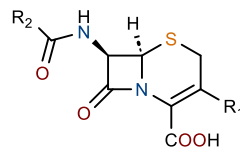
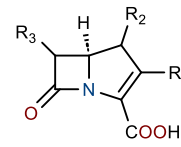


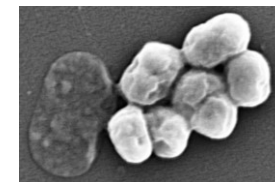
- *Acinetobacter baumannii* (Gram-negative pathogen)
- Cephalosporin & carbapenem resistant
- 2020: 35% increase in number of cases due to extended hospital stays
- Multiple resistance mechanisms: targeting  $\beta$ -lactamases
- 3 out of 4 classes of  $\beta$ -lactamases use a serine-based mechanism
- Coupling a  $\beta$ -lactamase inhibitor with  $\beta$ -lactam antibiotics



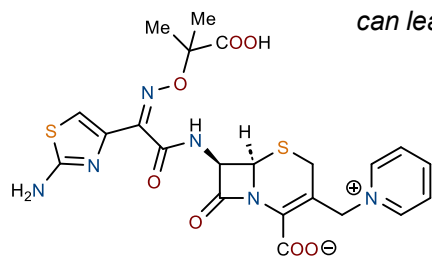
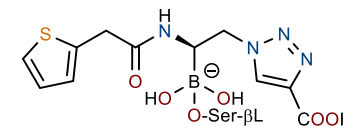
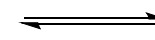
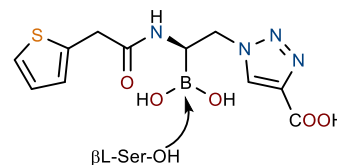
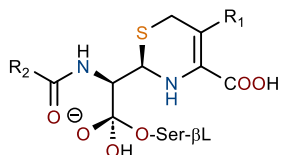
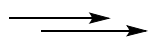
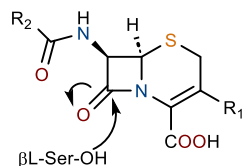
cephalosporins



carbapenems

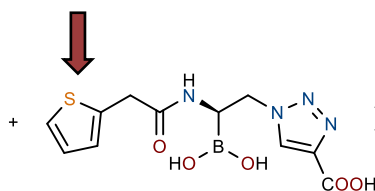


*Acinetobacter baumannii*

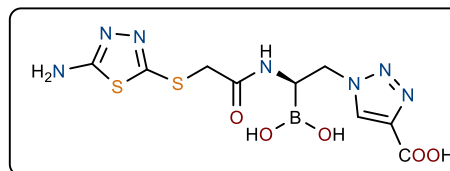


ceftazidime

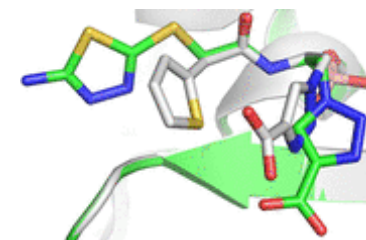
can lead to highly reactive metabolites



S02030

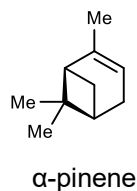


MB076

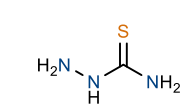
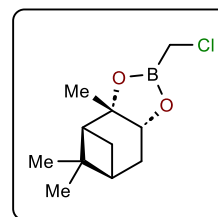
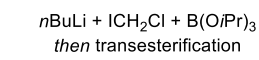
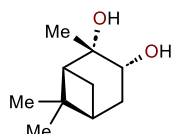
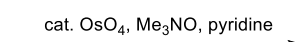


superposition of ADC-7 complexes

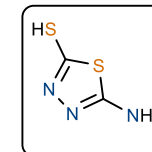
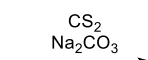
**Synthesis of starting materials**



$\alpha$ -pinene



thiosemicarbazide



Synthesis of MB076

