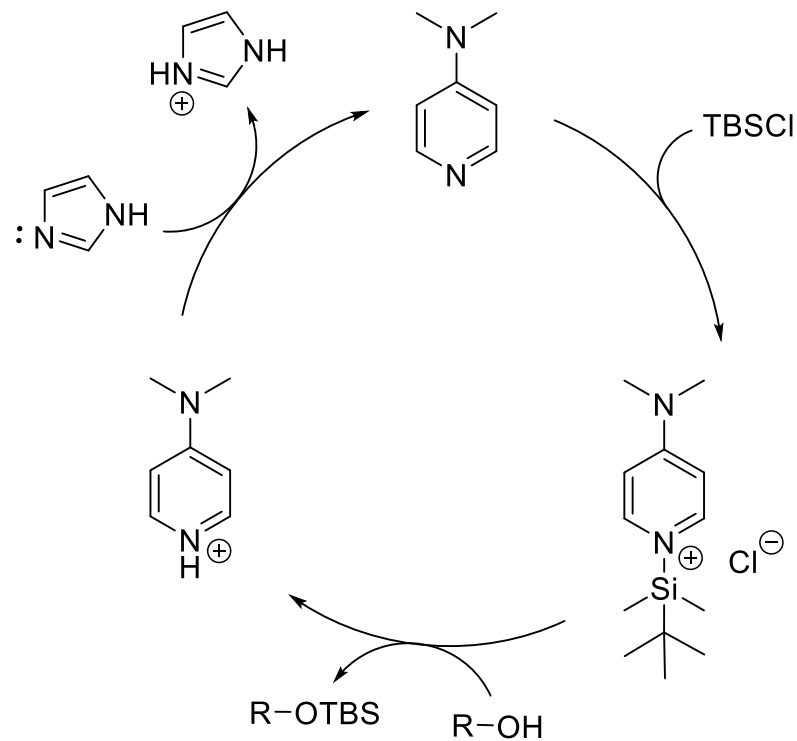


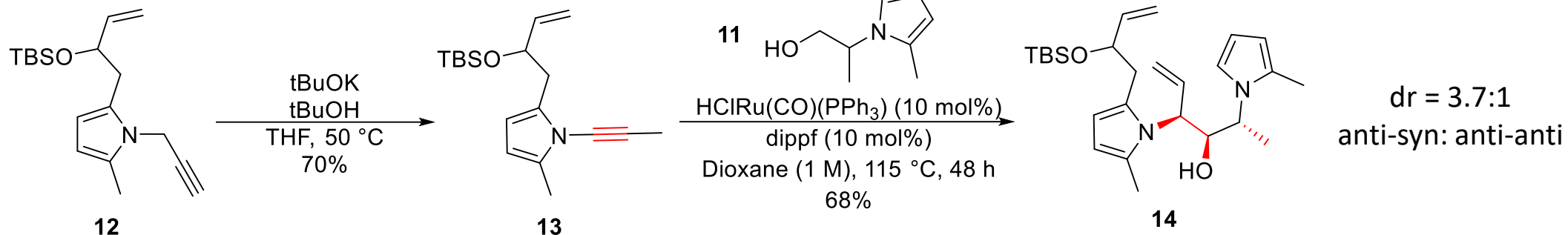


Reduction and then Grignard Reaction

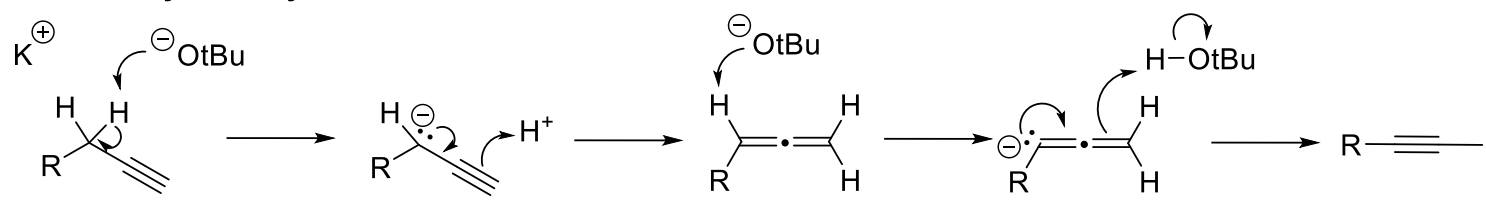


Lewis Base-Catalyzed Silylation of Alcohols

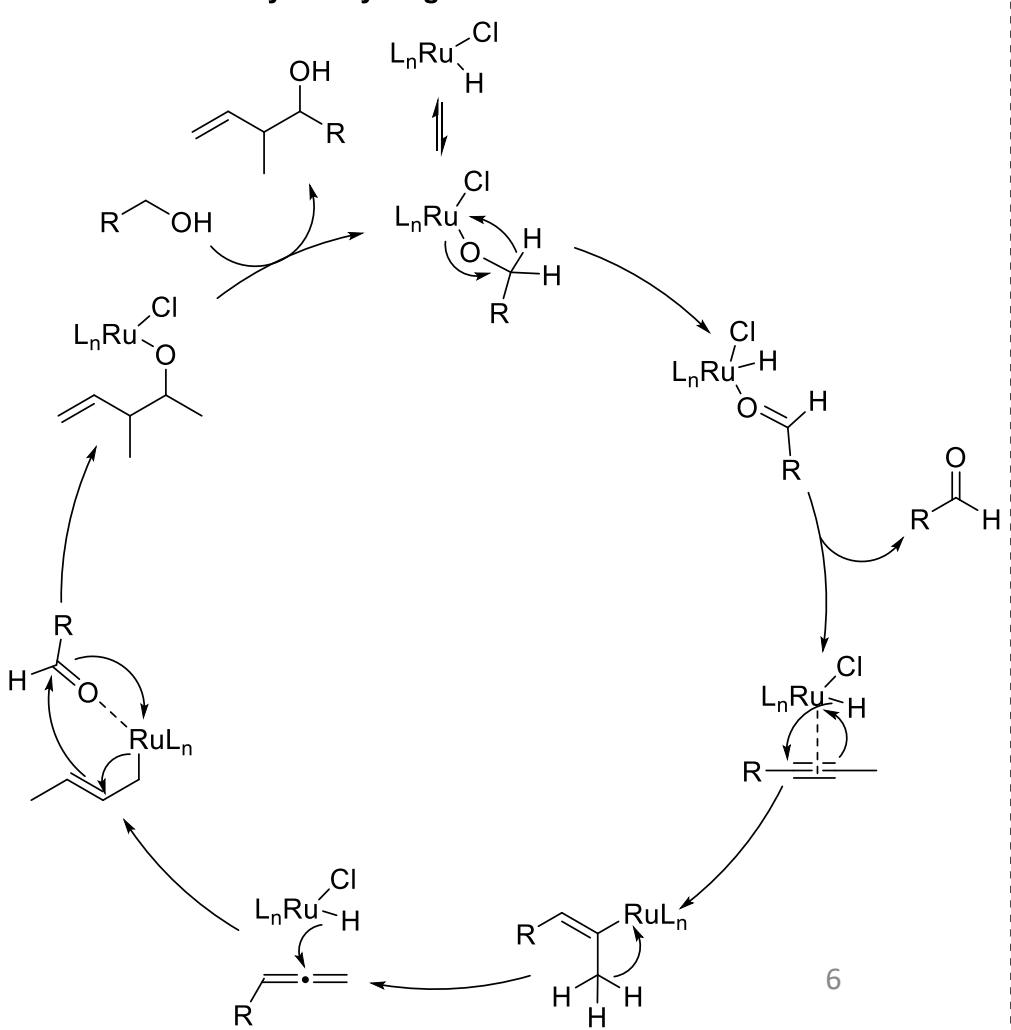


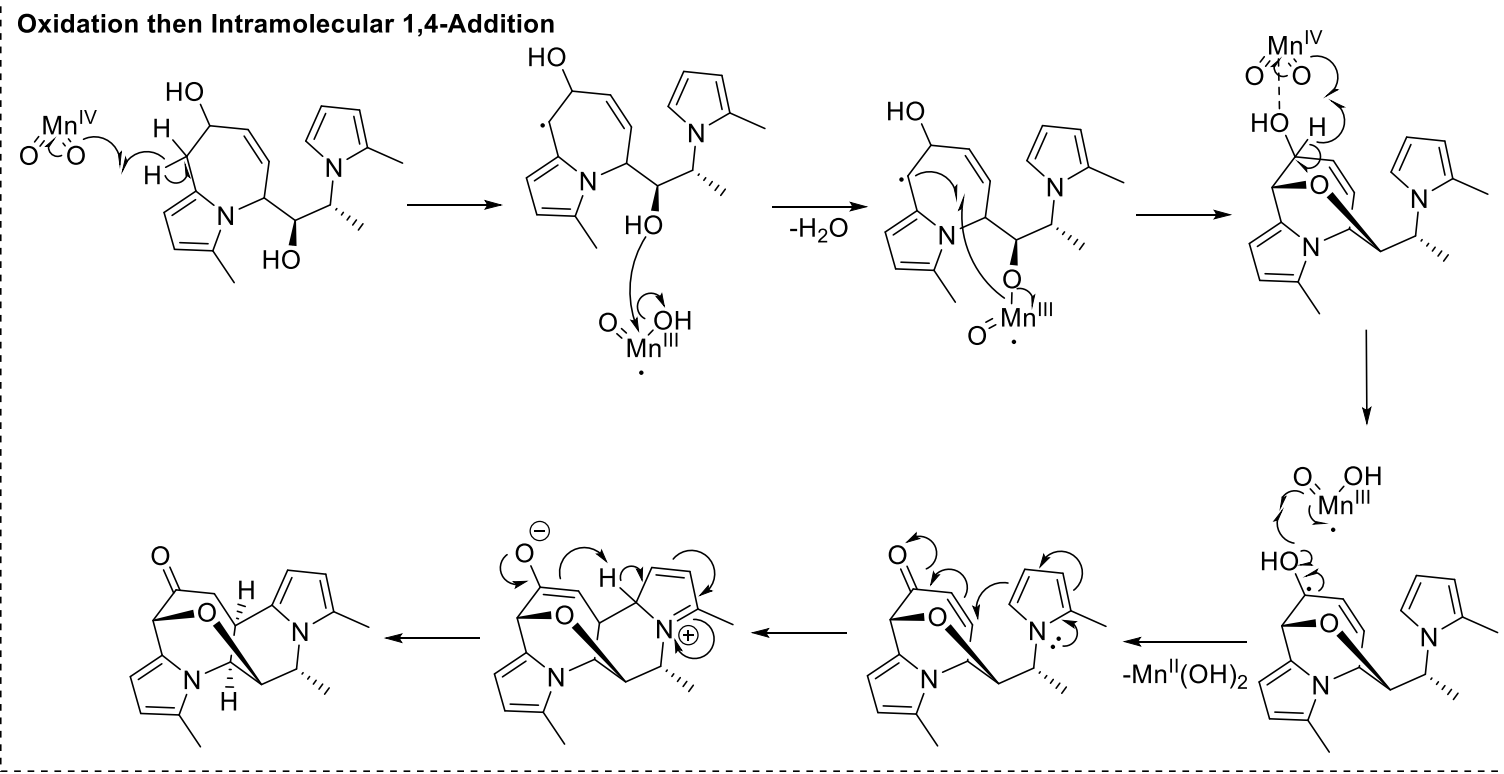
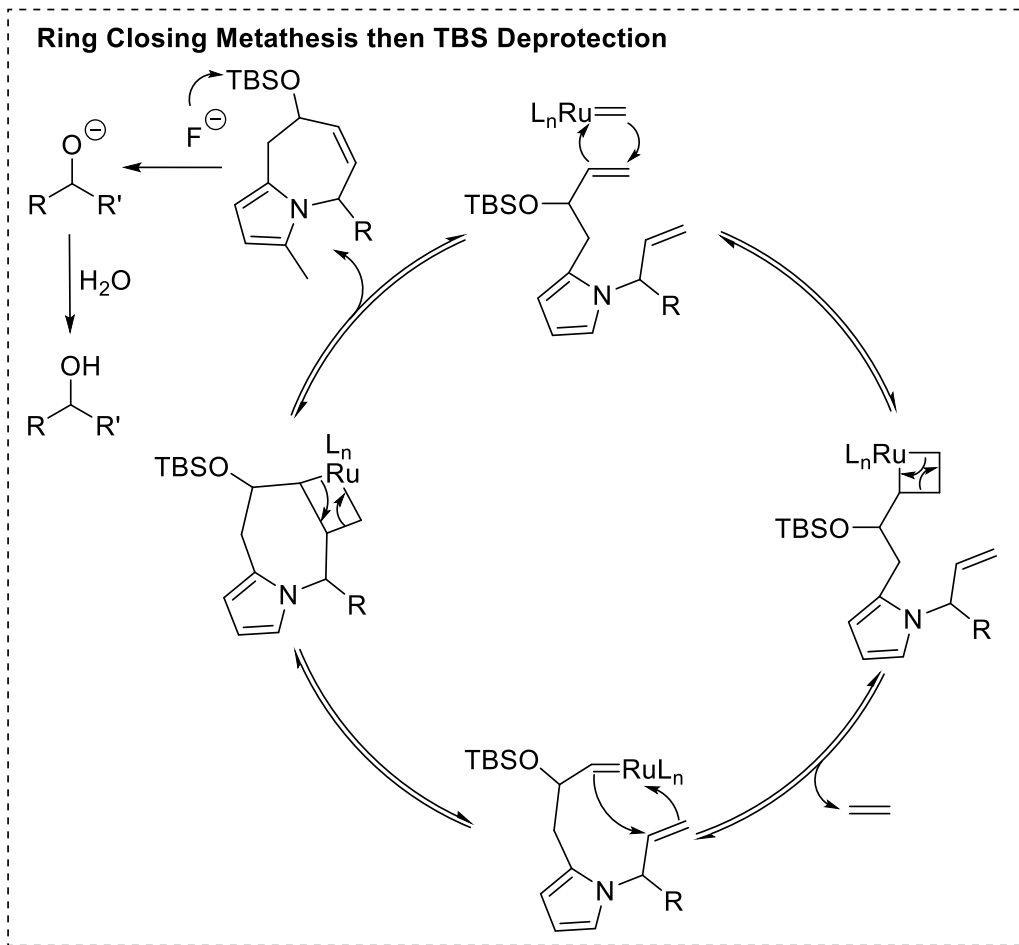
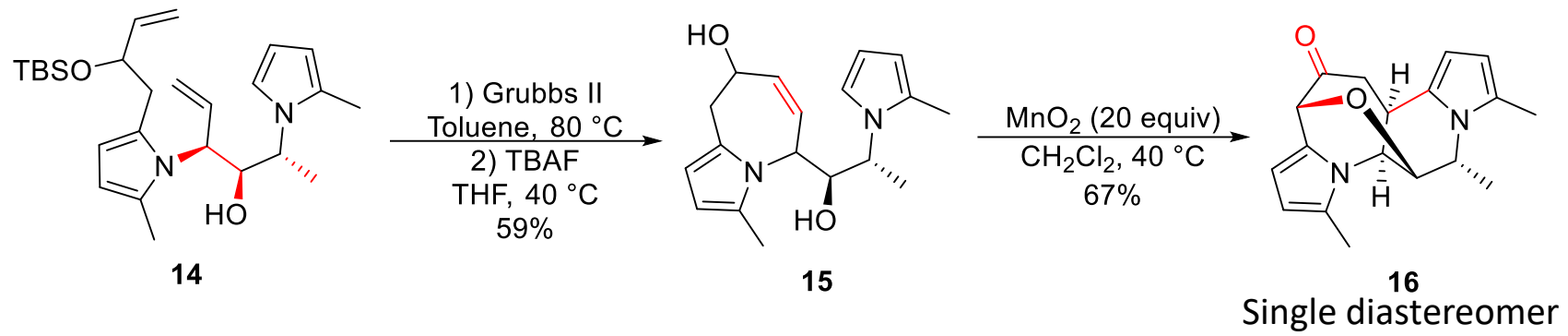


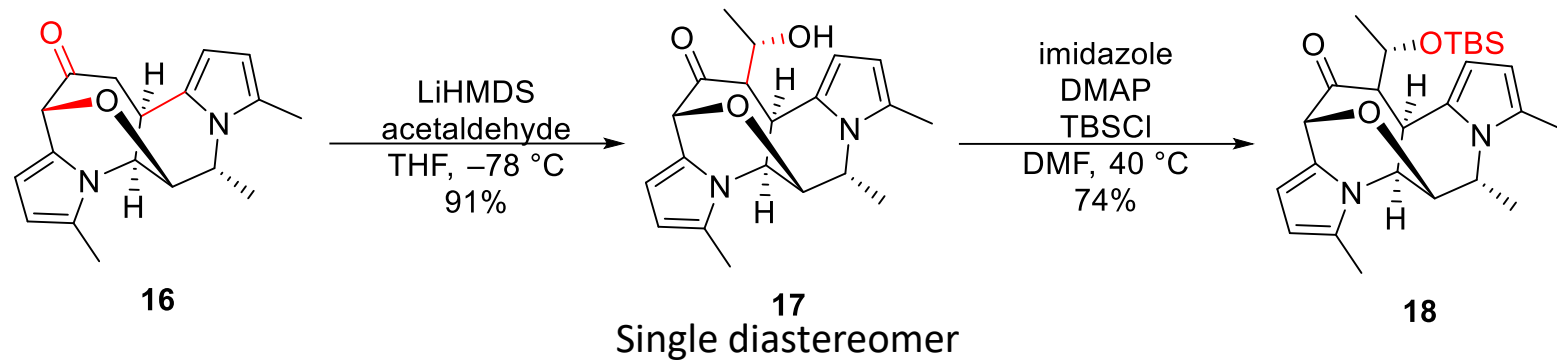
Base-Catalyzed Alkyne Isomerization



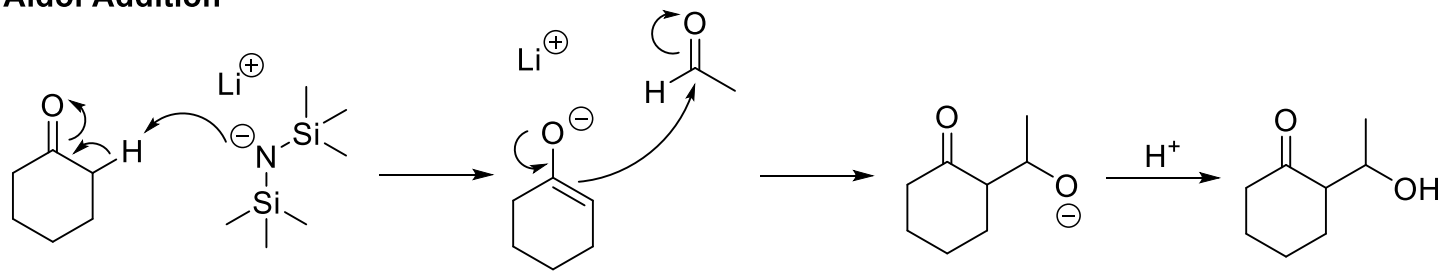
Krische's Ru-Catalyzed Hydrogen Transfer



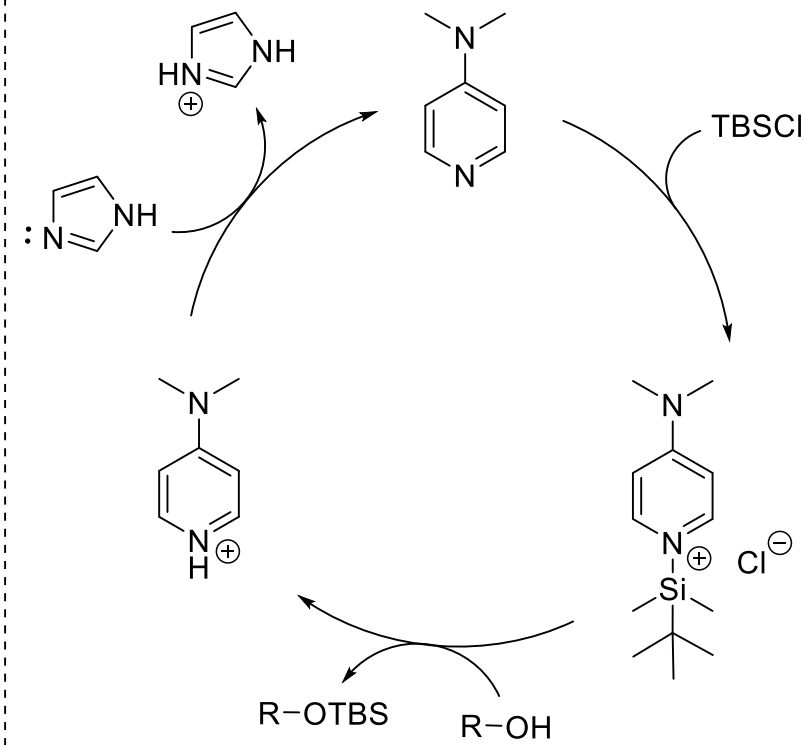


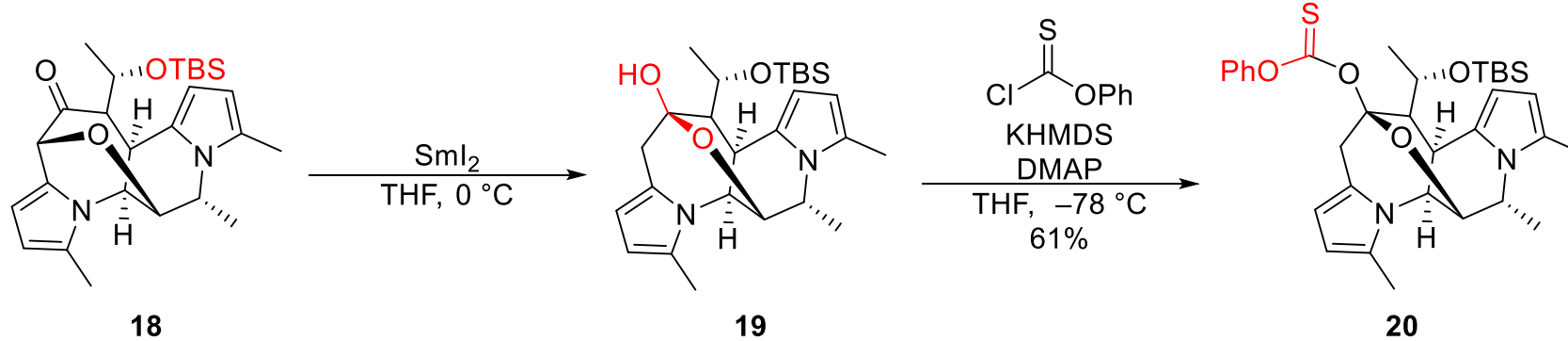


Aldol Addition

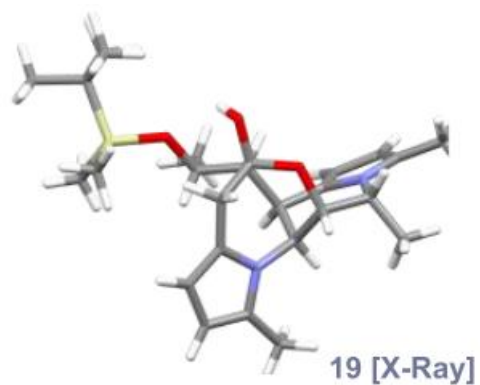
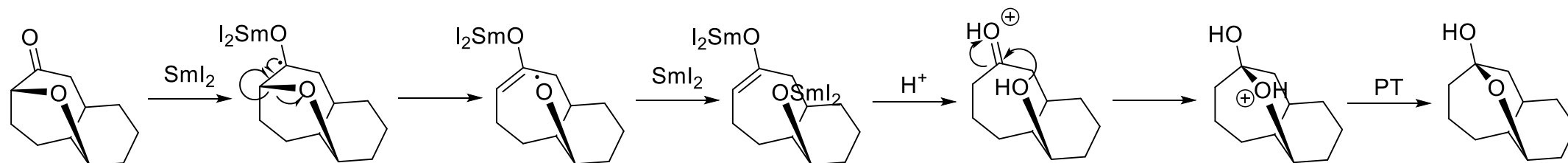


Lewis Base-Catalyzed Silylation of Alcohols

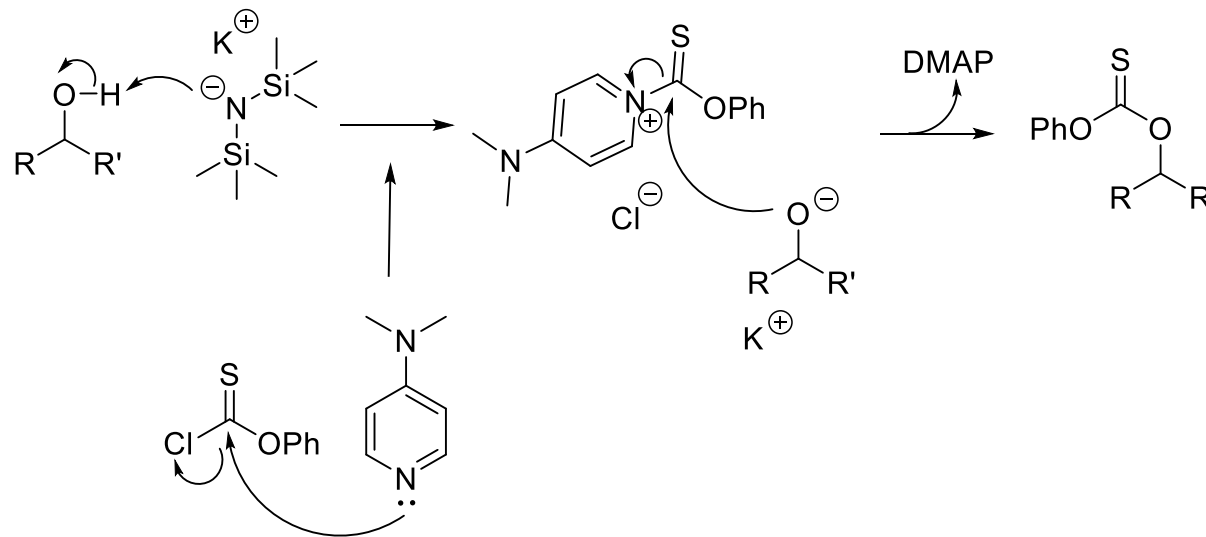


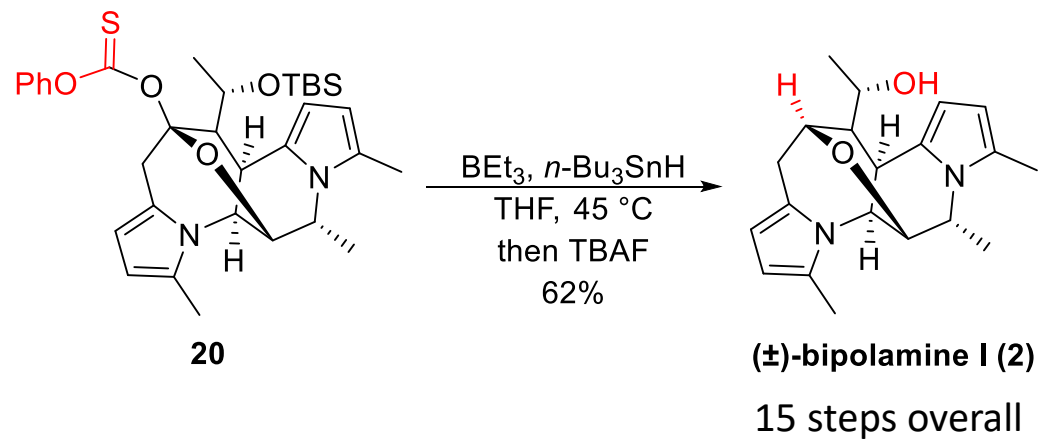


Reduction with Samarian(II) Iodide



Thiocarbonation





Barton-McCombie Deoxygenation

