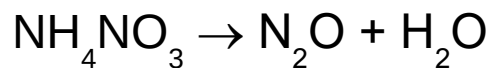


Syntheses and metabolism of selected general & local anesthetics

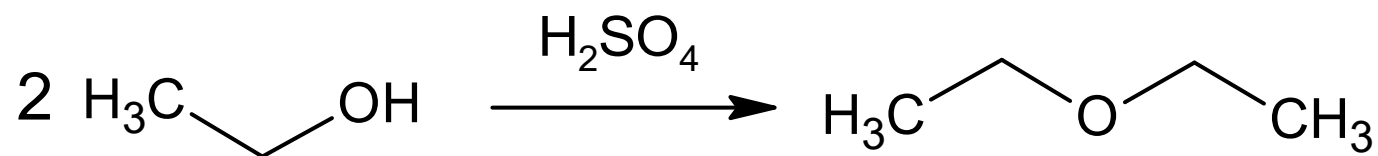
General anesthetics

Syntheses of some inhalation general anesthetics

Preparation of nitrous oxide: heating of ammonium nitrate to 180 – 250°C:

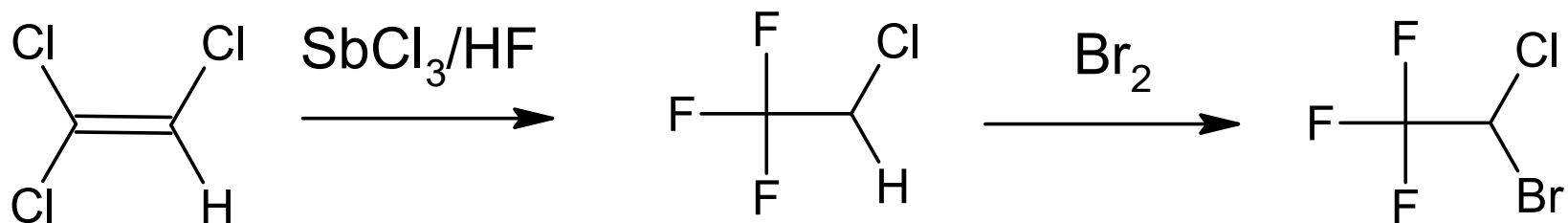


Synthesis of diethyl ether

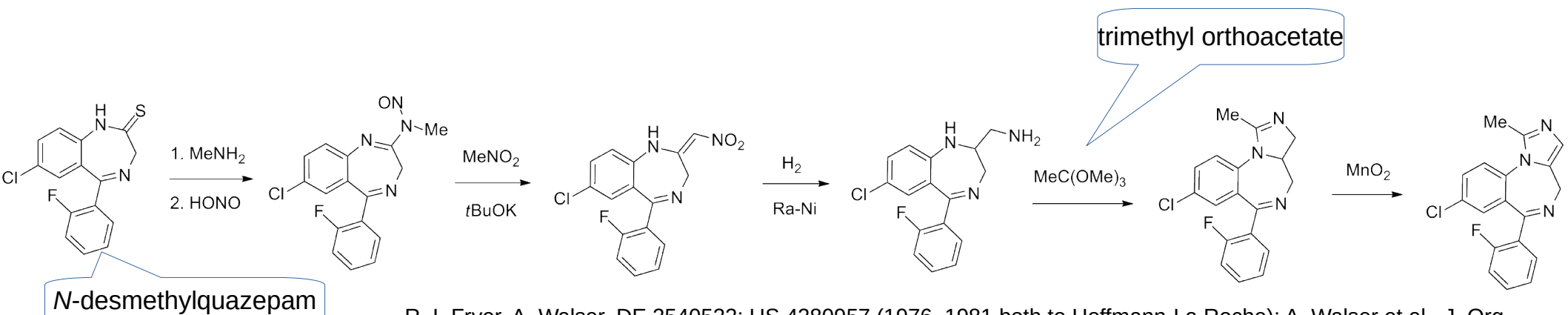


- known since 10th -11th century: Abu al-Khasim al-Zahravi Ibn Zuhr, an Arab alchemist

Synthesis of halothan

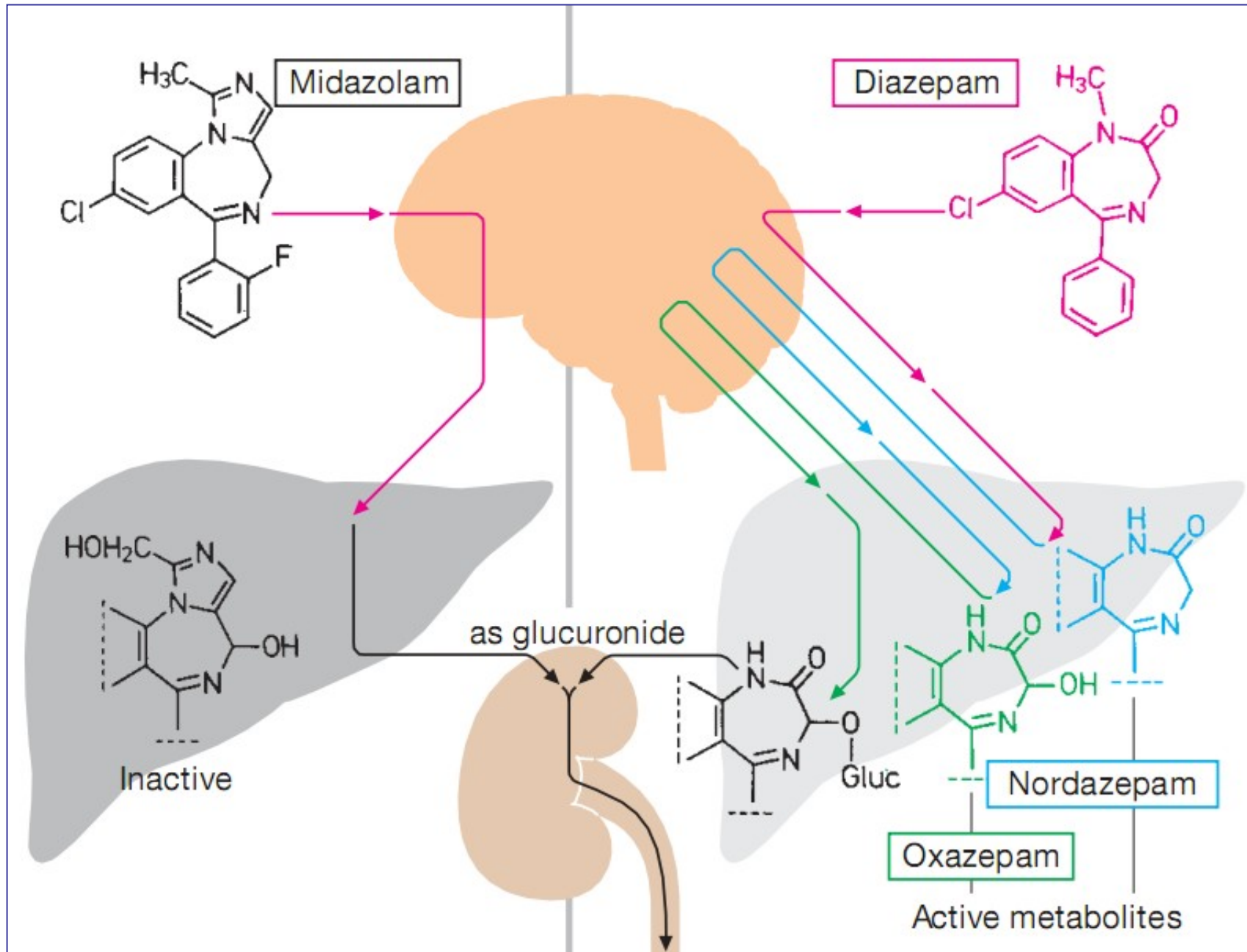


Synthesis of midazolam

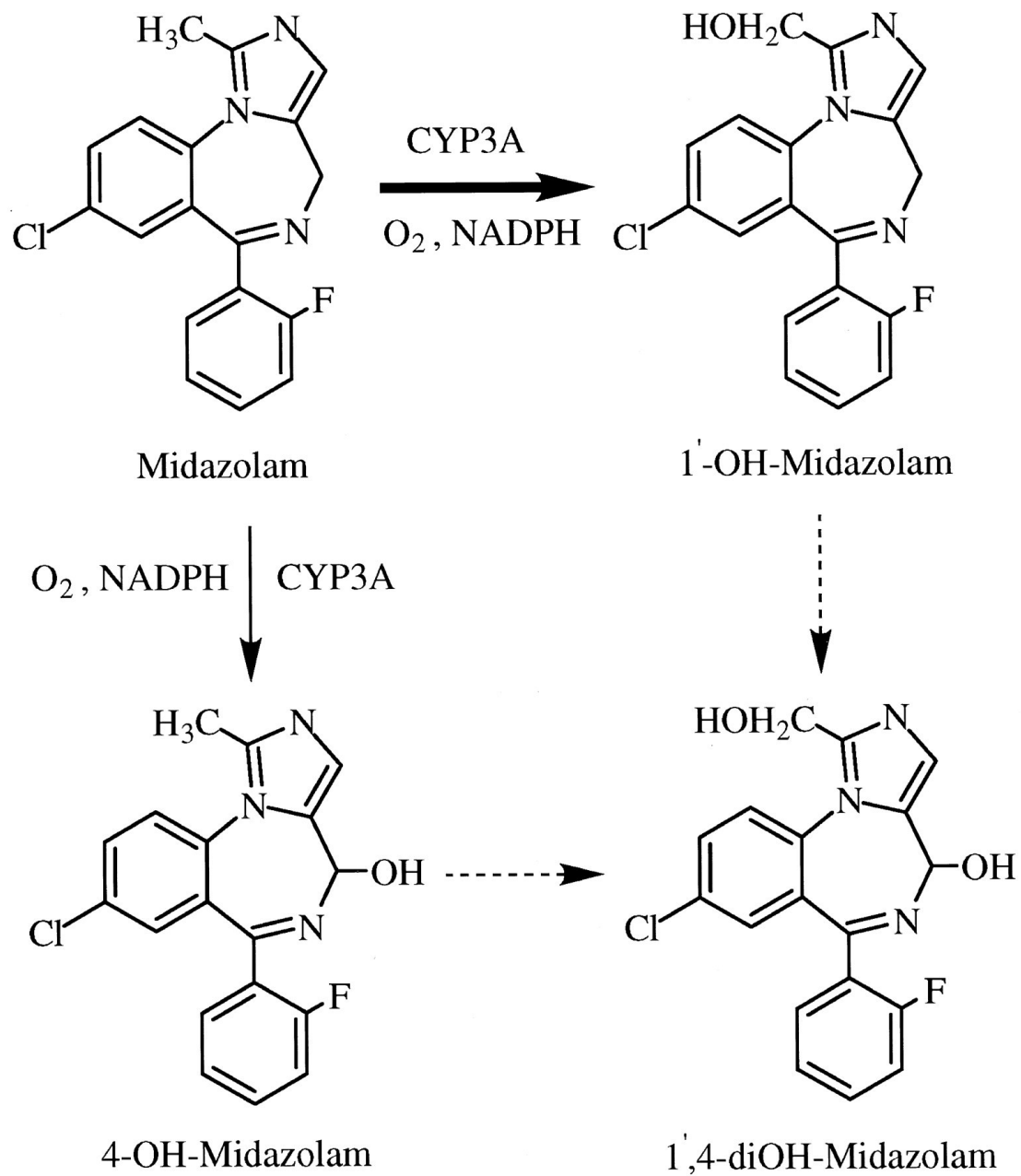


R. I. Fryer, A. Walser, DE 2540522; US 4280957 (1976, 1981 both to Hoffmann-La Roche); A. Walser et al., J. Org. Chem. 43, 936 (1978).

Metabolism of benzodiazepines, especially midazolam

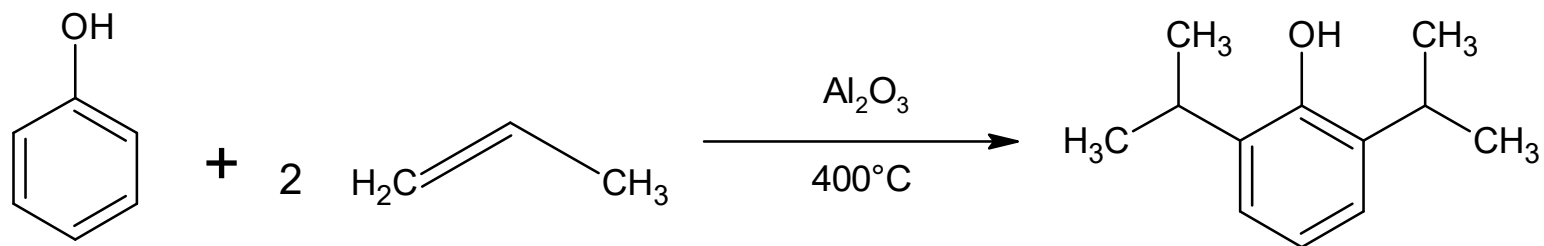


A detail of midazolam oxidative metabolism

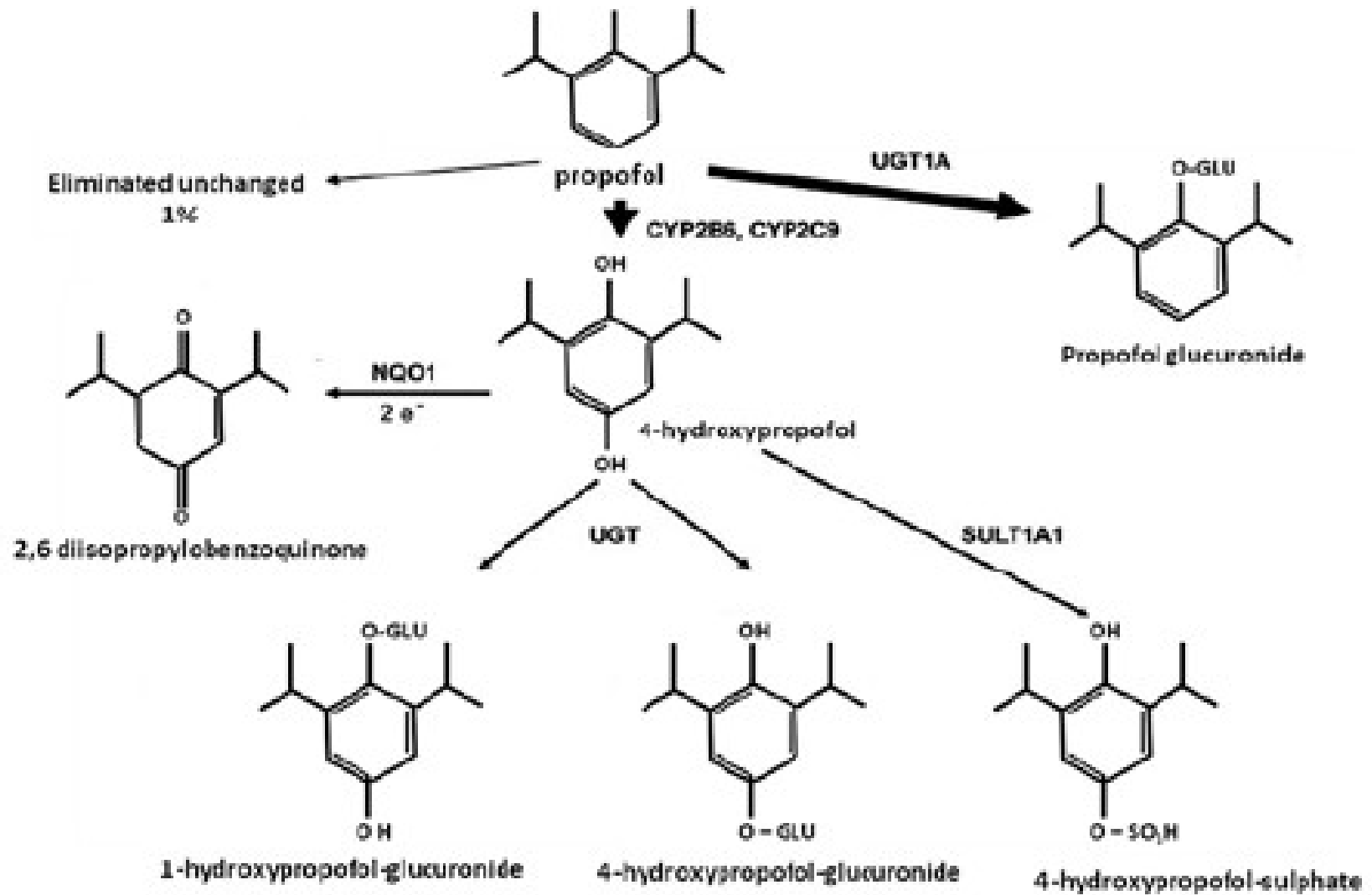


Syntheses of some intravenous general anesthetics

Propofol

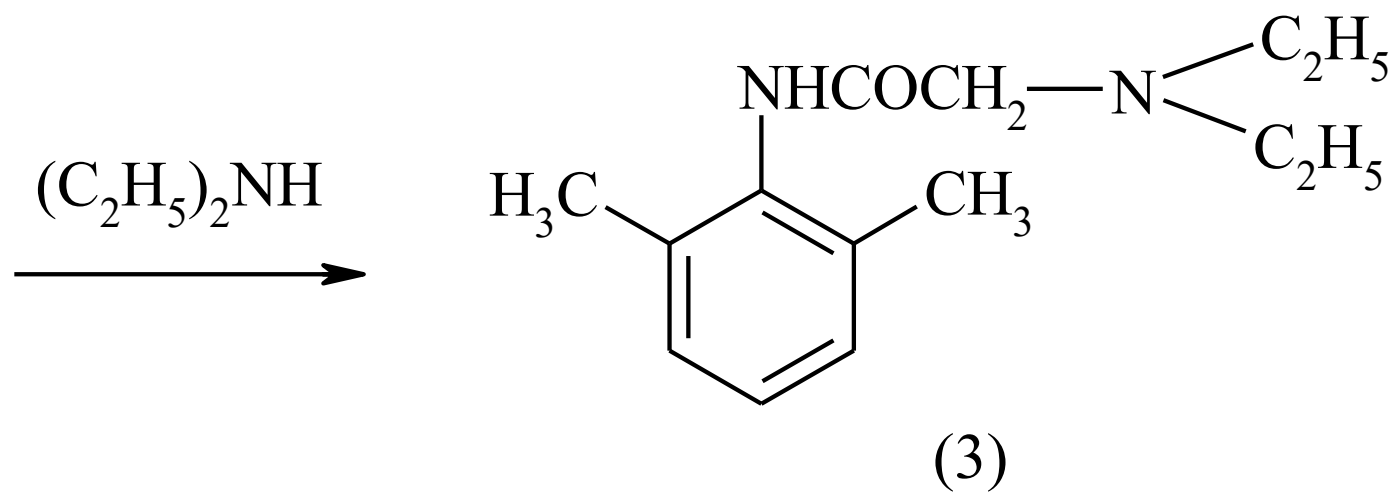
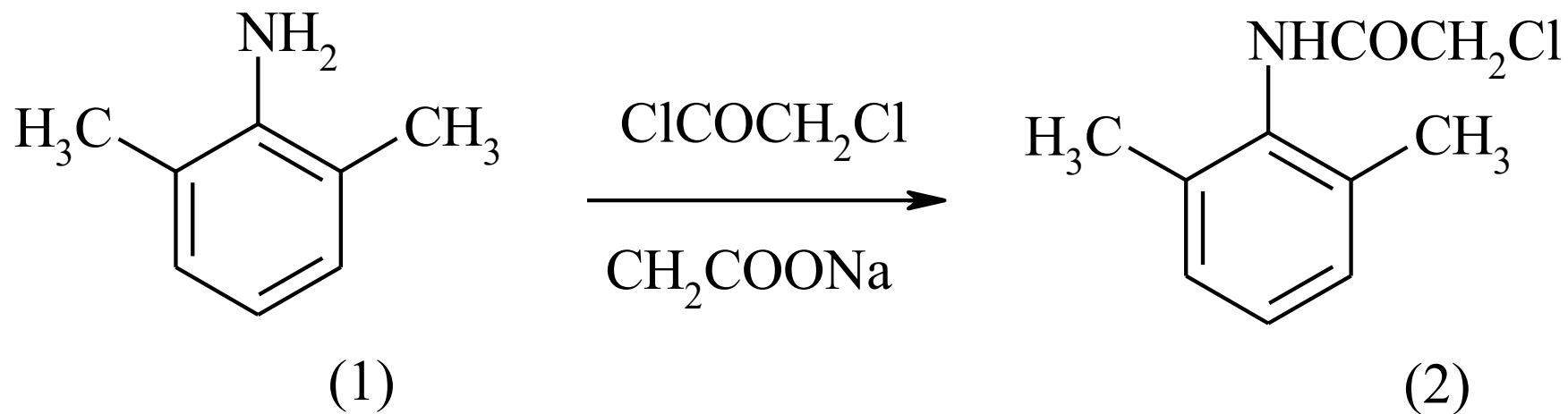


Metabolism of propofol

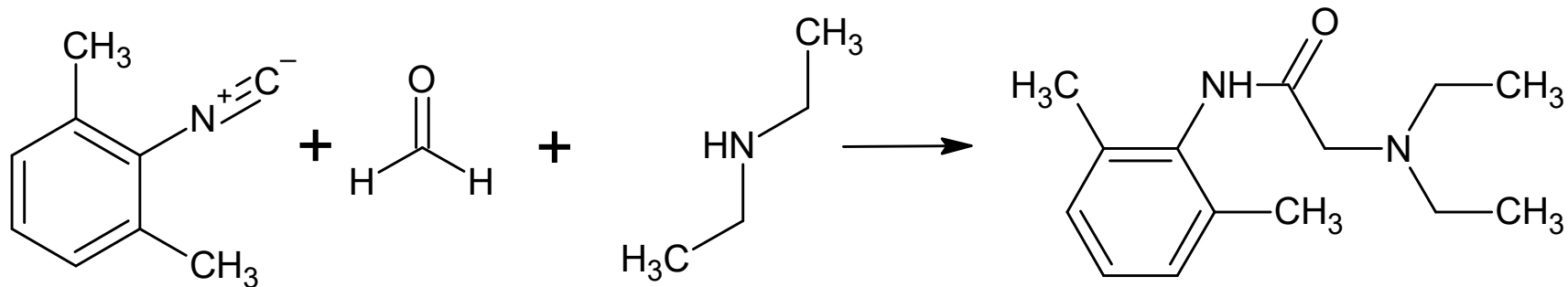


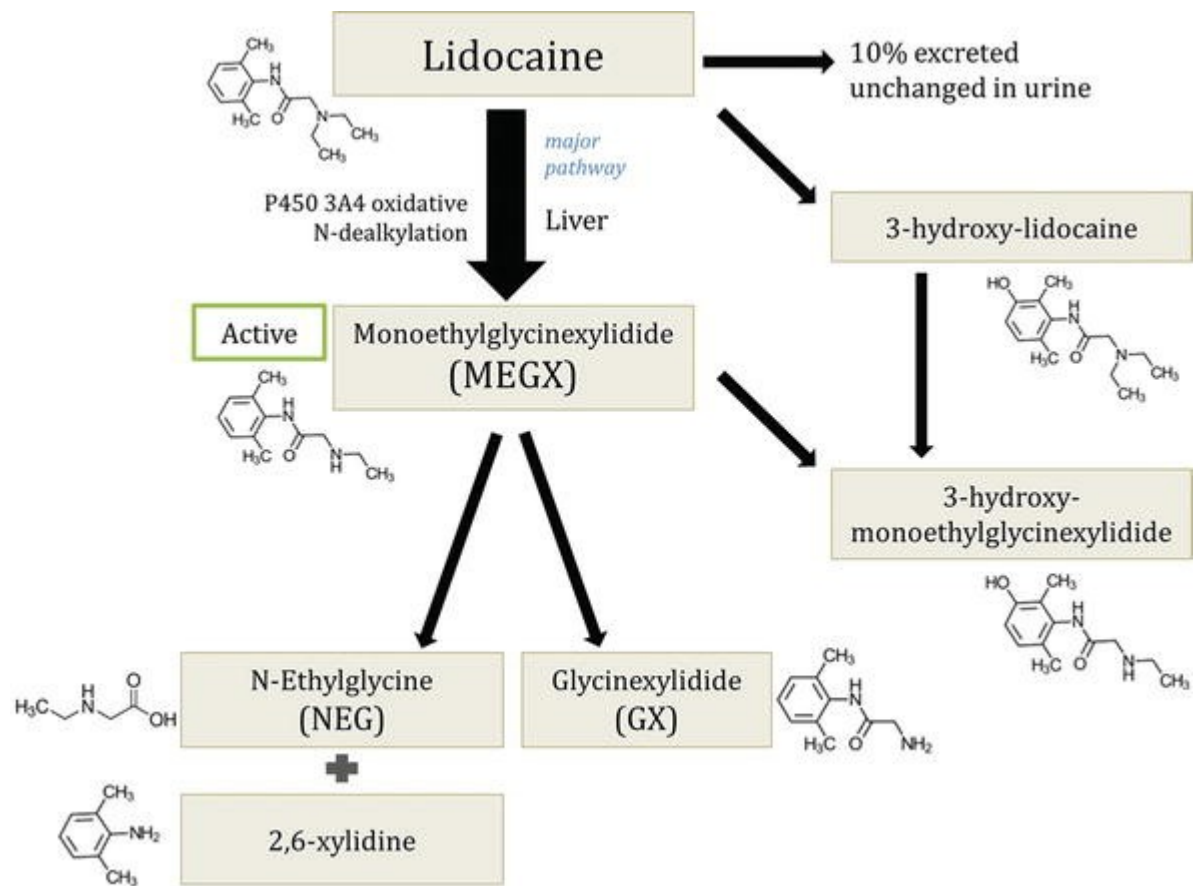
Local anesthetics

Classical synthesis of lidocaine



An alternative: a one-pot synthesis of lidocaine: Ugi condensation





Synthesis of Levobupivacaine

