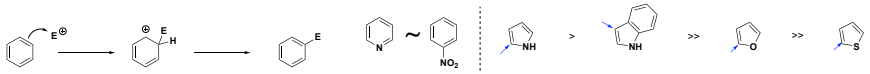
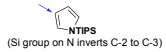
Lecture 2: General Reactivity 2

Electrophilic attack @ carbon:

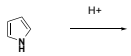
Relative rate of Friedel-Crafts acylation

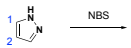


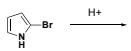


(Si group on N inverts C-2 to C-3)

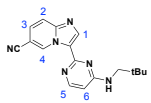
POD#1

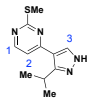






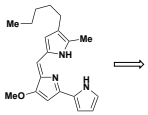
Where will bromination go?





JOC, **2016**, *81*, 5128

prodigiosin:



POD#2

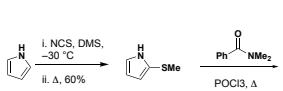


1. $^1O_2$, then pyrrole
2. NH_2NH_2; TsCl/py; Na_2CO_3 (170°C)

A B

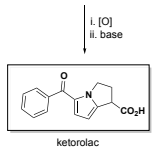


Synthesis of ketorolac:

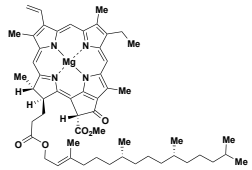


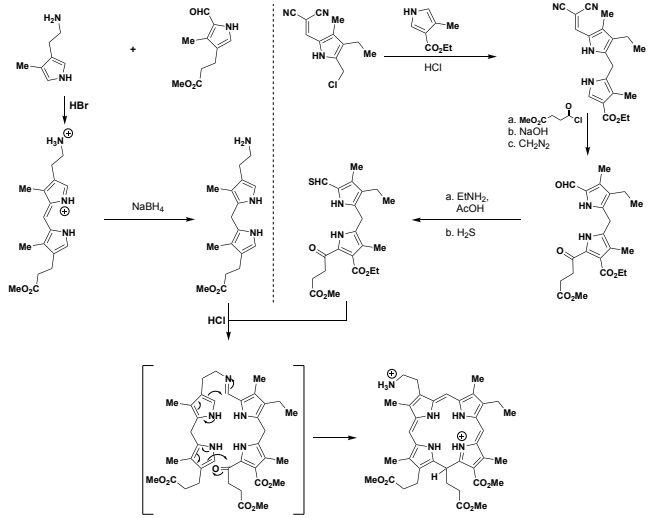
POD#3





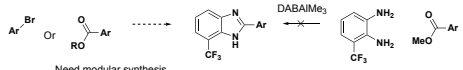
Muchowski, *Adv. Med. Chem.* **1992**, *1*, 109





Tet. Lett. **2014**, *4853*

Consulting Question #1:



Need modular synthesis. Substituents cannot tolerate highly acidic conditions

Observe:

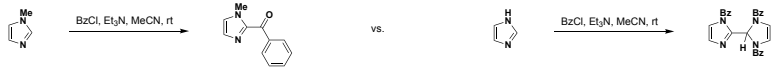


Via:

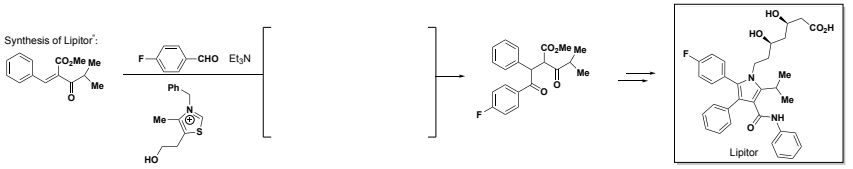
Suggestions:

POD #4

Explain:

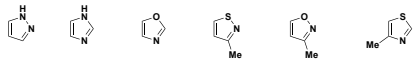


Synthesis of Lipitor®:

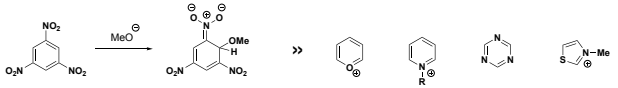


Roth *Tetrahedron Lett.* **1992**, 2279, 2283

Nitration on rings:



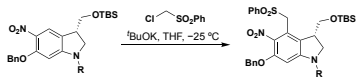
Reactions initated by attack of nucleophiles @ carbon:

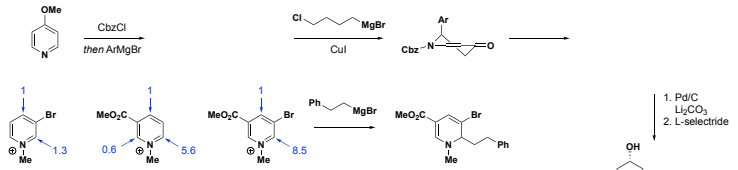


Strong Nu's will attack

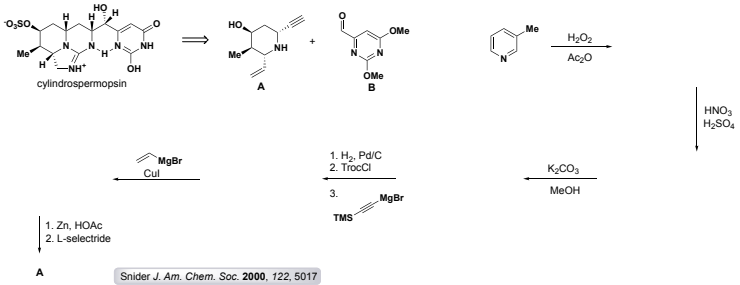


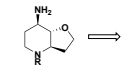
POD #5



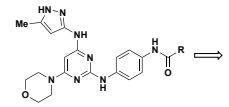


Synthesis of cylindrospermopsin



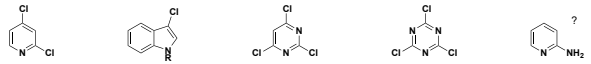


POD #6

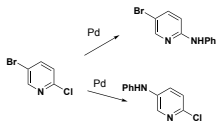


J. Med. Chem. **2018**, *61*, 1895.

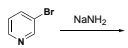
Consulting Corner: Haloselectivity



Haloselectivity in metal catalyzed cross couplings:



J. Am. Chem. Soc. **2017**, *139*, 10613



POD # 7

