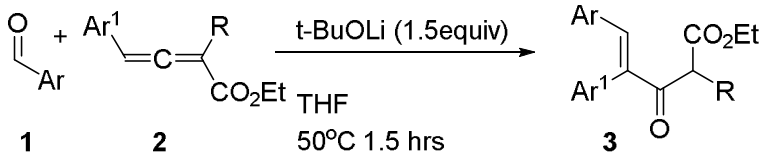
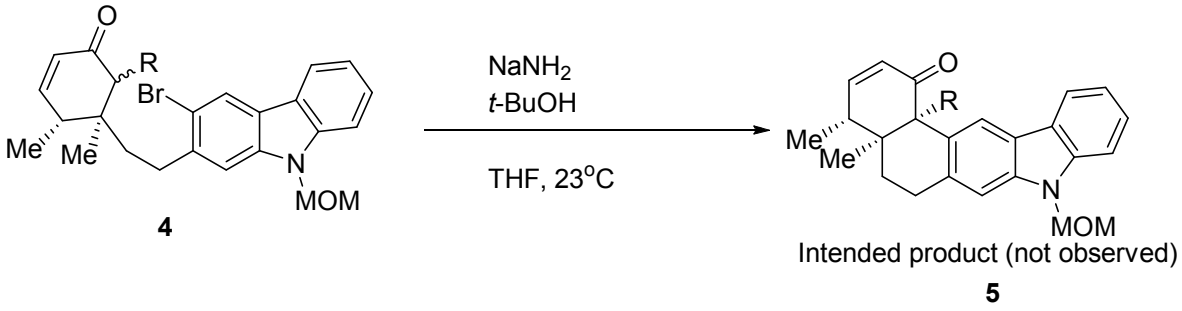
Joint Group Meeting Questions February 27th, 2014

1) Please propose a reasonable mechanism for the following transformation forming compound **3**. Hint: No water!

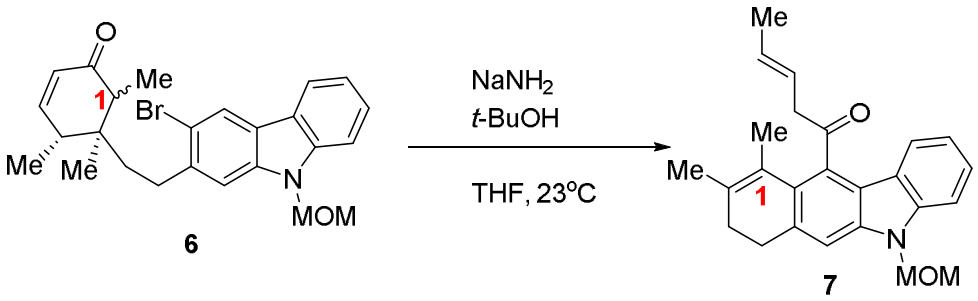



**1** **2** **3**

2) In the synthesis of a natural product some chemists explored the reaction shown below. They found their substrate **4** did not undergo the desired transformation to **5**. A simpler model substrate **6** was found to give product **7** instead. Propose a mechanism for the formation of **7** and explain why the desired product could be formed when the ring carbon labeled **1** did not have an alkyl substituent or when the ketone was not α-β unsaturated.




**4** Intended product (not observed) **5**




**6** **7**

22%