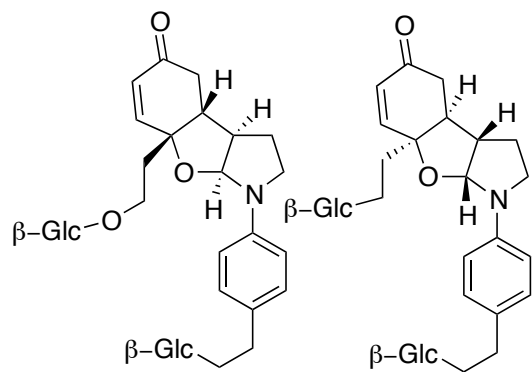


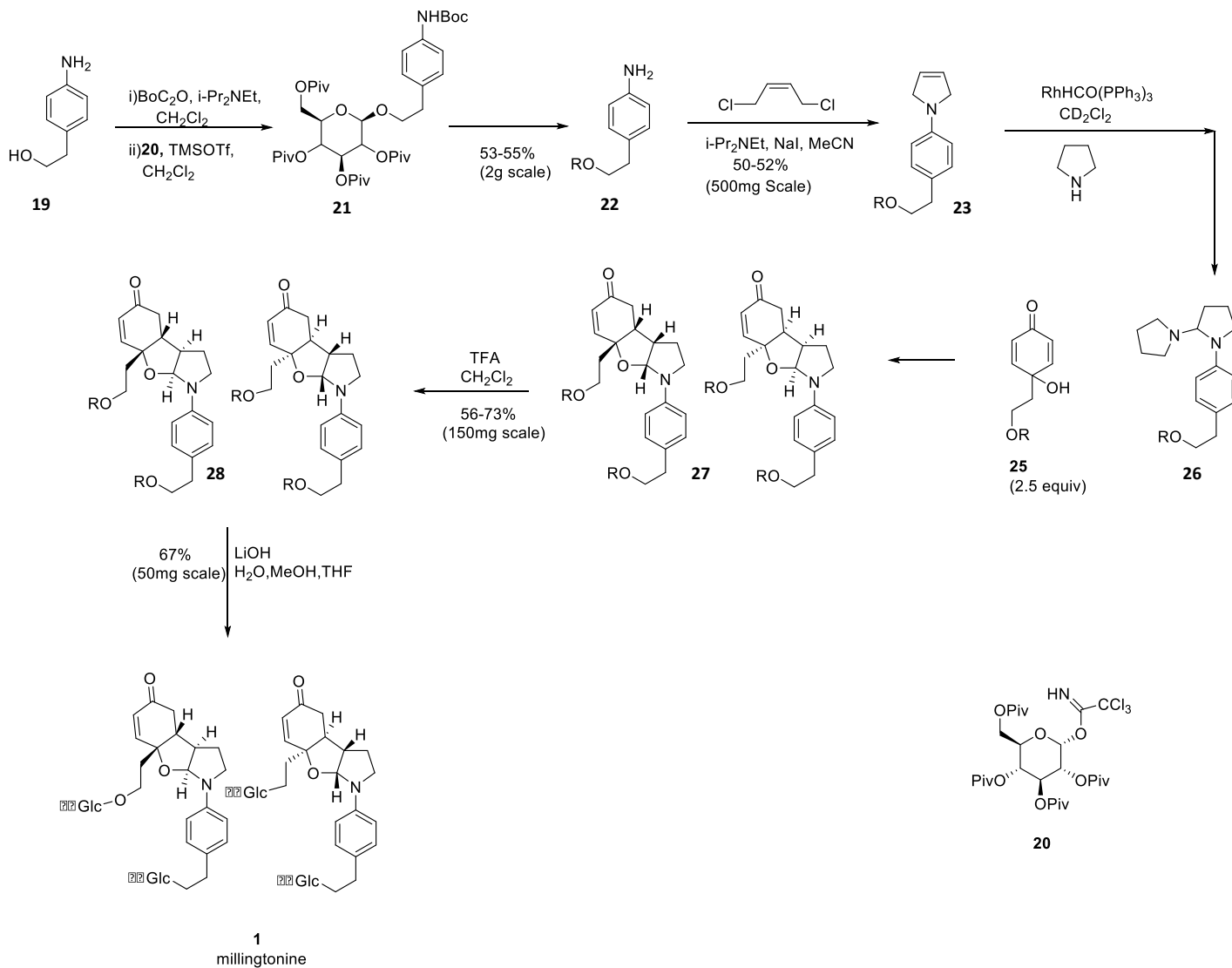
Total synthesis of Millingtonine



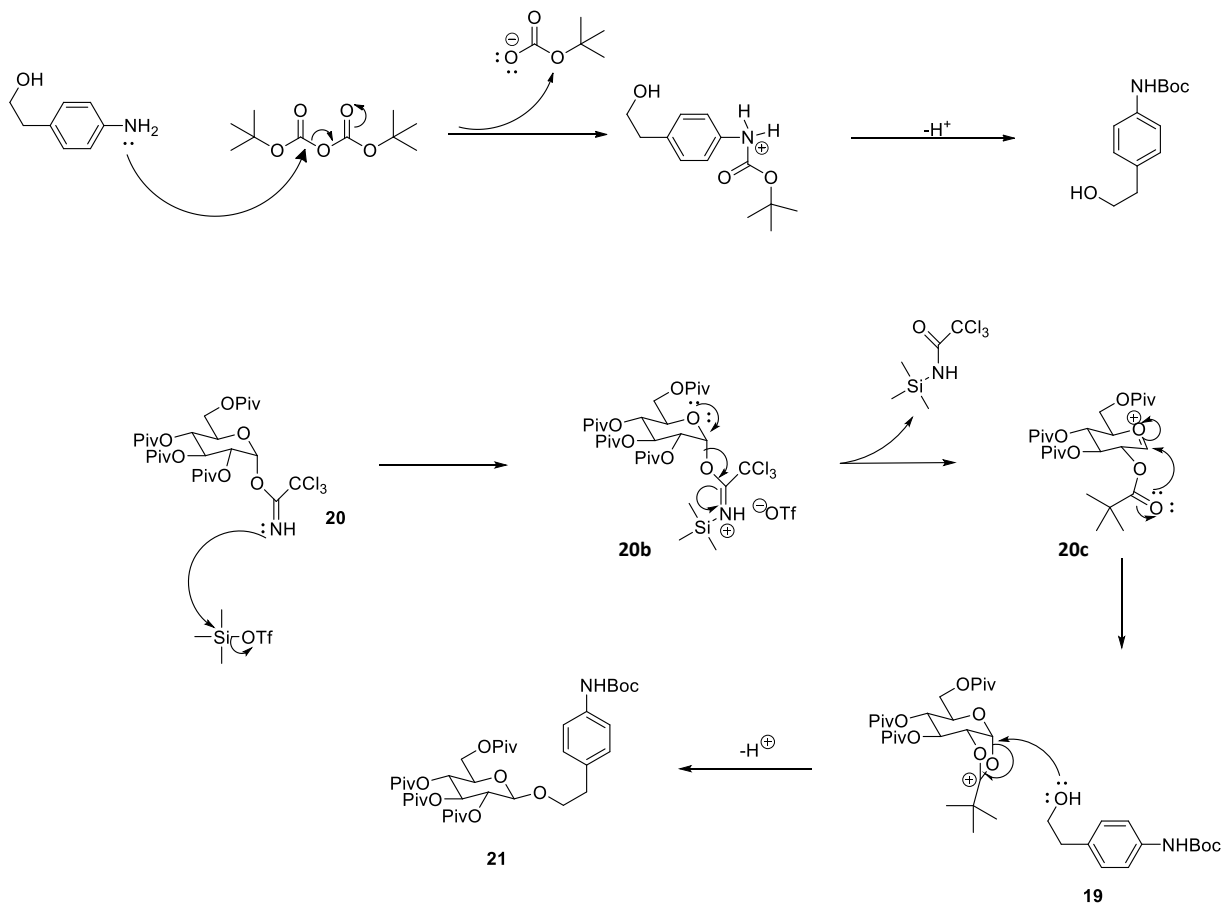
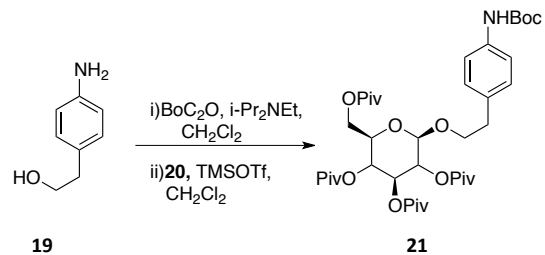
1
millingtonine

- Alkaloid millingtonine was isolated as a mixture of two diastereomeric alkaloids in 1996
- One previous total synthesis of millingtonine was reported by research group Ley, requires 12 linear step.
- New biosynthetic insights that enabled a highly step economical total Synthesis pathway- seven-step total synthesis . (50mg scale)

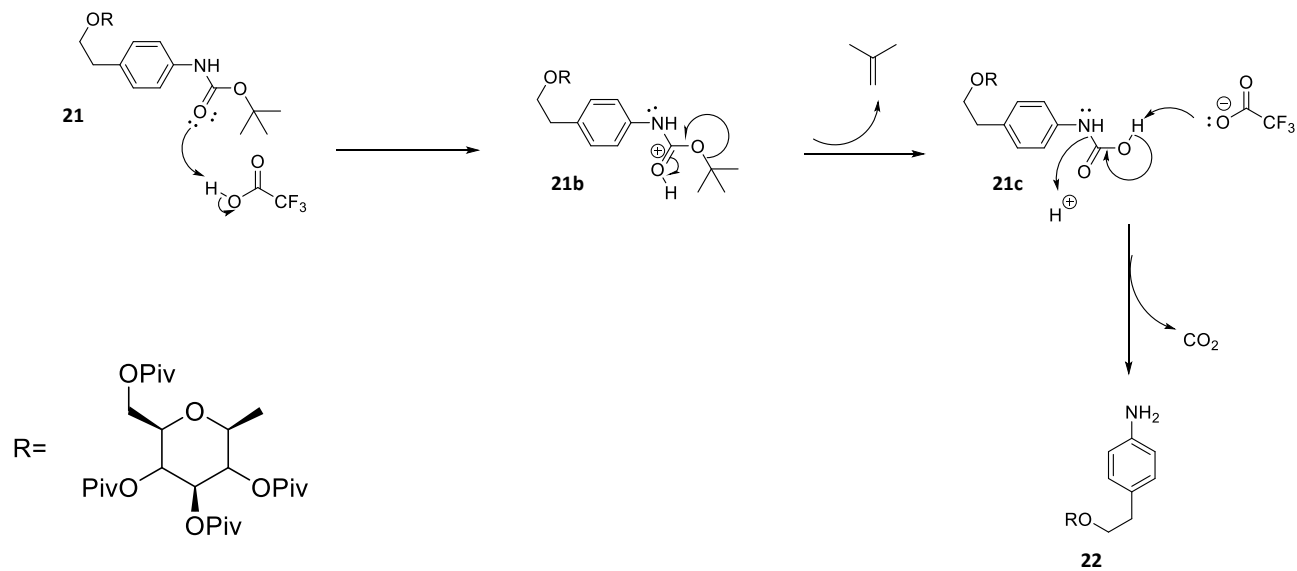
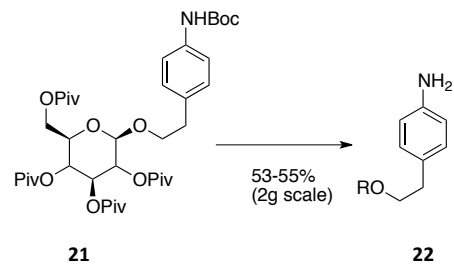
Total synthesis of Millingtonine



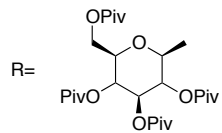
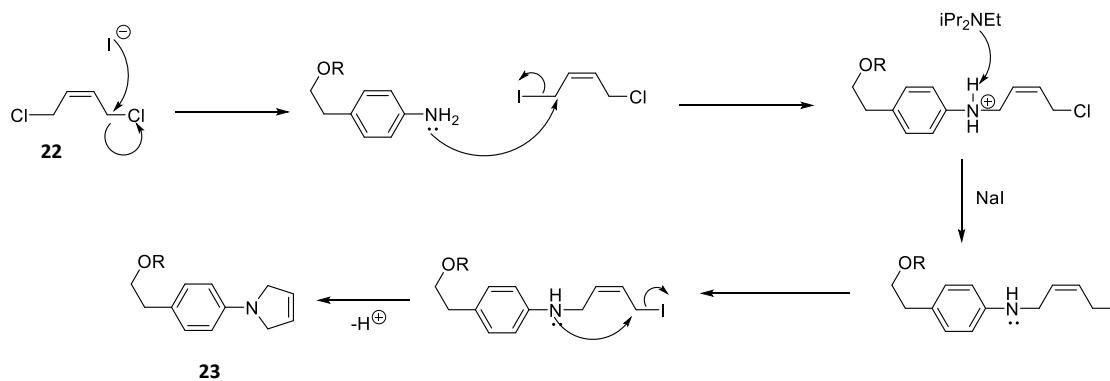
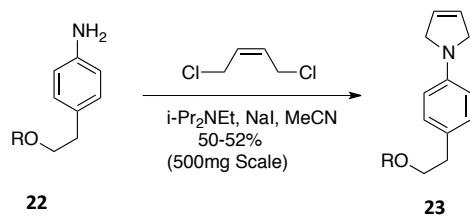
Forward step 1: Boc protection and β -selective Glucosidation



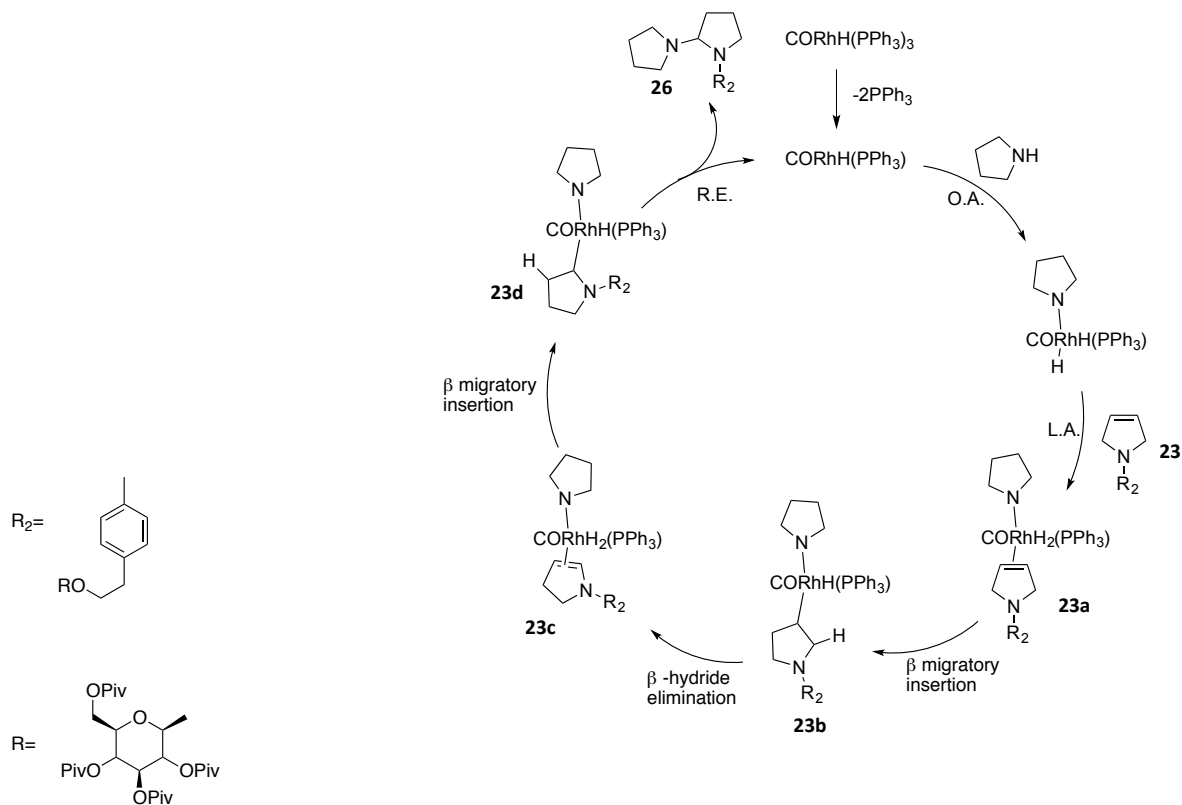
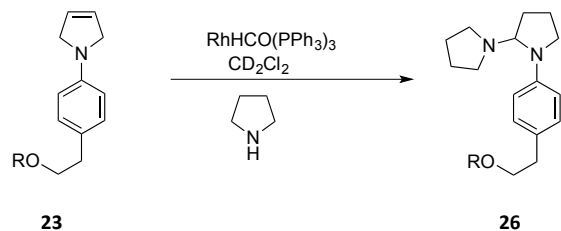
Forward step 2: Boc deprotection



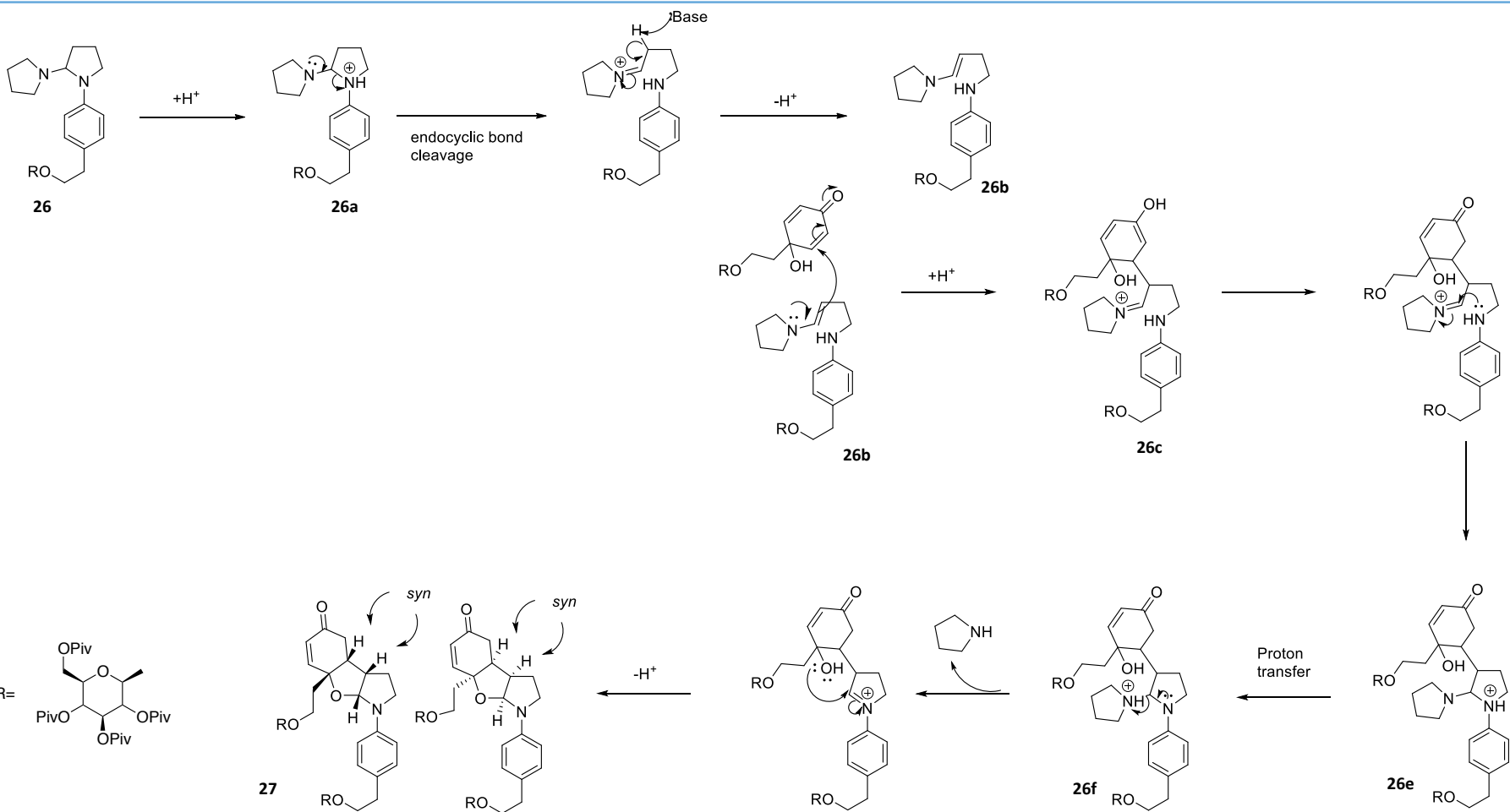
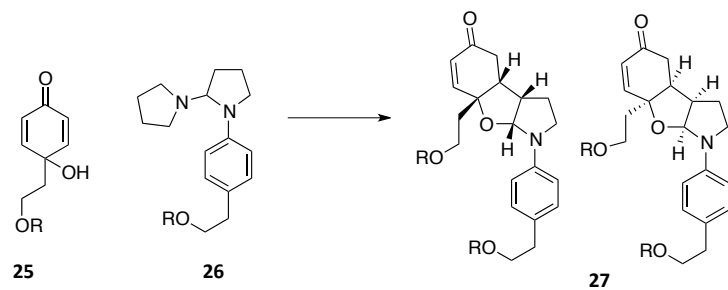
Forward step 3: Condensation of aniline



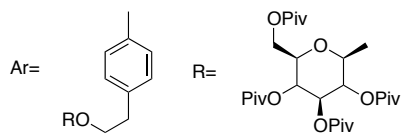
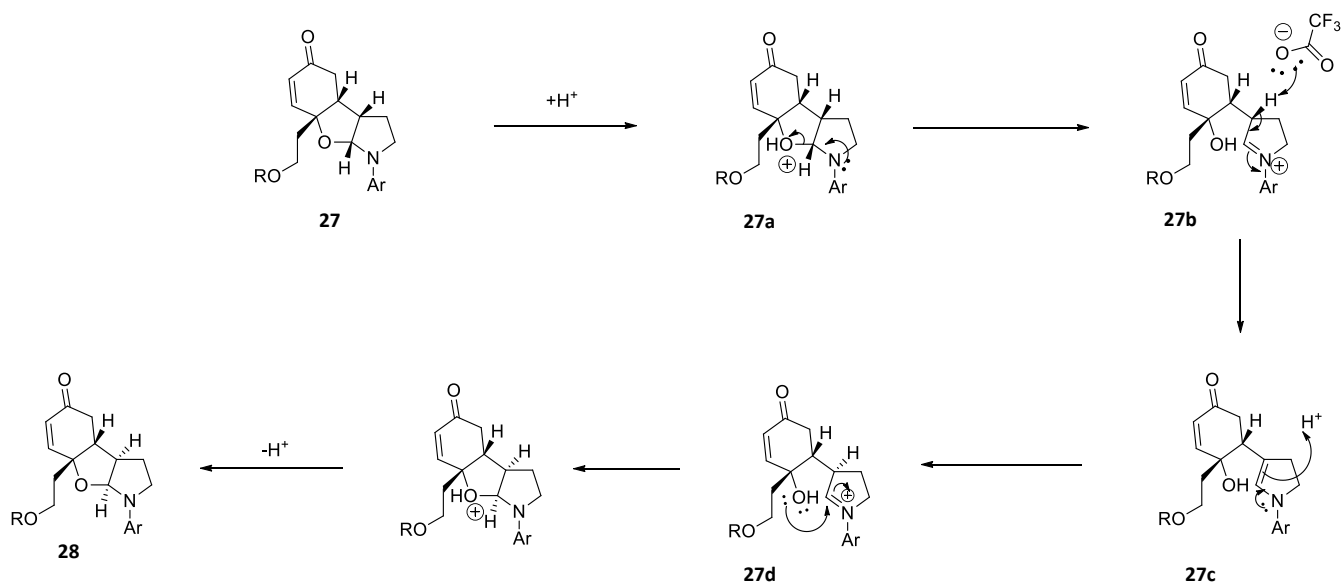
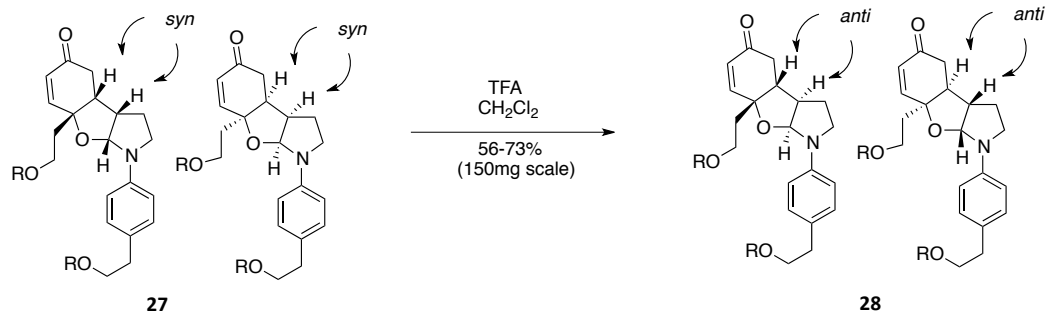
Forward step 4: Condensation of aniline



Forward step 5: Cross-dimerization



Forward step 6: Isomerization under acidic conditions



Forward step 7: Deprotection of pivaloyl groups

