

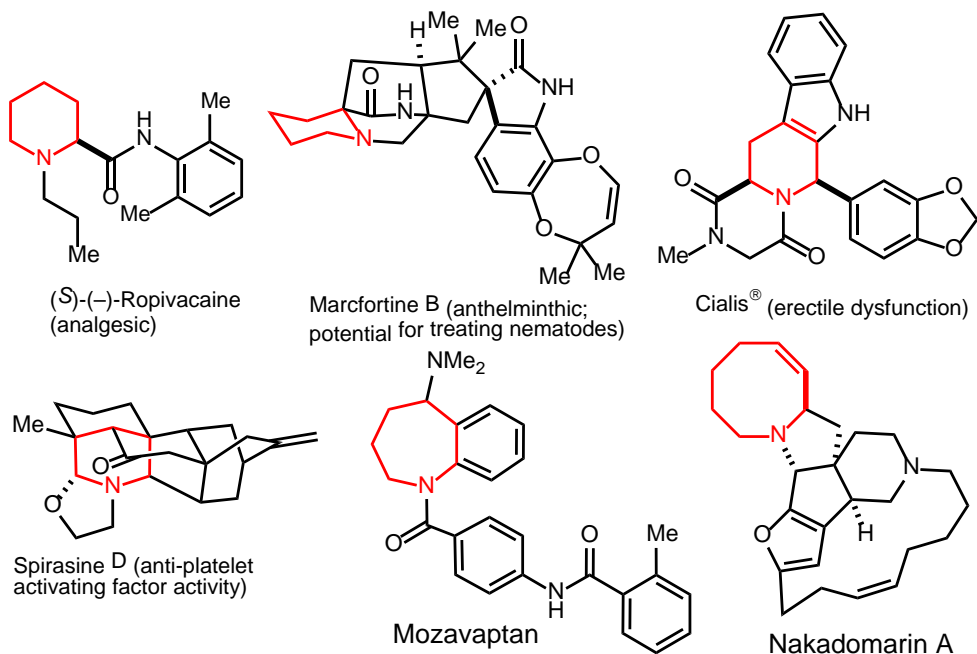
# Beng Research Group

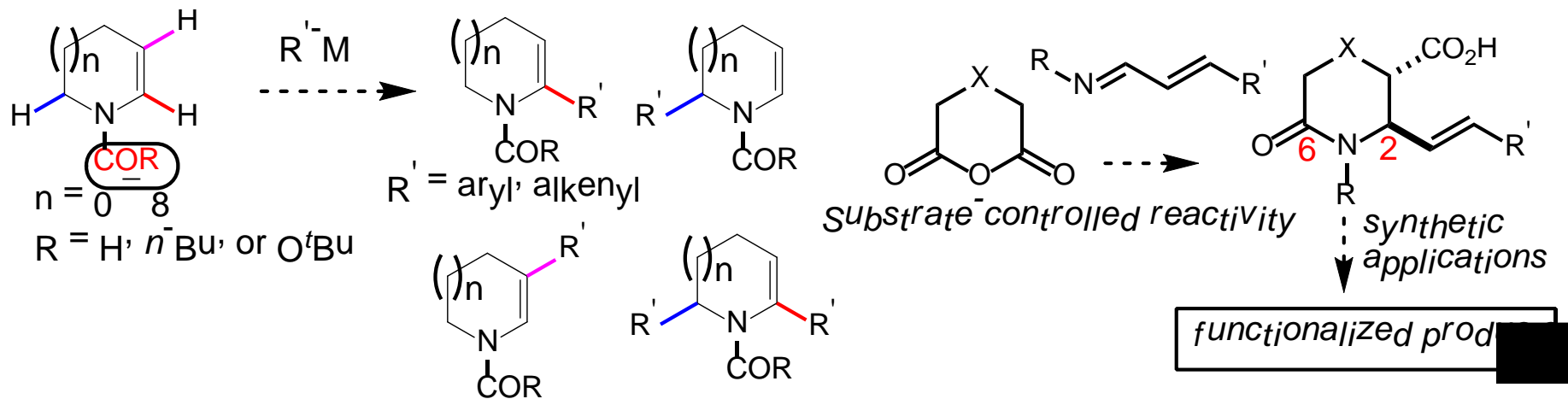
## Development of efficient strategies for the regio- and stereocontrolled construction and functionalization of biologically relevant nitrogen & oxygen-containing heterocycles

Research in our laboratories focuses mainly on the design of ingenious and efficient strategies for the construction and functionalization of nitrogen- and oxygen-containing heterocycles for eventual application in natural product synthesis. Through these efforts, we seek to explore the limits of existing chemical reactivity and develop new reaction manifolds in the process.

**Short-Term Goals:** To expand the synthetic strategies developed for the  $\alpha$ -regioselective and stereoselective functionalization of  $\alpha$ -halo eneforamides to large ring azaheterocycles. To explore the possibility of a one-pot vicinal difunctionalization of  $\alpha$ -halo eneforamides.

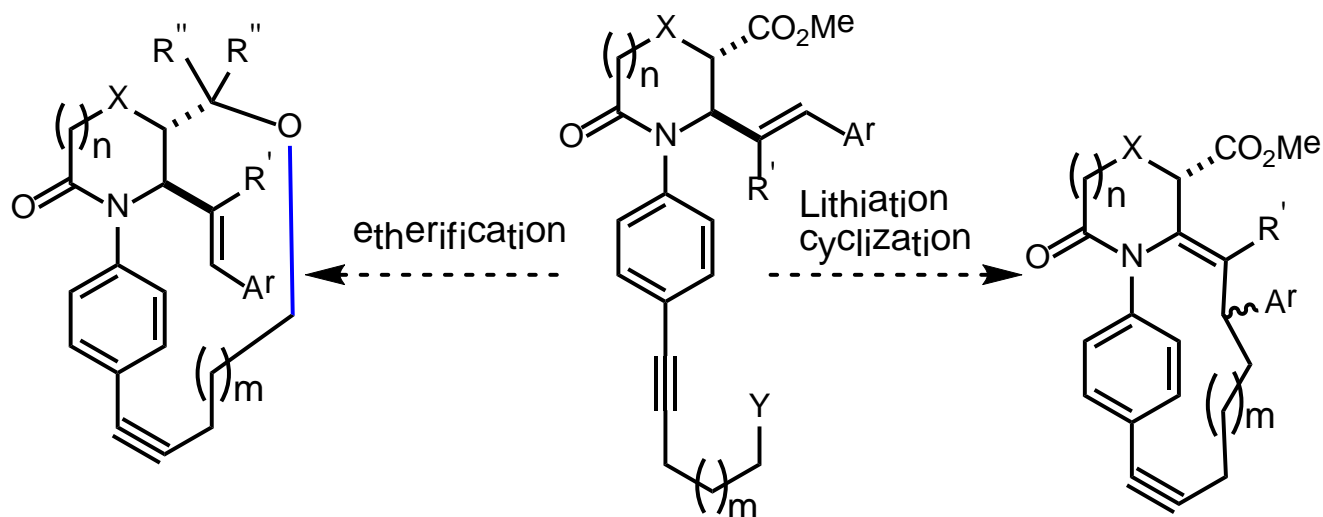
**Long-Term Goals:** To apply newly developed vicinal difunctionalization tactics to the synthesis of fused biologically relevant aza polycycles





Project #1: C-H activation/cross-coupling

Project #2: Hexannulation with 1,3-azadienes



Project #3: Macrocyclizations to form strained cycloalkynes