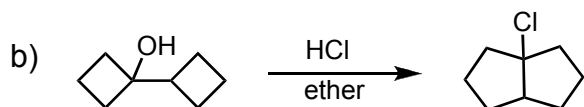
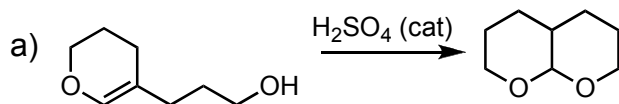


Chemistry 30B Discussion - Week 6: Alcohols - DCF

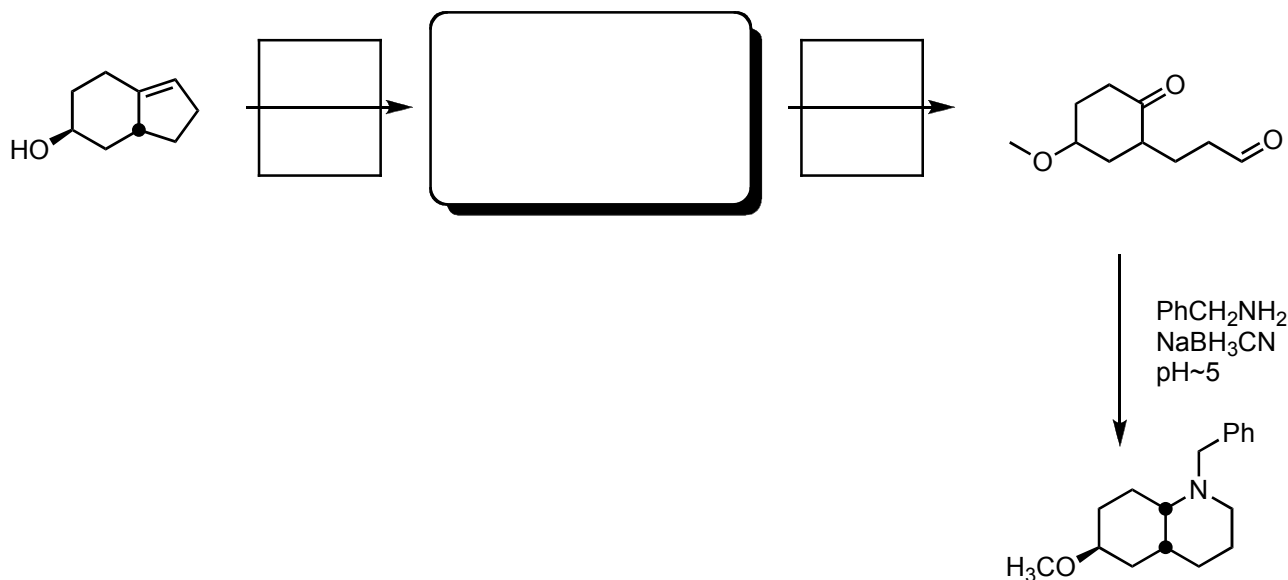
1: Back to Week 1: Propose a reasonable mechanism

Looking back to problem 3 on the 30A review problems. They are posted below for your convenience.

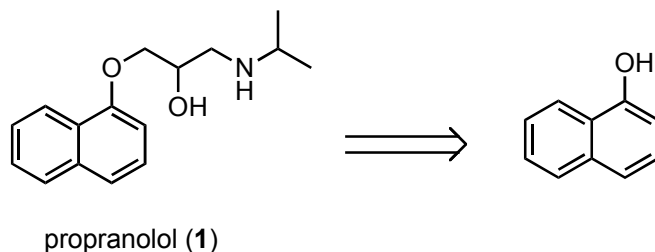


2: Synthesis: What organic chemistry is all about!

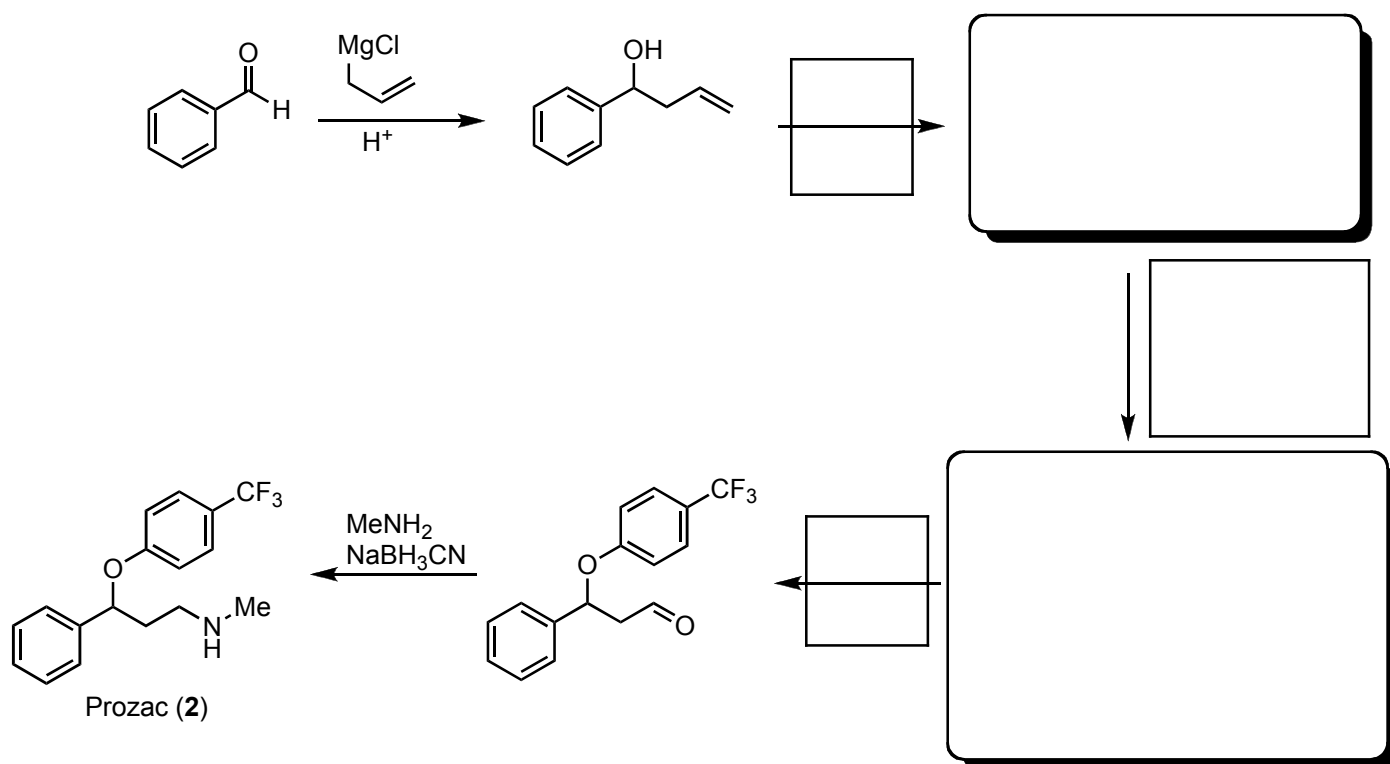
a) Complete the following synthetic scheme. At risk of sounding dumb, boxes on arrows should be filled with appropriate reagents, and boxes between arrows should be filled with appropriate intermediates



b) The beta-adrenergic blocker propranolol (**1**) is used as an antihypertensive agent and in the treatment of arrhythmia. Design a short synthesis of **1** from 1-naphthol and any other organic or inorganic compounds.

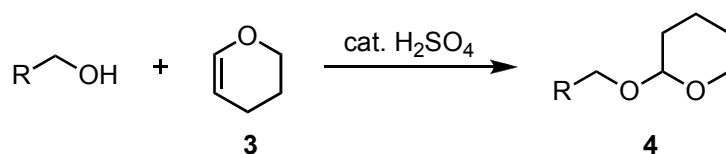


c) The serotonin uptake inhibitor Prozac (**2**), produced by Eli Lilly, had received much attention in conjunction with its effectiveness in the treatment of acute depression. Complete the following synthetic scheme designed to convert benzaldehyde to Prozac.



3: Thinking about mechanisms.

Dyhydropyran **3** is frequently used as a protecting group for alcohols in organic synthesis:



a) Propose a reasonable arrow pushing mechanism for the transformation of **3** to **4**.

b) Propose a method to effect the deprotection of **4** to regenerate the starting alcohol. Specify all reagents used. Also, consider the byproduct of the deprotection and draw it in the box provided. Finally, propose a mechanism for this deprotection. (Hint: the byproduct is NOT **3**, and is acyclic.)

