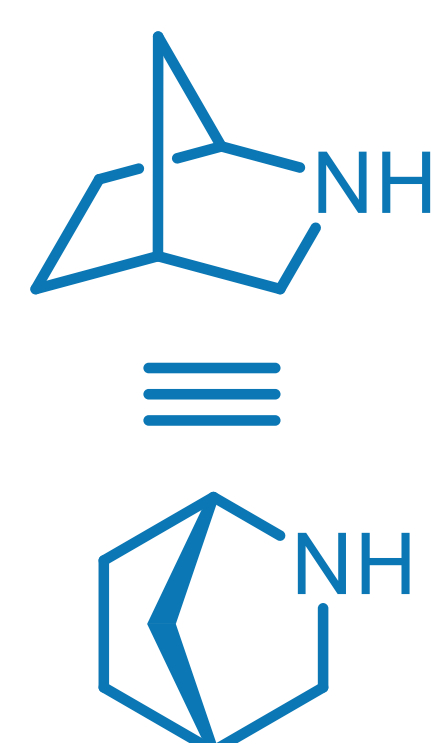


Synthesis and Functionalization of Azabicyclo[2.2.1]heptanes for Medicinal Chemistry Applications



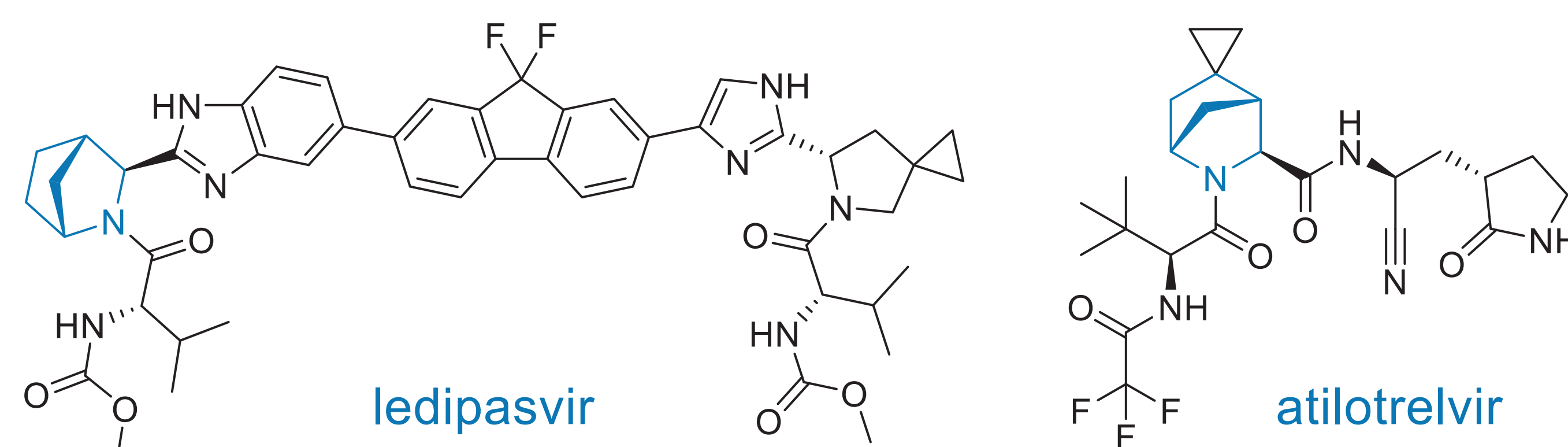
Artem Klochkov, Evgeniy Zarudnitskii, Alexander Pashenko, Dmytro Volochnyuk, Serhiy Ryabukhin

2-Azanorbornane: a promising motif in drug discovery

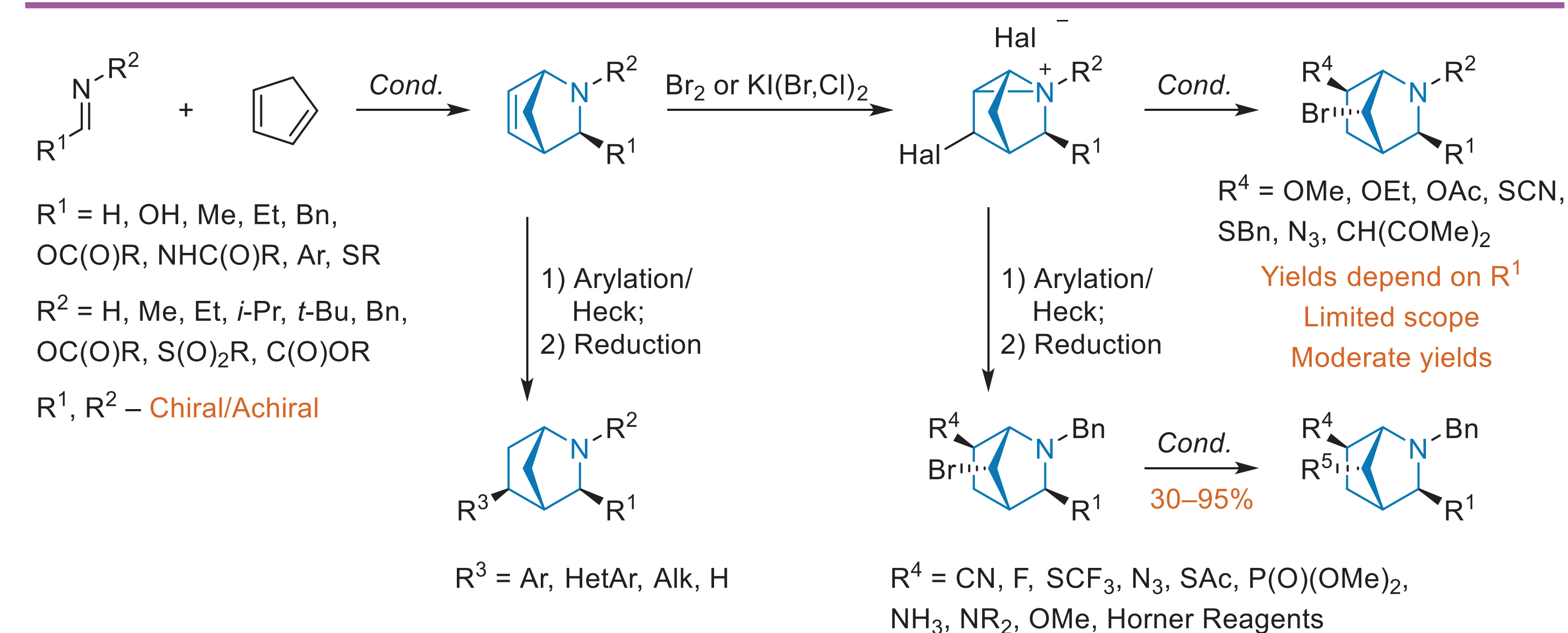


2-azanorbornane

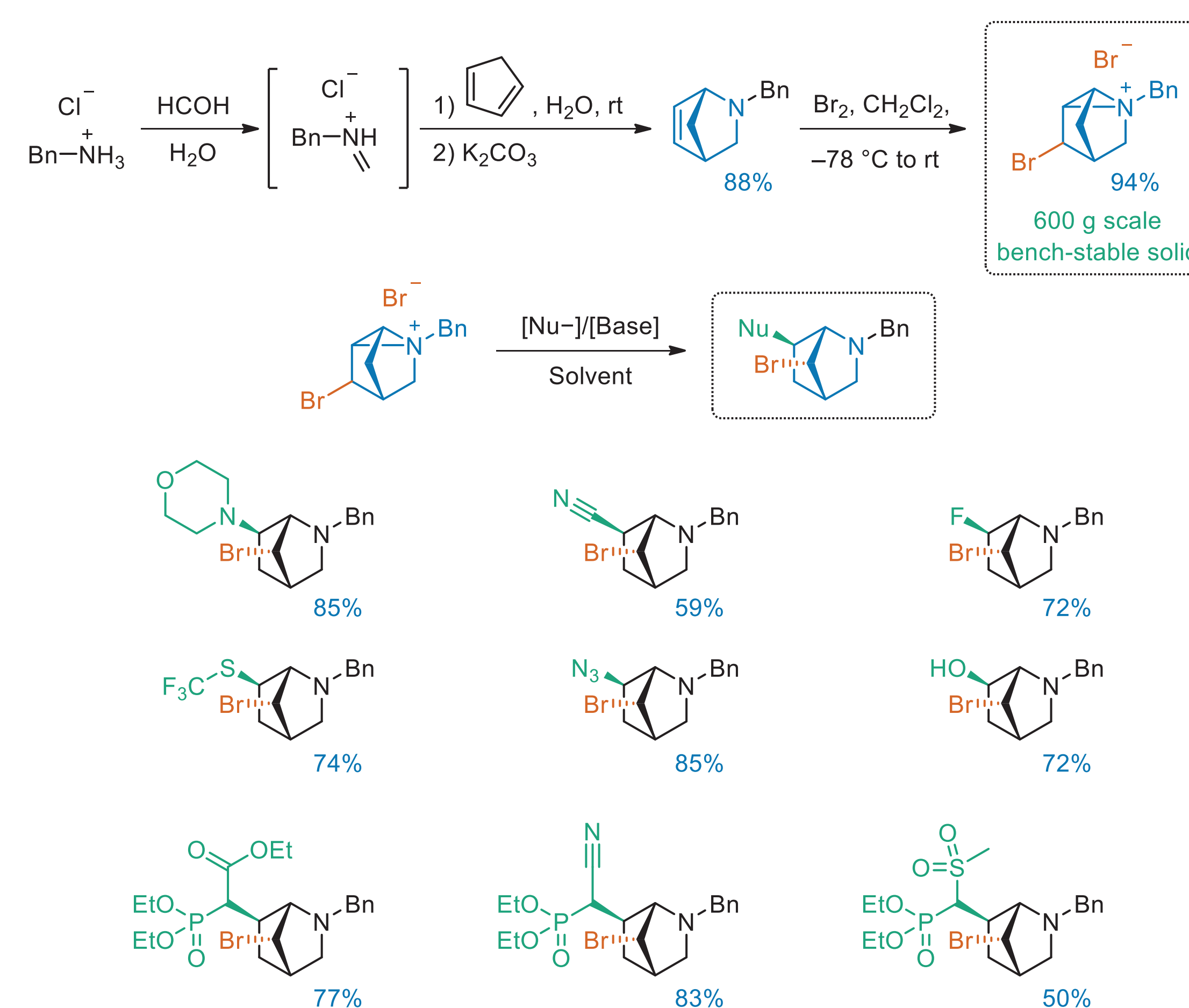
- Structural analogue to biologically relevant piperidine and pyrrolidine
- Two approved drugs feature the 2-azanorbornane moiety: **atiltrelvir** against SARS-CoV-2, and **ledipasvir** against hepatitis C
- 2-Azanorbornanes were found to be orexin receptor antagonists, peptidase inhibitors, and GPR119 agonists.



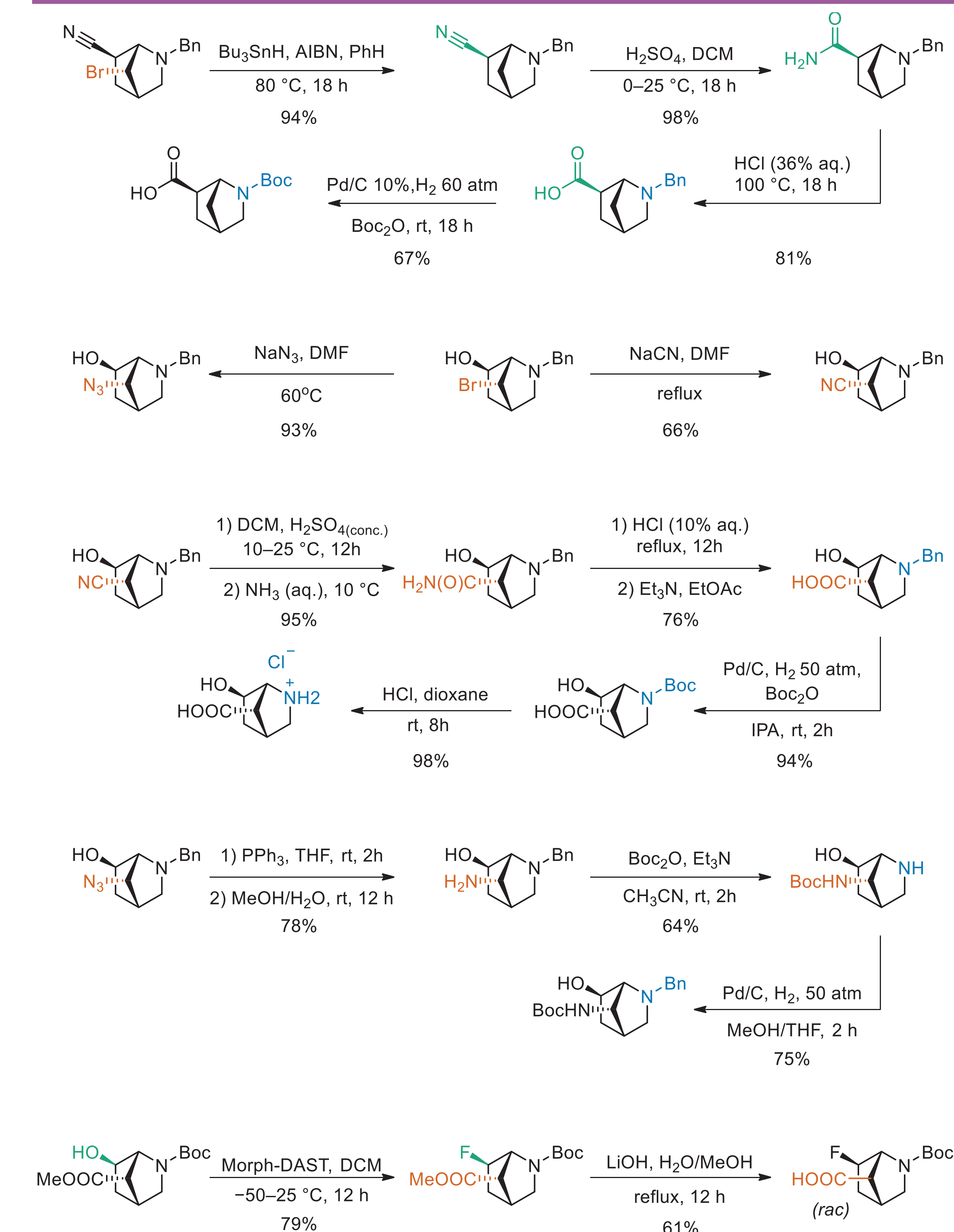
Diels-Alder approaches towards 2-azanorbornanes¹



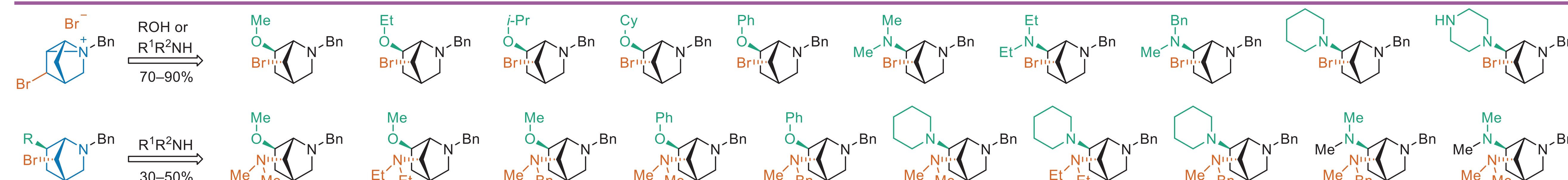
Key precursor scale-up and its reactions with various nucleophiles



Post-modification of substituted 2-azanorbornanes



Combinatorial approach to synthesis of functionalized



Contact

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 Sergey V. Ryabukhin, Prof. Dr. Sci., s.v.ryabukhin@gmail.com

References

1. Wojaczyńska, E., et al., *Org. Biomol. Chem.*, **2015**, 13(22): p. 6116-48.