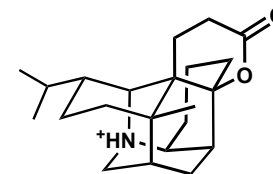
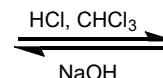
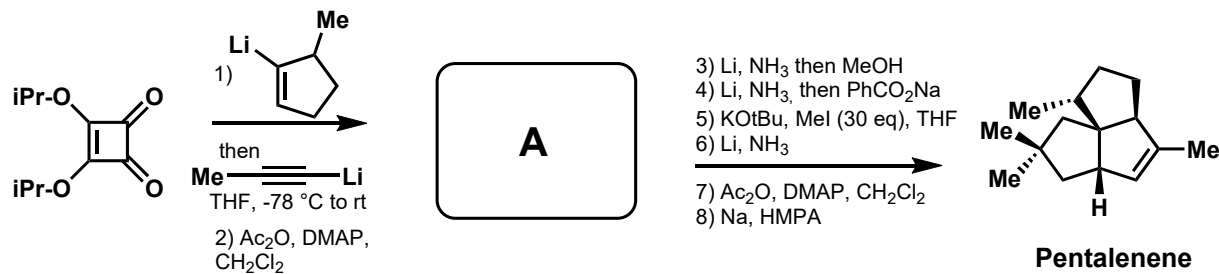


Dapholdamine B



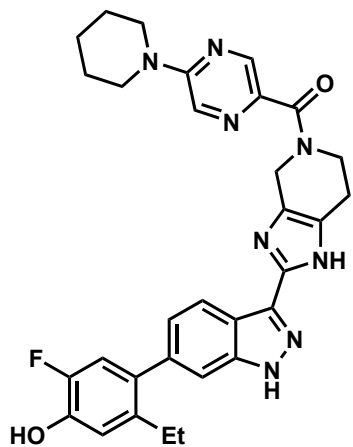
Dapholdamine B lactone



Provide a detailed mechanism for the first step

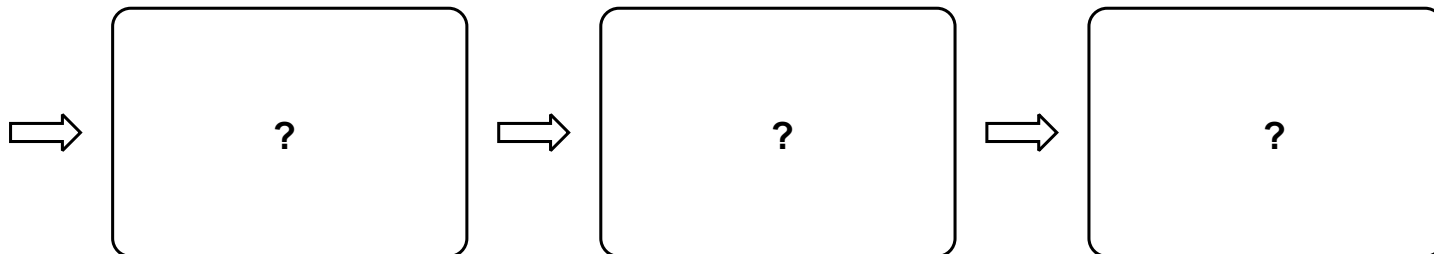
Retrosynthesis

Gontcharov, A. *et al.*, *Org. Process Res. Dev.* **2019**, 1990 - 2000.



Janus Kinase Inhibitor PF-06263276

JAKs transduce cytokine-mediated signals;
 used to treat inflammatory diseases, cancer



Provide a short retrosynthesis and a synthetic plan.
Try to use small building blocks; you are allowed to use
a metal-catalyzed reaction once! Keep the conditions simple.

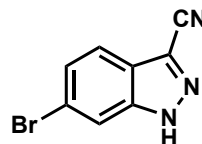
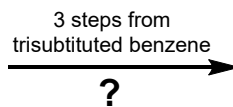


Figure out the starting material
and the reaction conditions!
You are only allowed to use substitution,
Red/Ox or condensation reactions.

Sato Pharmaceutical Co., Ltd.; NAGAI K. *et al.*, EP2669270, 2013, A1