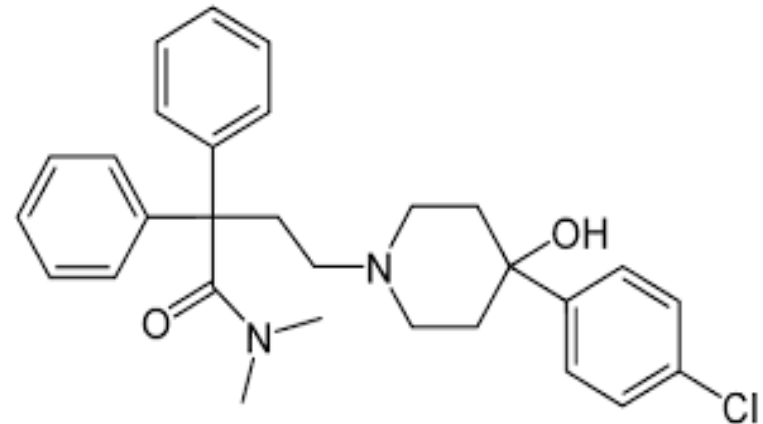


Diphenoxylate

MOA: Diphenoxylate is an **opiate** receptor **agonist** that stimulate **mu receptors in GI** to **decrease the peristalsis** and constrict the sphincters. Diphenoxylate has a direct effect on circular smooth muscle of the bowel, that conceivably results in segmentation and **prolongation of gastrointestinal transit time**.

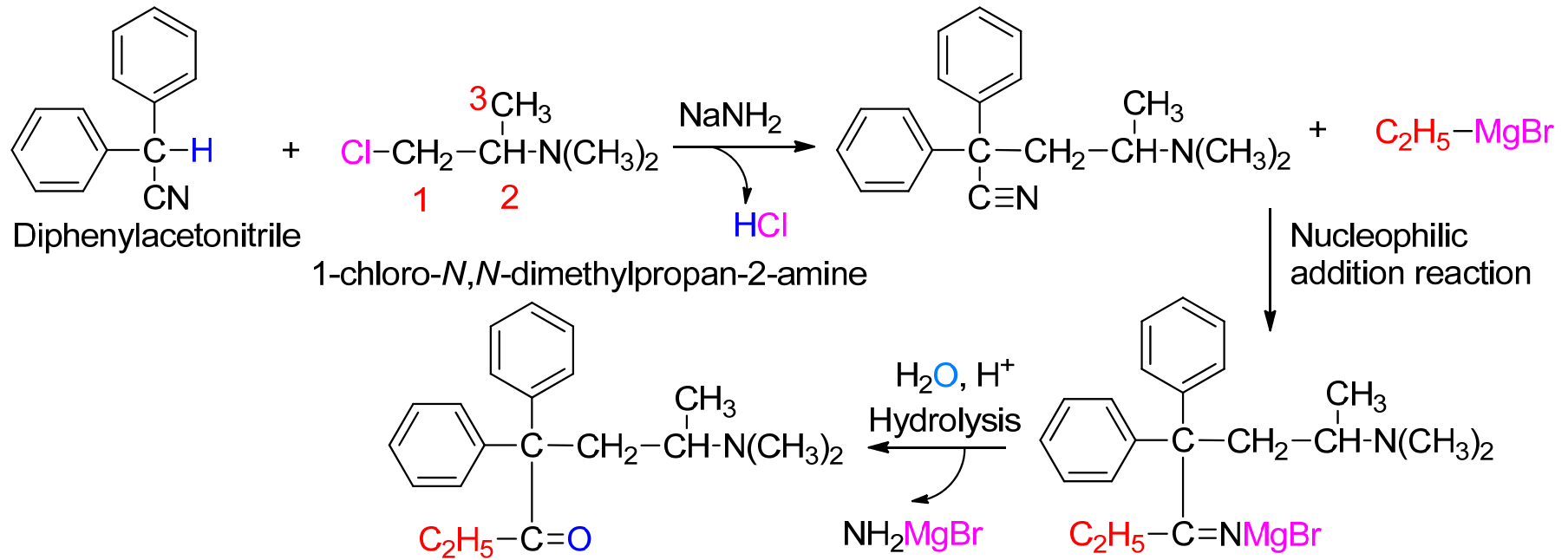
Uses: it is mainly used for treating **diarrhea**. It helps to decrease the number and frequency of bowel movements.

Loperamide



MOA: Similar to diphenoxylate
Uses: This medication is used to treat **sudden diarrhea** (including **traveler's diarrhea**). Loperamide is also used to reduce the amount of discharge in patients who have undergone an **ileostomy**.

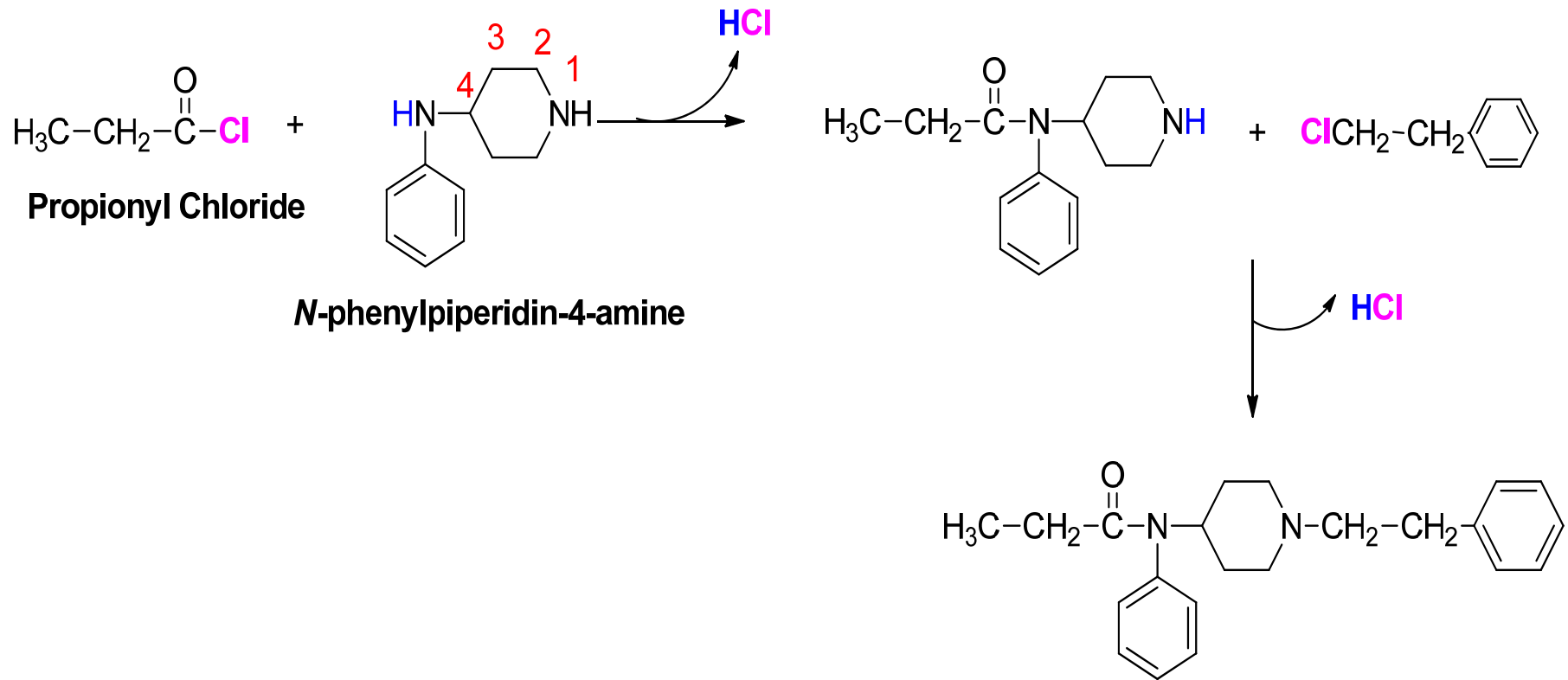
Methadone



MOA-In addition to **opioid receptor agonist** activity, methadone also act as **antagonist** of the N-methyl-D-aspartate (**NMDA**) receptor and it strongly **inhibits serotonin** and **norepinephrine uptake**.

Uses-Methadone is indicated for the management of **pain severe** enough to require an opioid analgesic and for which alternative treatment options are inadequate. It is also used in treating **drug addiction**, since it replaces other agonists on the receptor.

Fentanyl



MOA: Similar to morphine

Uses: It is used both independently and in combination with droperidol for preanesthetic medication, in different forms of narcosis, and in post-operational anesthesia.