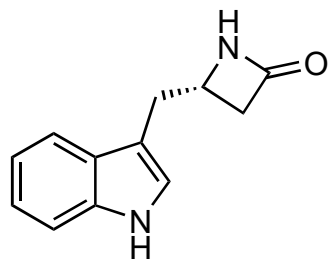
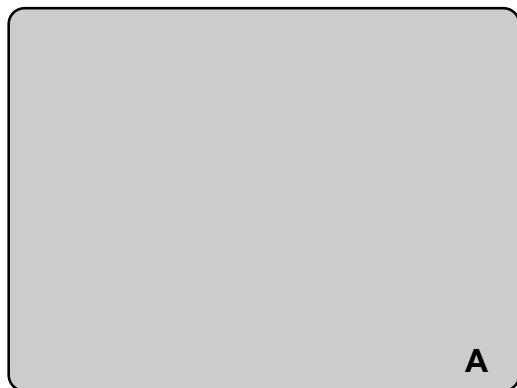


Total Synthesis of (+)-Alstonlarsine A

Ferjancic, Z.; Kukuruzar, A.; Bihelovic, F.
Angew. Chem. Int. Ed. **2022**, *61*, e202210297.

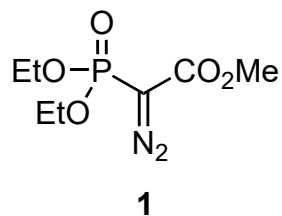


1-8



9-12

- 1) TBSCl, Et₃N, DMAP
- 2) NaH, *then* TBSCl
- 3) LDA, *then* MeI
- 4) Et₂NLi; *then* MeCHO, -100 °C
- 5) Ac₂O, Et₃N, DMAP
- 6) KF
- 7) Boc₂O, Et₃N, DMAP
- 8) HF



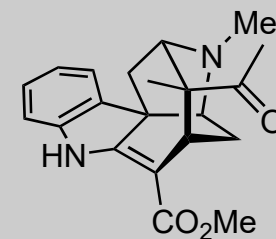
- 9) **1**, Cu(acac)₂ (2 mol%), 120 °C
- 10) NaBH₄ (3 equiv.)
- 11) IBX
- 12) LiBr, Et₃N

4) Mixture of diastereomers was carried forward

9) Provide a mechanism

11) Structure of IBX

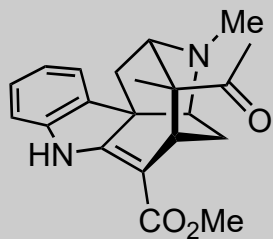
12) Named reaction



(+)-Alstonlarsine A

B

13-18



(+)-Alstonlarsine A

- 13) Boc₂O, Et₃N, DMAP
- 14) NaH, *then* MeI
- 15) TFA
- 16) MeCHO, 100 °C
- 17) NaH, LiAlH₄
- 18) NCS, Me₂S, Et₃N

16) Two step cascade

17) Provide reasoning for the role of NaH

18) Named reaction