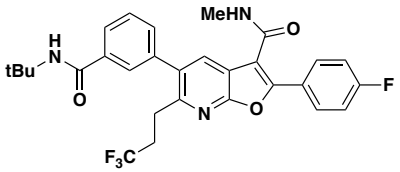
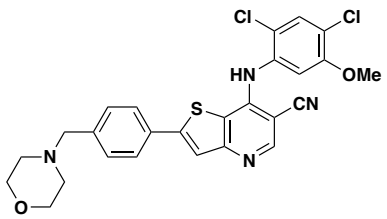
Lecture 8: Azaindoles, Furopyridines and Thienopyridines

Study music: Mozart

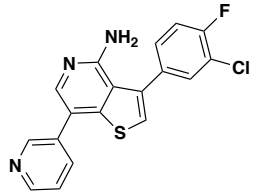
Syntheses discussed:



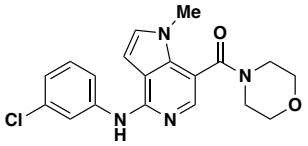
HCV Polymerase Inhibitors (BMS)
Med. Chem. Commun. **2017**, *8*, 796-806



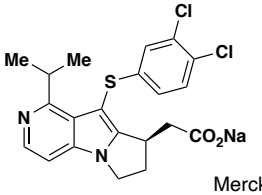
Src Kinase Inhibitor (Wyeth)
J. Med. Chem. **2005**, *48*, 3891



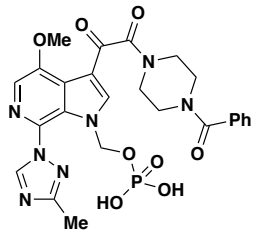
Protein kinase inhibitors
(GSK) BMCL **2007**, *17*, 250



J. Med. Chem. **2009**, *52*, 5785



Merck
OPRD, **2010**, *14*, 787



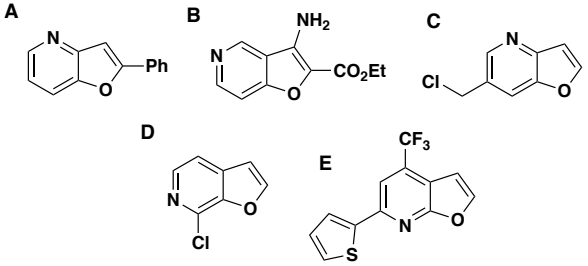
BMS-663068 *OPRD,* **2017**, *21*, 1095

Reading assignment: PCC 5/6 Fused Heteroarenes

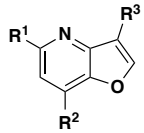
Partial list of concepts/transforms discussed:
Pyridine ring forming reactions
Pyrrole ring forming reactions
Thiophene ring forming reactions
Furan ring forming reactions
Fused arene retrosynthesis

Problems of the day:

1 Propose syntheses of the following furopyridines

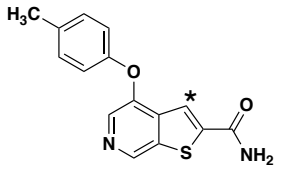


2 Provide a flexible synthesis of the following core to allow diverse R groups to be incorporated



R groups = NR_2 or (het)aryl

3 Propose a synthesis of the following radiolabelled thienoopyridine



4 Propose syntheses of the following azaindoles using indole synthesis logic

