



Logic: Step 1 is Michael addition. I have seen this reaction stop before it does the aldol. Step 2 is getting creative. I think the second best place to form an enolate would be where I selected, forming thermodynamic enolate. Step 3 is reacting the more basic enolate with an electrophilic bromine source. The more basic enolate reacts first. Step 4 the structure cyclizes naturally, hopefully not reacting at carbon and forming a three membered ring. Using sodium as the counter ion should help it react at oxygen. Step 4 is chemoselective wittig. This ketone should react faster because the other ketone is a vinyl ester (has donation from other oxygen).