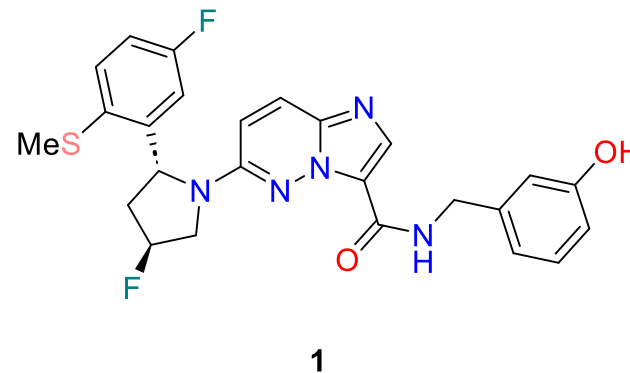
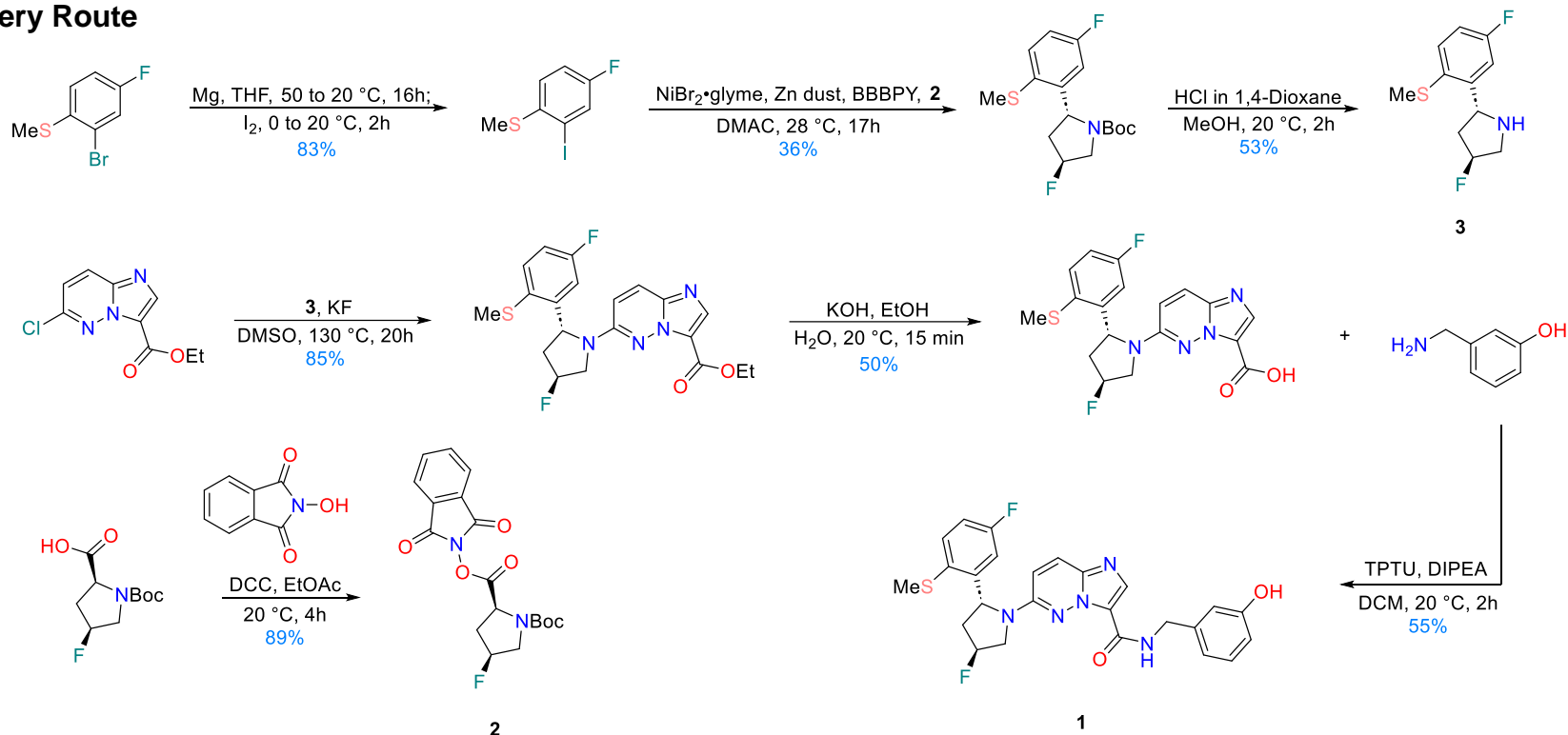


- Partnership between BenevolentAI Ltd and Concept Life Sciences
- Tropomyosin-related kinases (Trks)
- Trks implicated in pathologies relevant to diseases of the skin including pain sensation, itch, inflammation, and tumor cell growth and survival
- Medicinal chemistry efforts identified pan-Trk inhibitor 1 along with two other candidates to be developed for clinical trials
- Process route described herein has enabled the first in human clinical trials of this bioactive compound



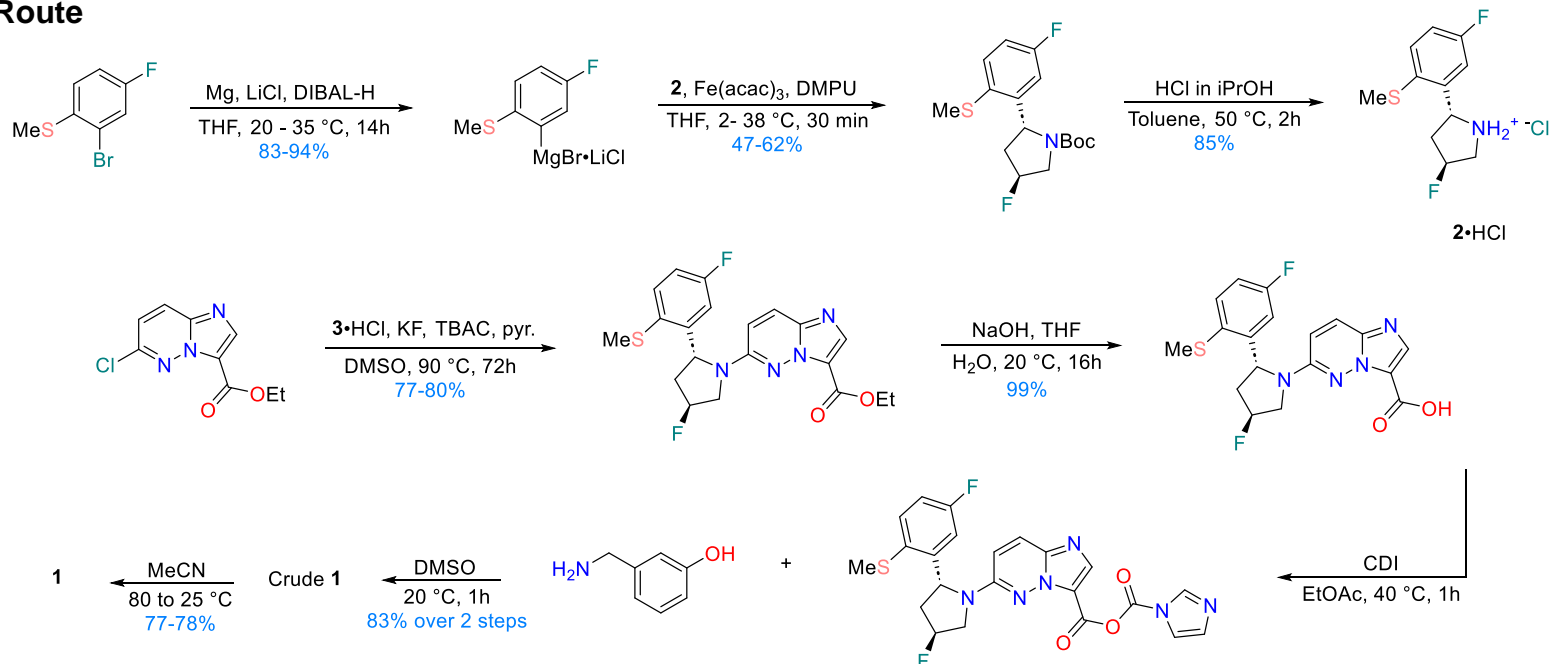
## Discovery Route



Some discovery route shortcomings:

- nickel poses challenges related to cost, toxicity, and residual metal removal
- key decarboxylative coupling step gave low yield
- Low overall yield of 3%

## Process Route



Process route highlights:

- successful GMP campaign to deliver 1.4 kg of the API in two batches
- 18% overall yield
- 6-fold increase in overall yield versus discovery route
- decarboxylative cross-coupling was successfully carried out on seven batches on 0.6–0.7 kg scale and yields one diastereomer

