Fig 1.

Scheme 1:

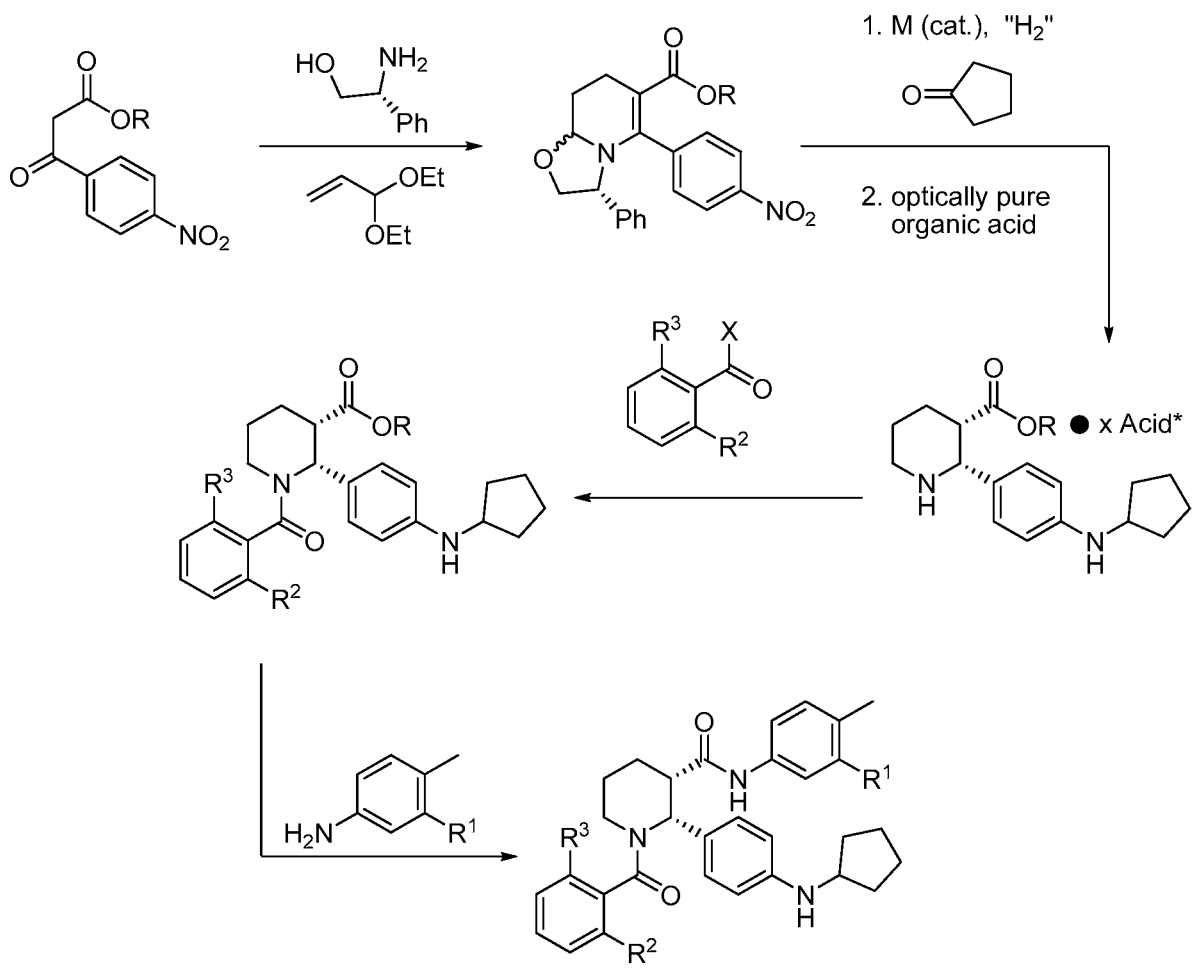


Fig 2.

Scheme 2:

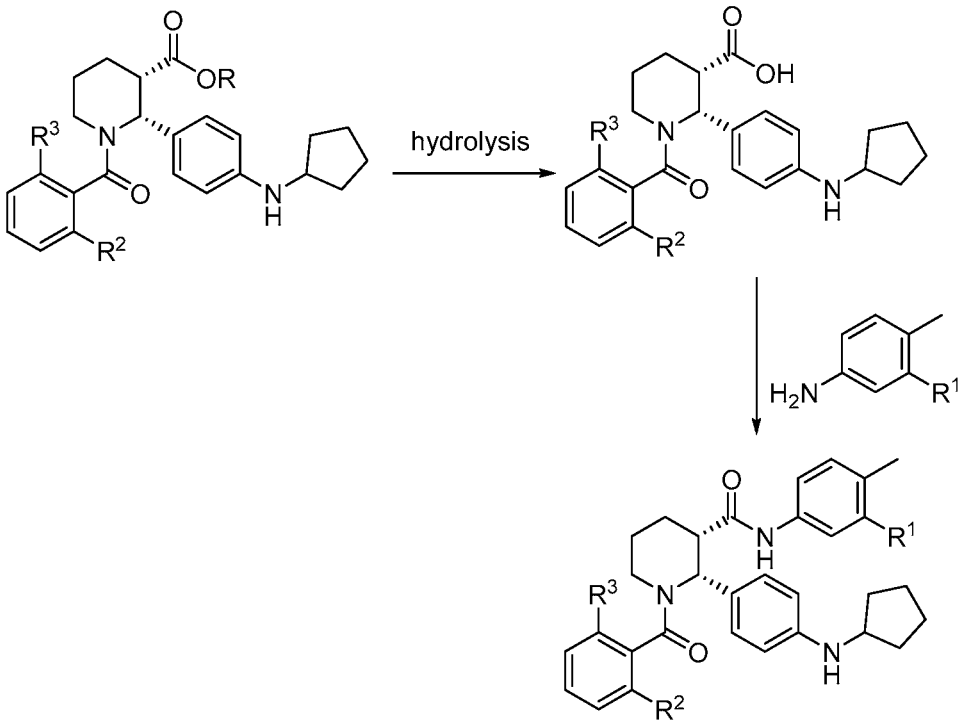


Fig 3.

Scheme 3:

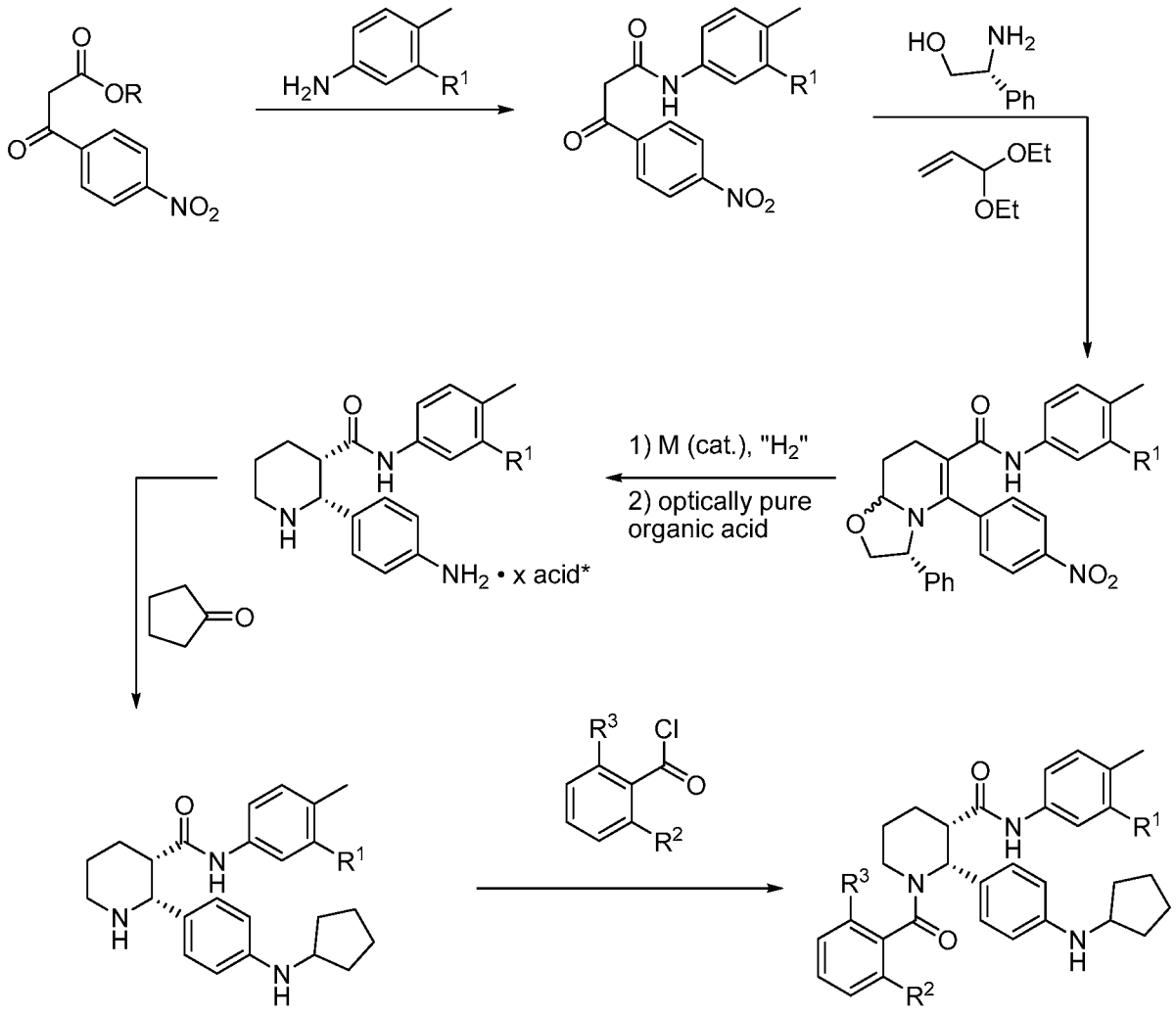
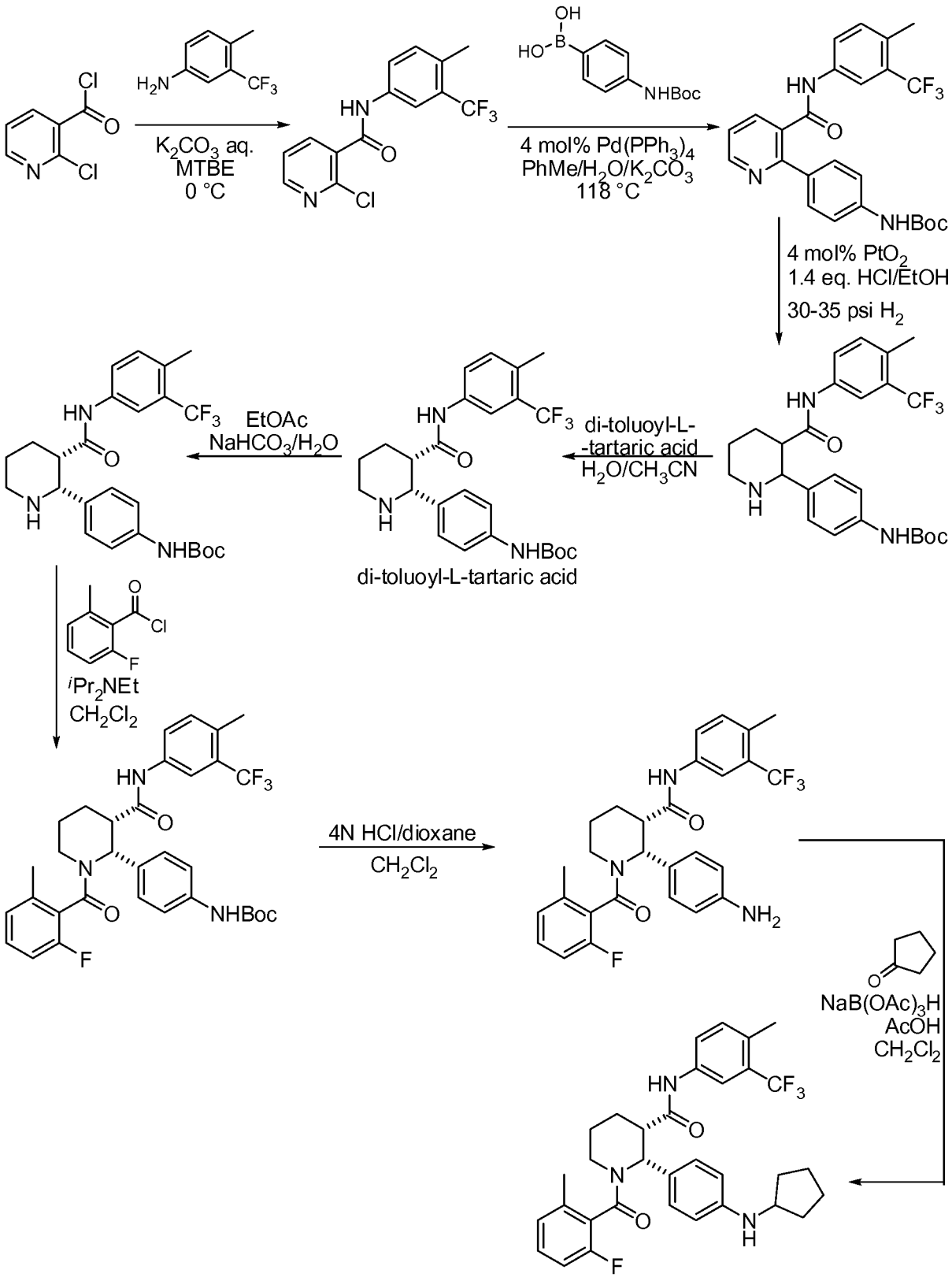


Fig 4.


K2CO3 aq.
MTBE
0 °C
4 mol% Pd(PPh3)4
PhMe/H2O/K2CO3
118 °C
4 mol% PtO2
1.4 eq. HCl/EtOH
30-35 psi H2
di-toluoyl-L-
-tartaric acid
H2O/CH3CN
di-toluoyl-L-tartaric acid
EtOAc
NaHCO3/H2O
iPr2NEt
CH2Cl2
4N HCl/dioxane
CH2Cl2
NaB(OAc)3H
AcOH
CH2Cl2