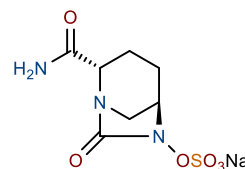
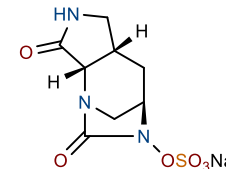


## Background

- $\beta$ -lactamase enzymes are the primary means of resistance to  $\beta$ -lactam antibiotics like penicillin and cephalosporins
- IID572 is a broad-spectrum  $\beta$ -lactamase inhibitor (BLI) developed as a derivative of avibactam
- IID572 has similar pharmacokinetic properties to avibactam
- Avibactam also has modest antibacterial activity, while IID572 doesn't
- This may delay the development of resistance to BLI combination therapies, which is already being observed with avibactam



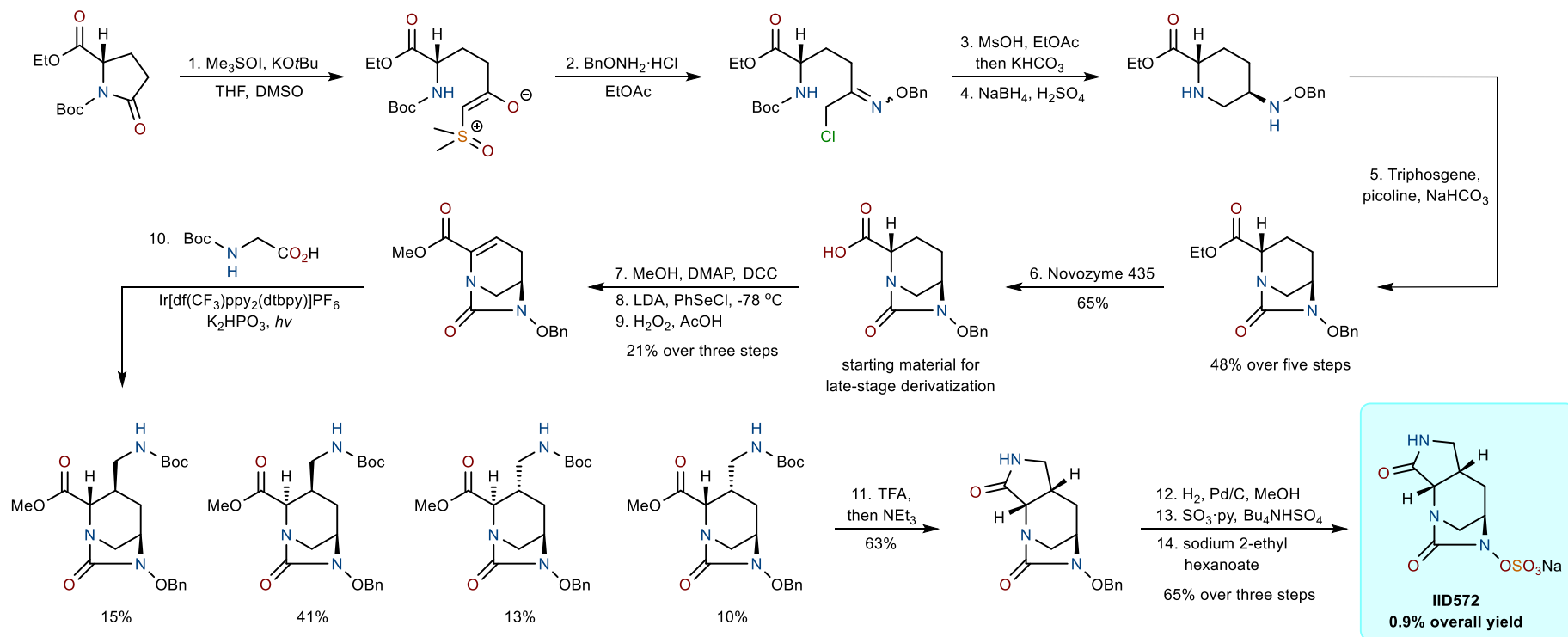
Avibactam



IID572



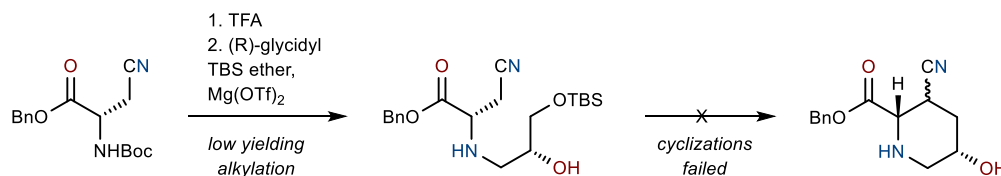
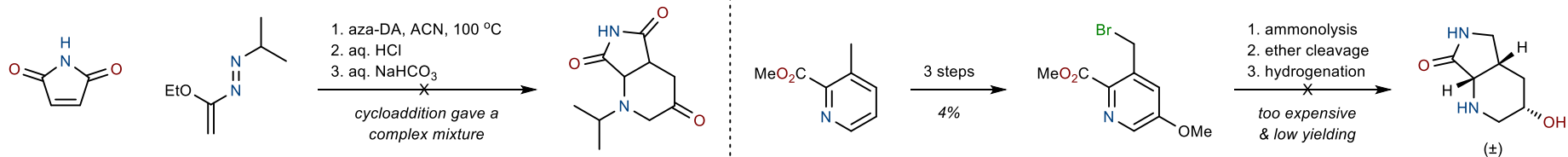
## Discovery Route: Late-Stage Derivatization



Golden, M. *Org. Process Res. Dev.* **2016**, *20*, 1799. <https://doi.org/10.1021/acs.oprd.6b00268>

Reck, F. *ACS Infect. Dis.* **2019**, *5*, 1045. <https://doi.org/10.1021/acsinfectdis.9b00031>

**Alternate Attempted Routes**



**Scale-Up Synthesis for Toxicological Studies**

