

# Alkaloide

alkaliähnliches Verhalten

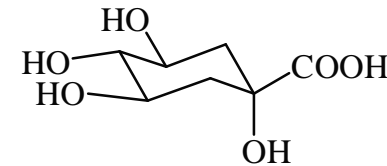
treten als Salze von Pflanzensäuren (Oxal-, Essig-, Milch-, Äpfel-, Wein-, Citronen-, und Aconitsäure) in der Natur

Manchmal auch an spezielleren Säuren (z.B. Chinasäure) gebunden

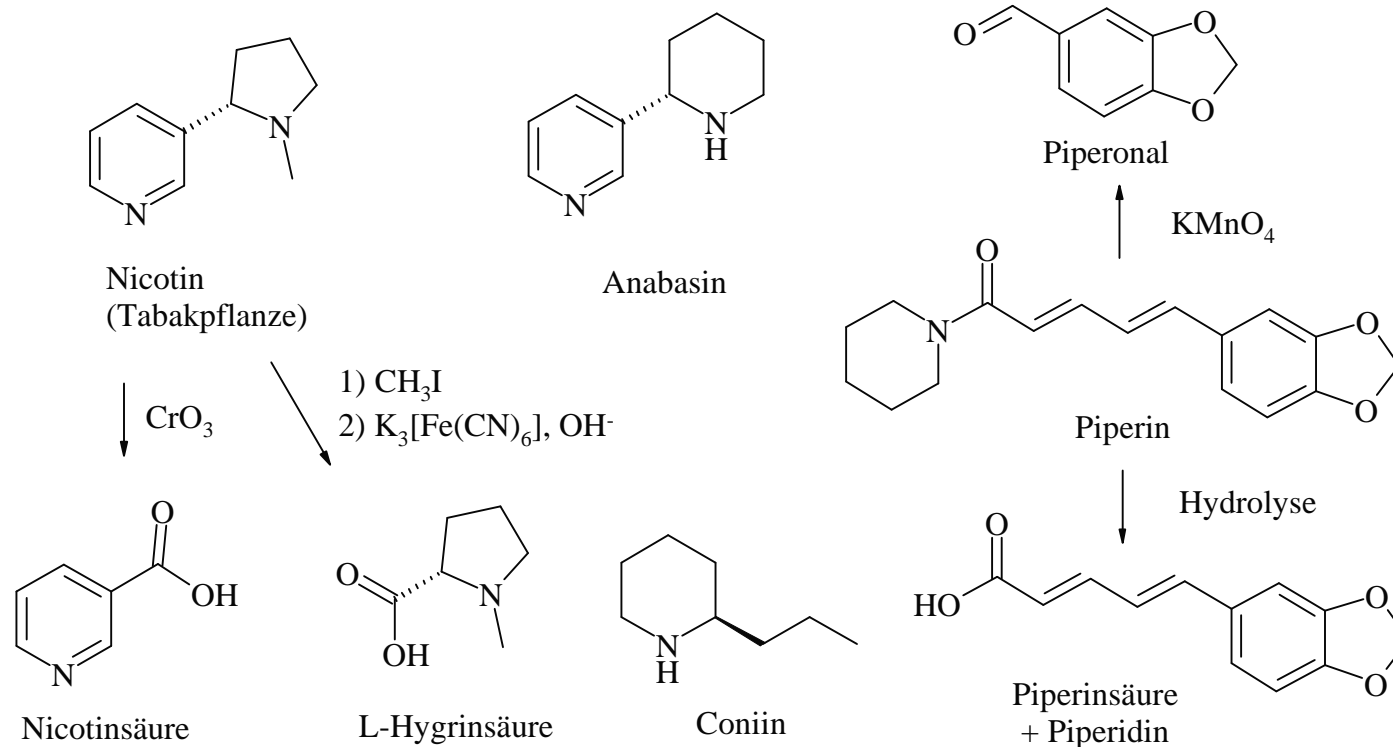
fast alle Alkaloide sind linksdrehend

Bestehen meist aus recht kompliziert aufgebauten heterocyclischen Systemen

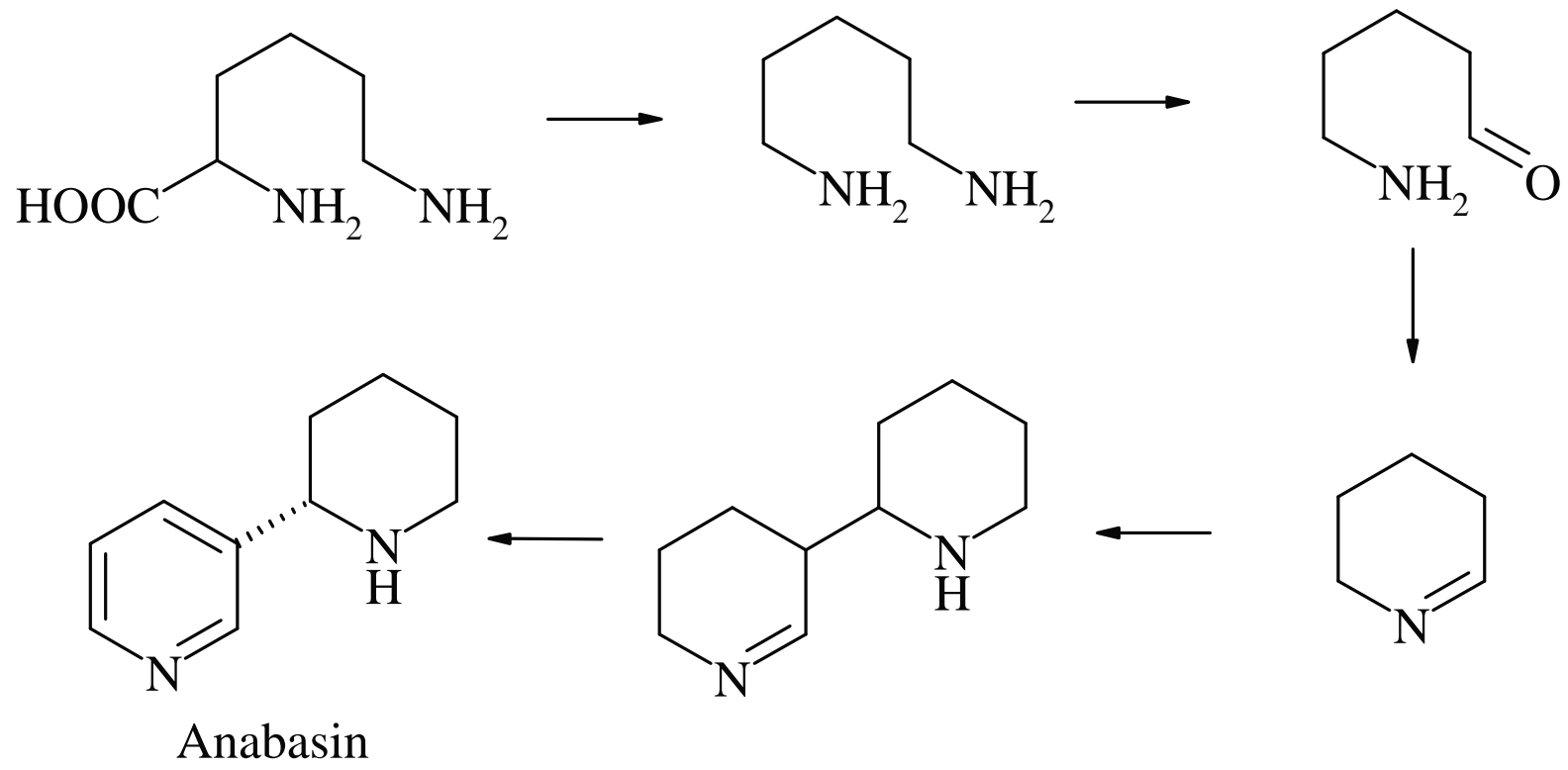
Einteilung nach dem zugrunde liegenden Ringsystem



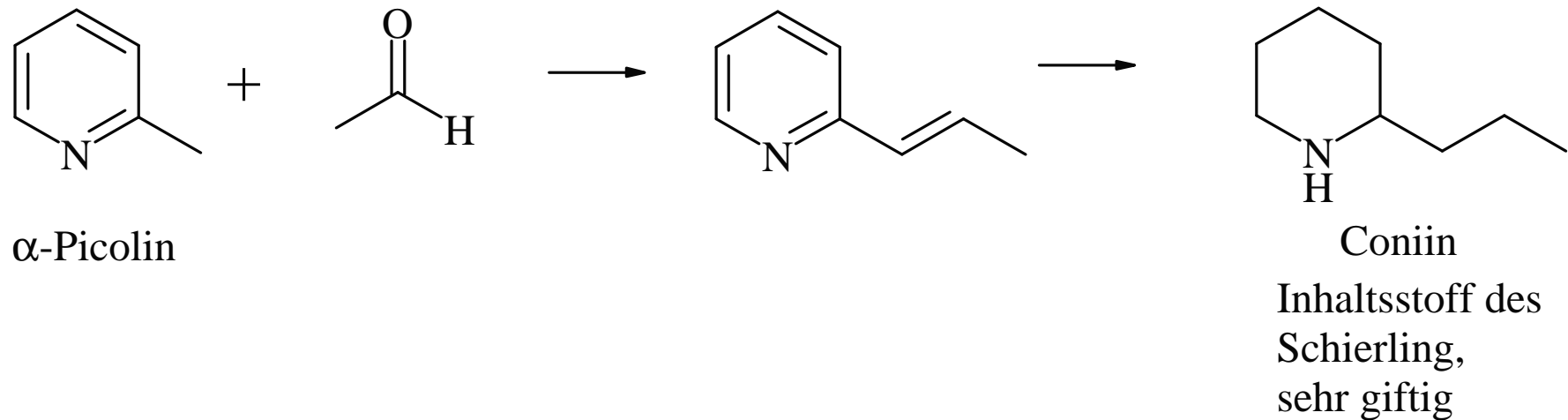
# Alkaloide vom Tetrahydropyrrol-, Pyridin- und Piperidin-Typ



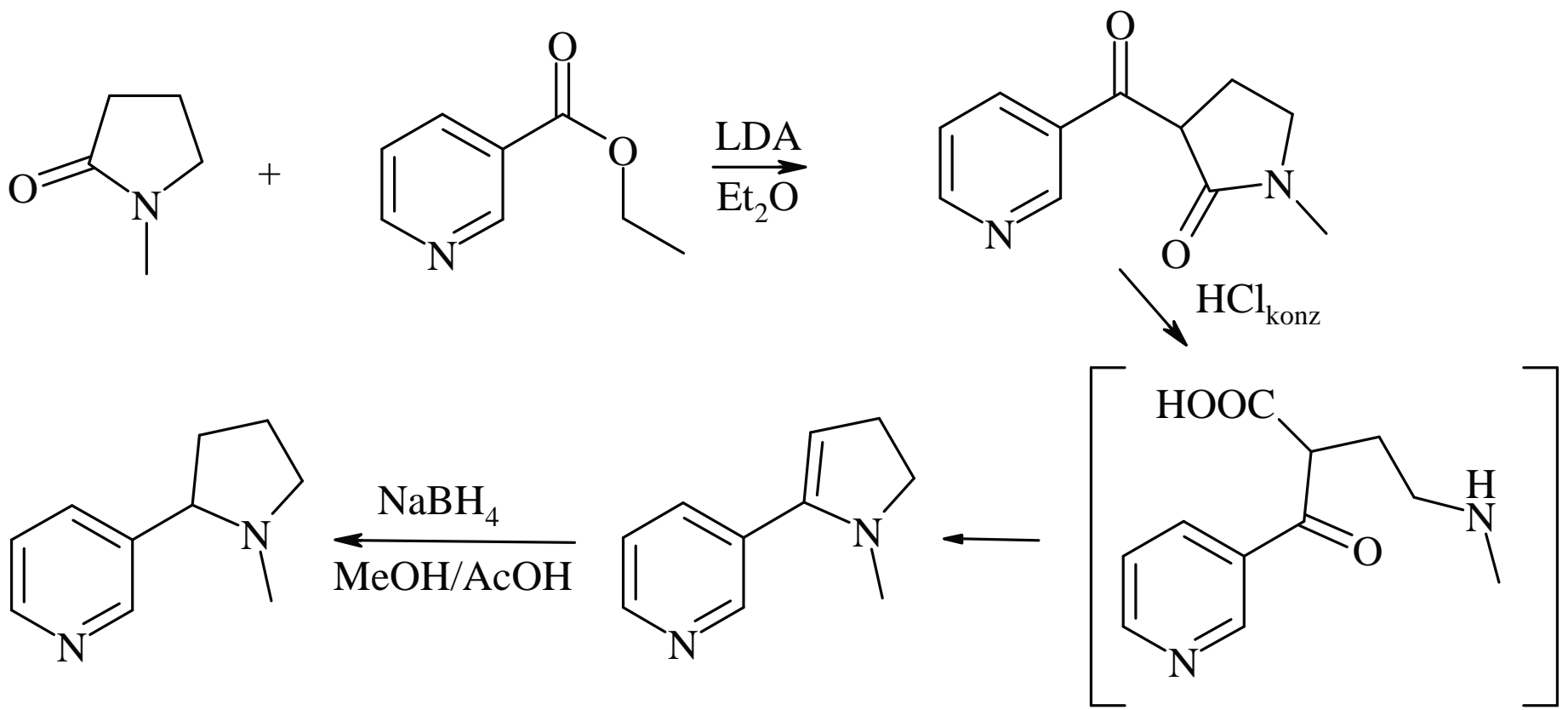
# Biosynthese des Anabasis



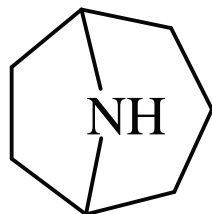
# Erste Synthese eines Alkaloids (Coniin)



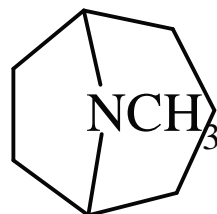
# Synthese des Nikotins



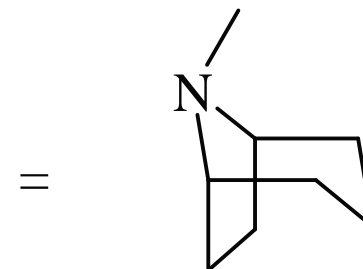
# Alkaloide vom Tropan-Typ



Nortropan



Tropan

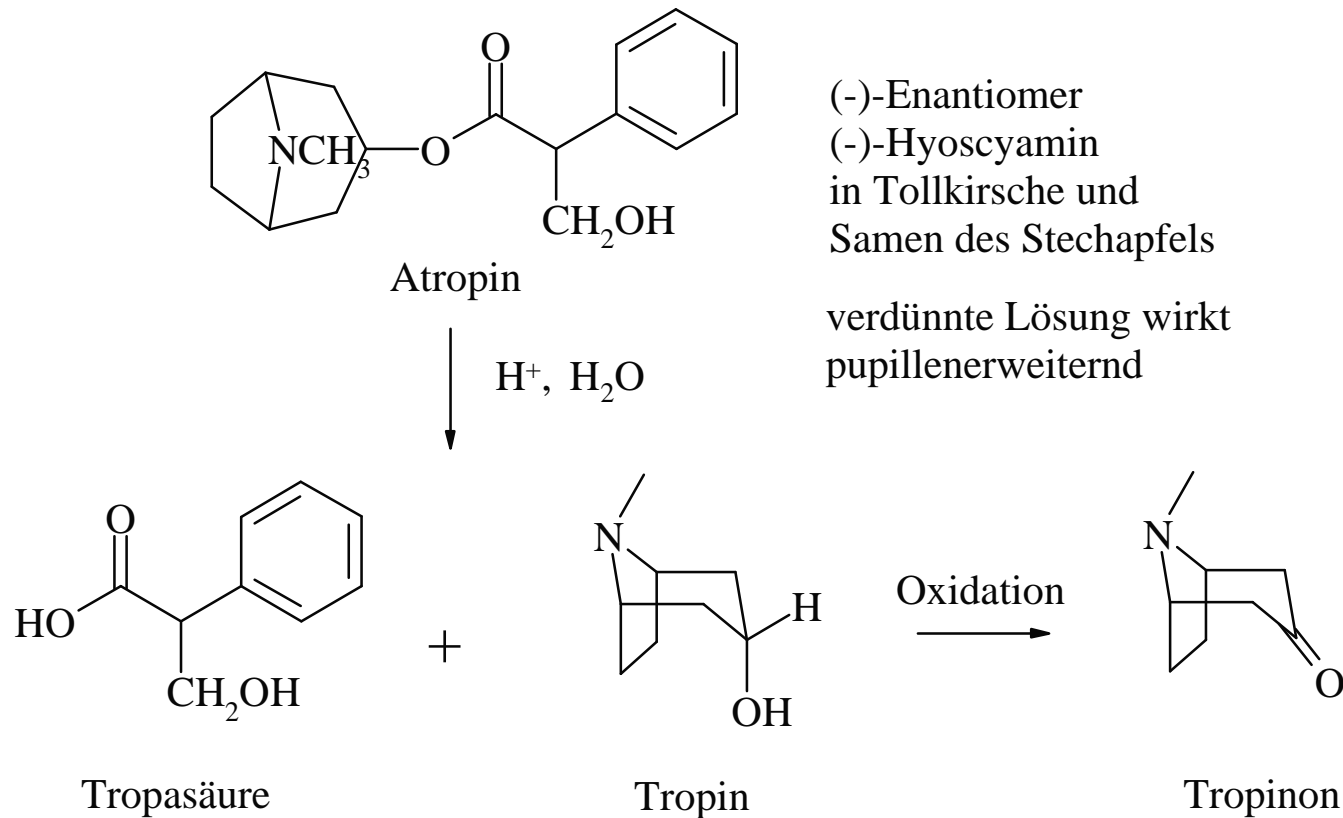


**Atropingruppe**

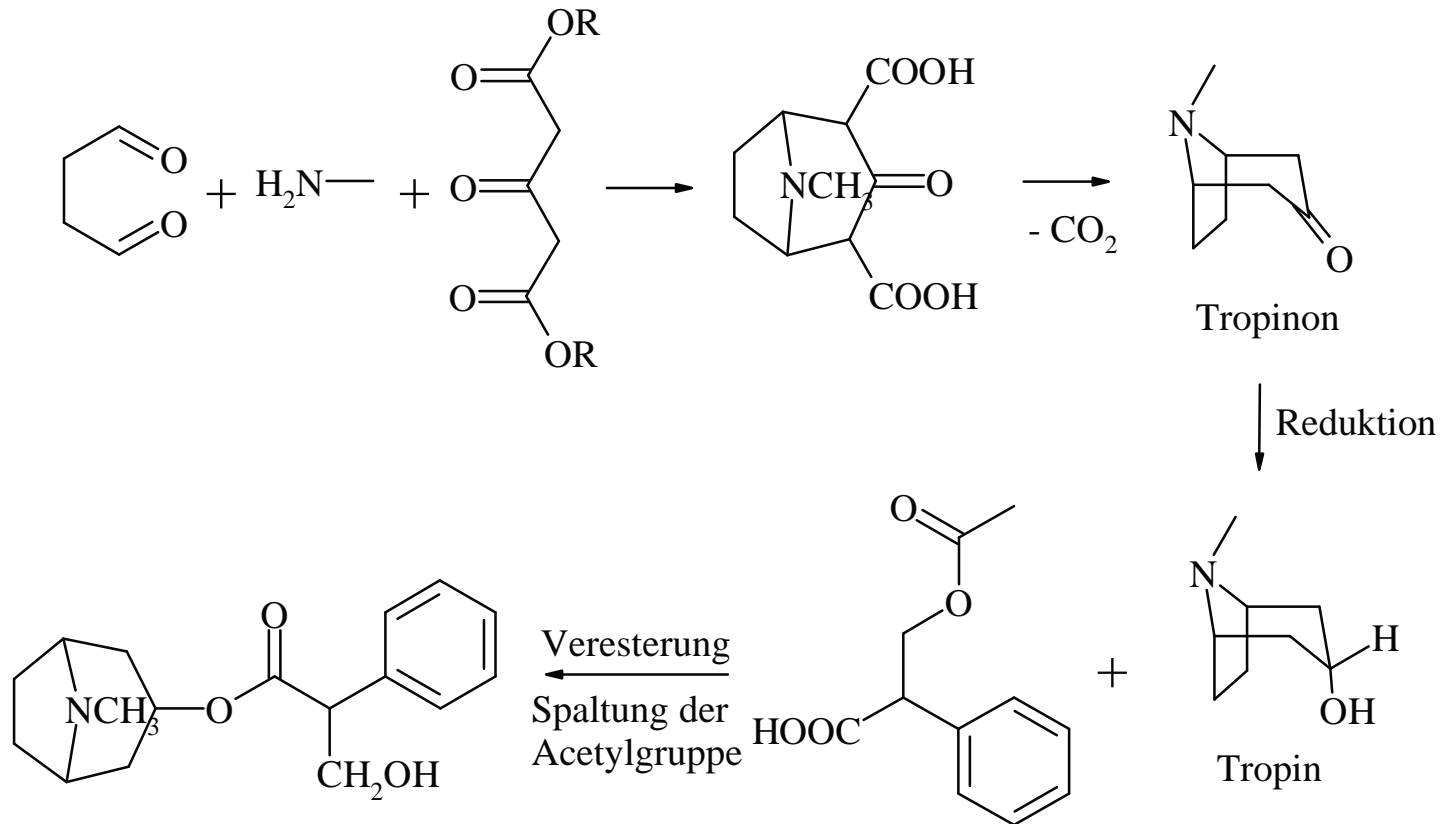
**Cocaingruppe**

**Alkaloide des Granatapfelbaumes**

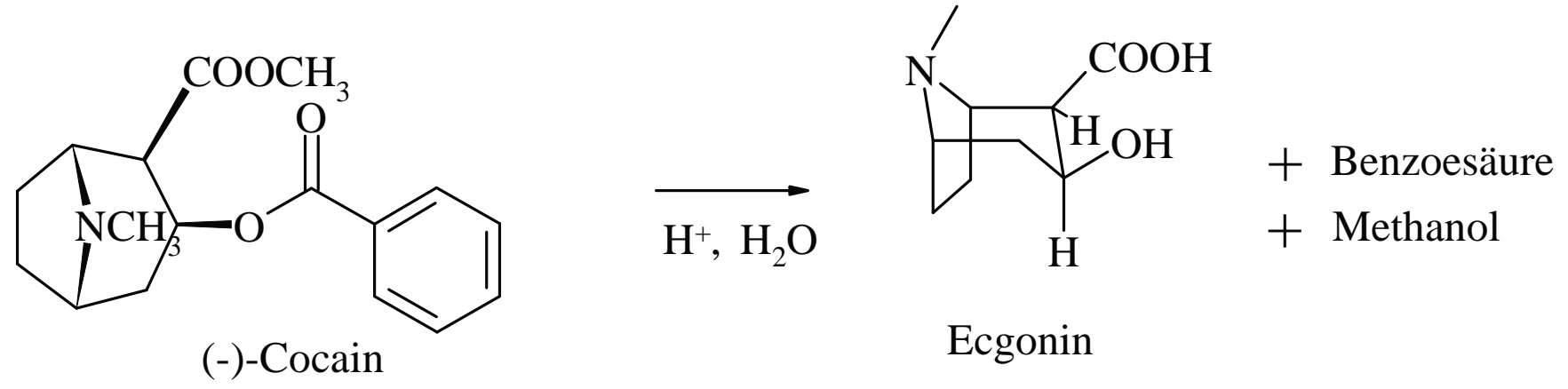
# Atropingruppe



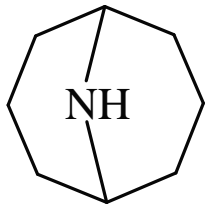
# Synthese des Atropins



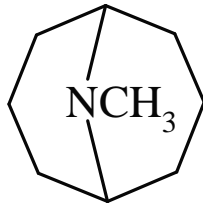
# Cocaingruppe



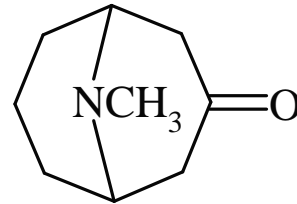
# Alkaloide des Granatapfelbaumes



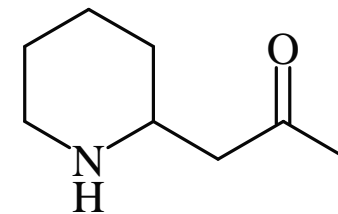
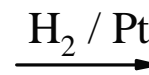
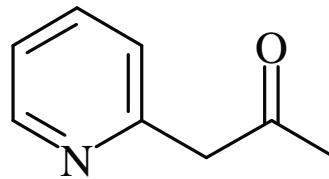
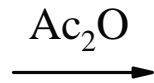
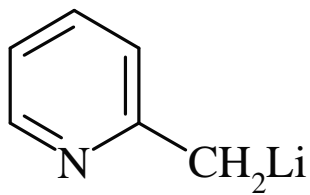
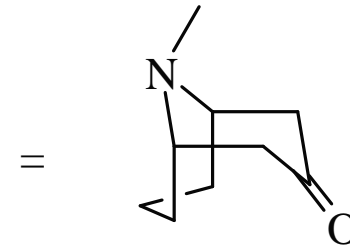
Norgranatan



Granatan

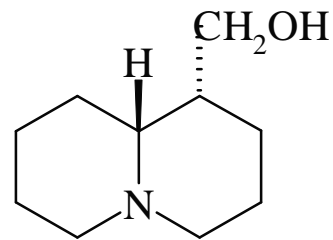
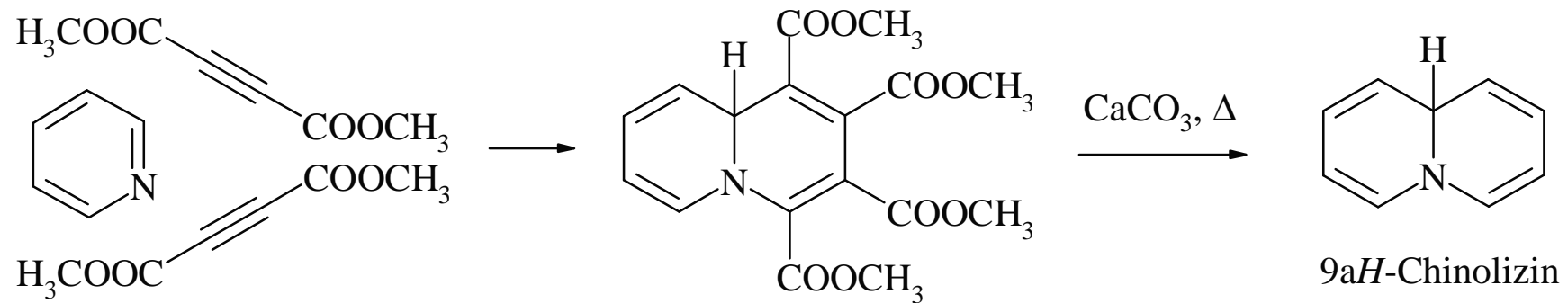


Pseudopelletierin

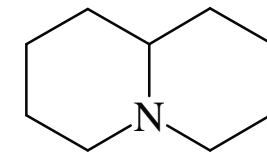
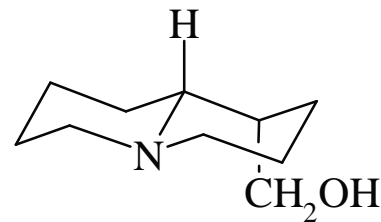


Isopelletierin  
(Nebenalkaloid)

# Alkaloide vom Chinolizidin-Typ



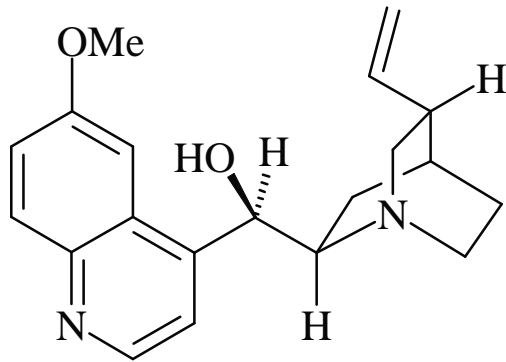
Lupinin (in den gelben Lupinen)



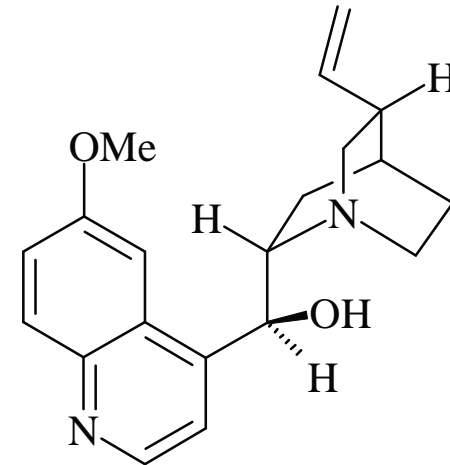
Chinolizidin  
Lupinen-Alkaloide

# Alkaloide vom Chinolin-Typ (China-Alkaloide)

Chinuclidinring



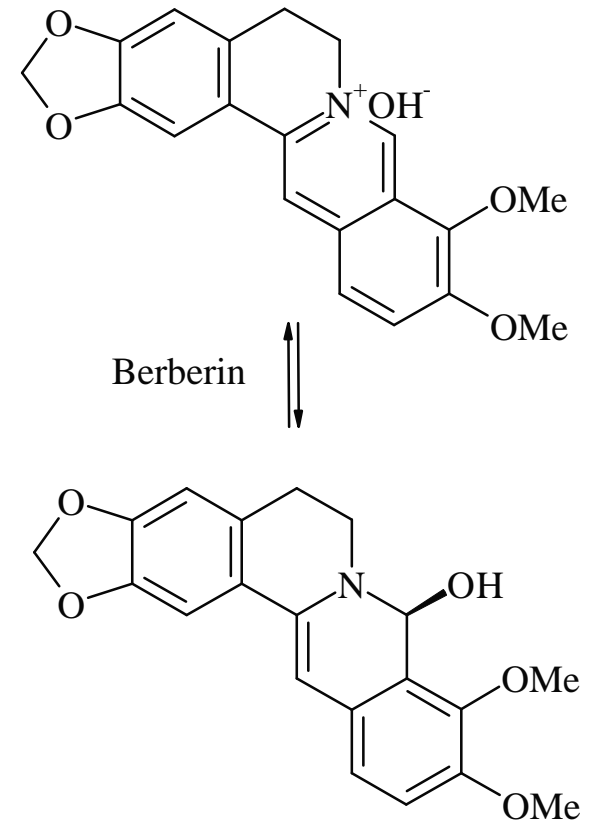
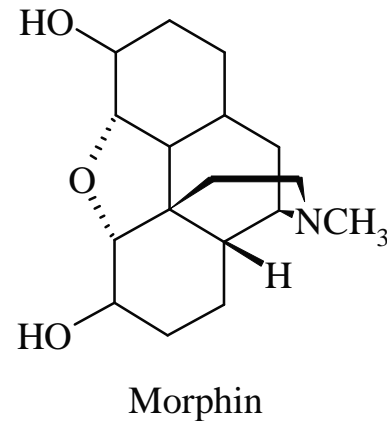
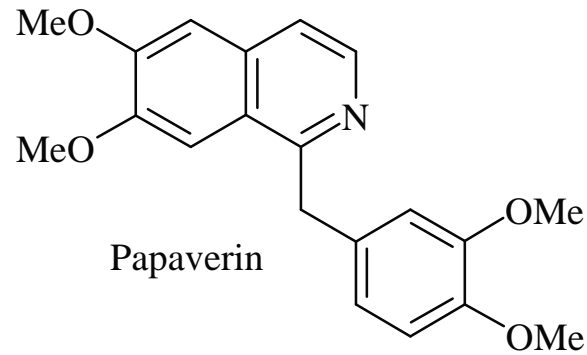
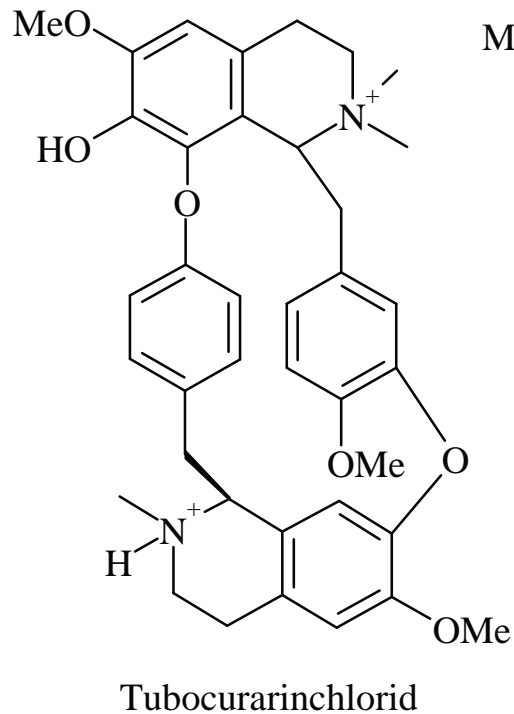
Chinin



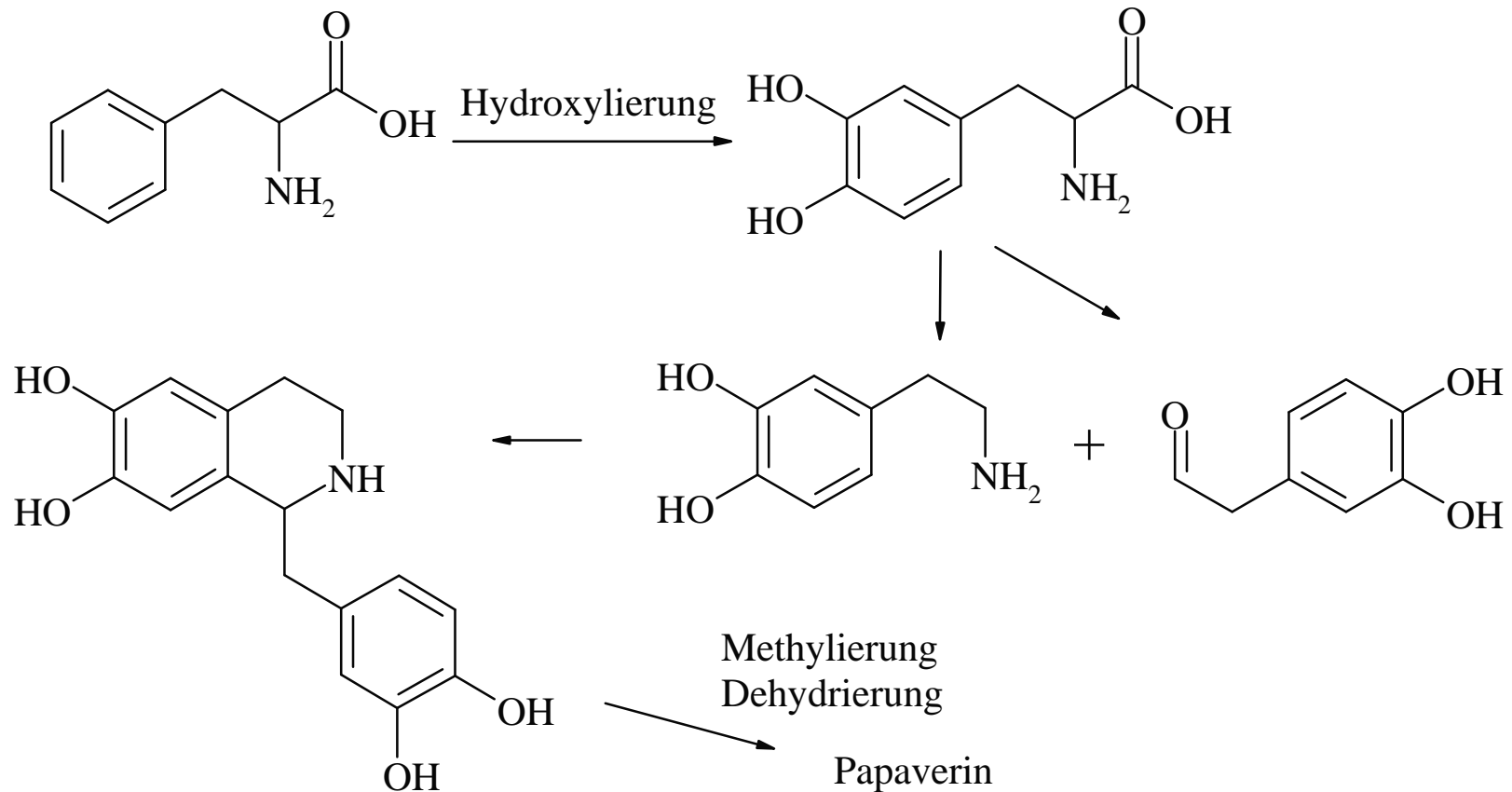
Chinidin

# Alkaloide vom Isochinolin-Typ

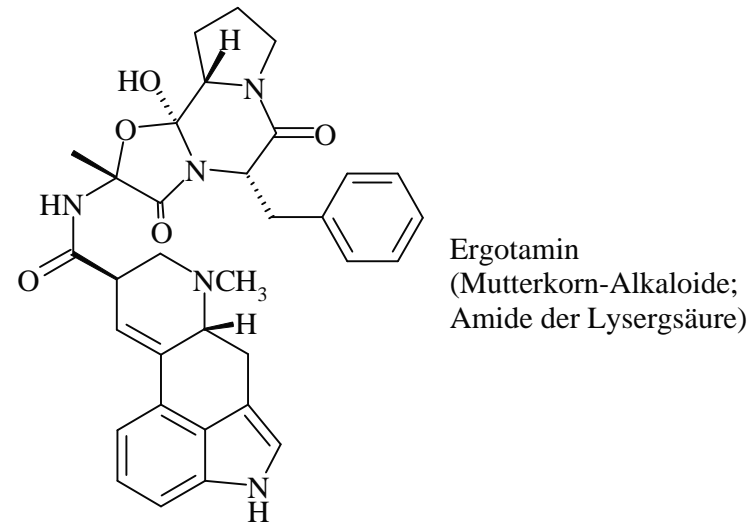
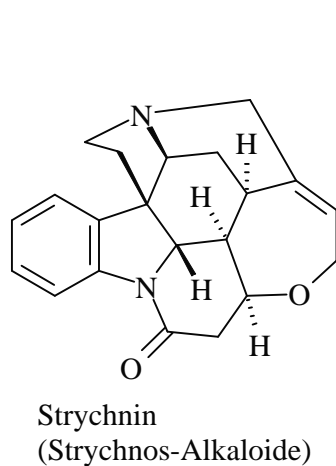
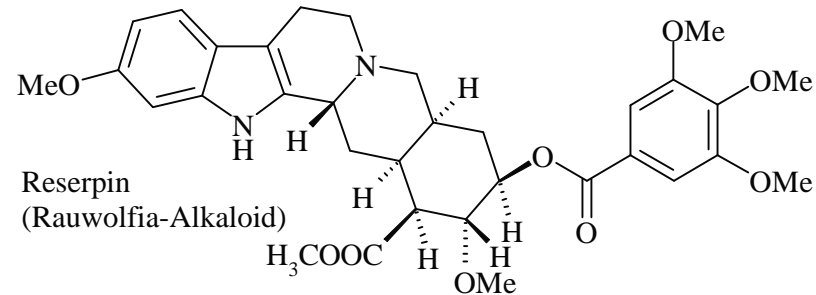
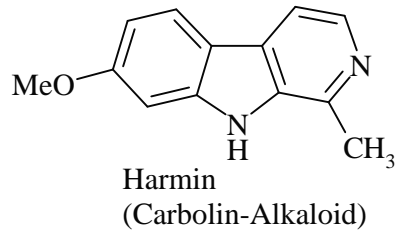
## (Opium)



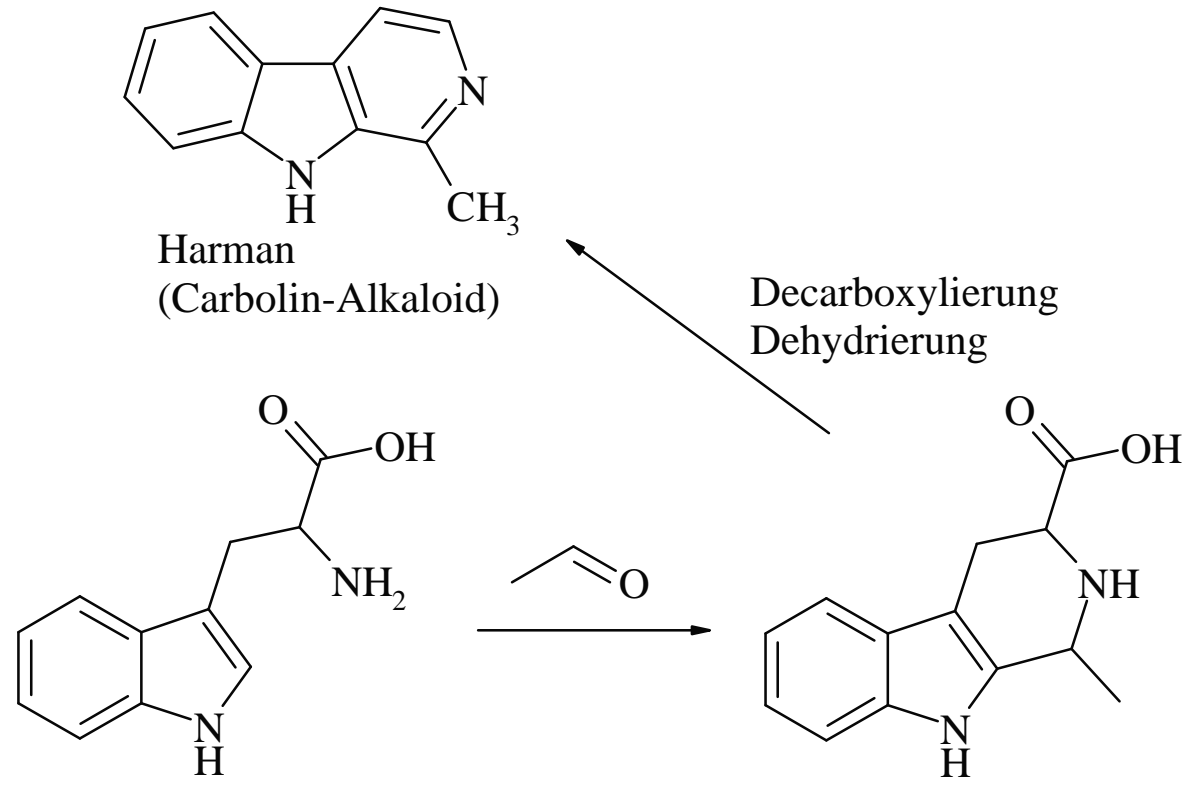
# Biosynthese des Papaverins



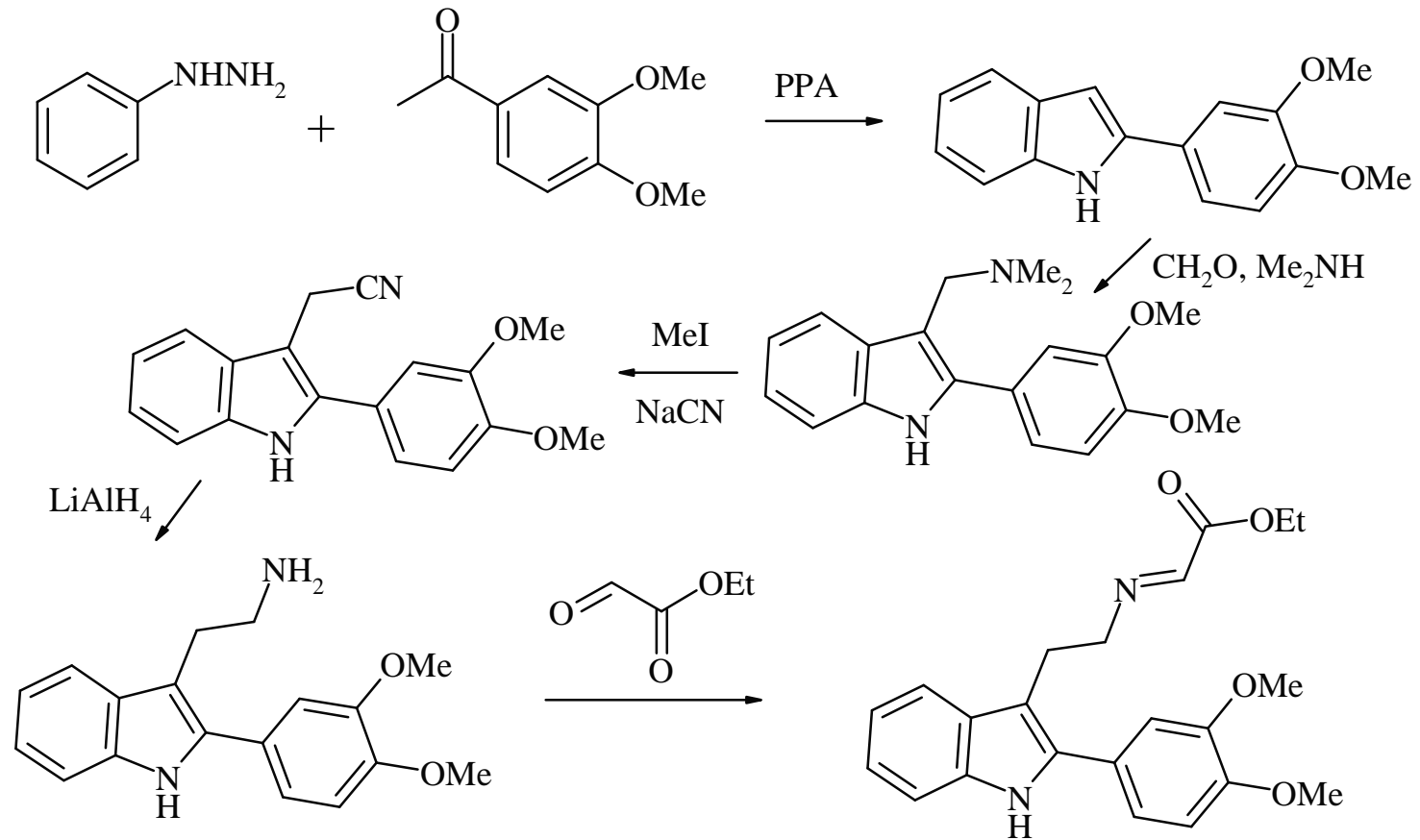
# Alkaloide vom Indol-Typ



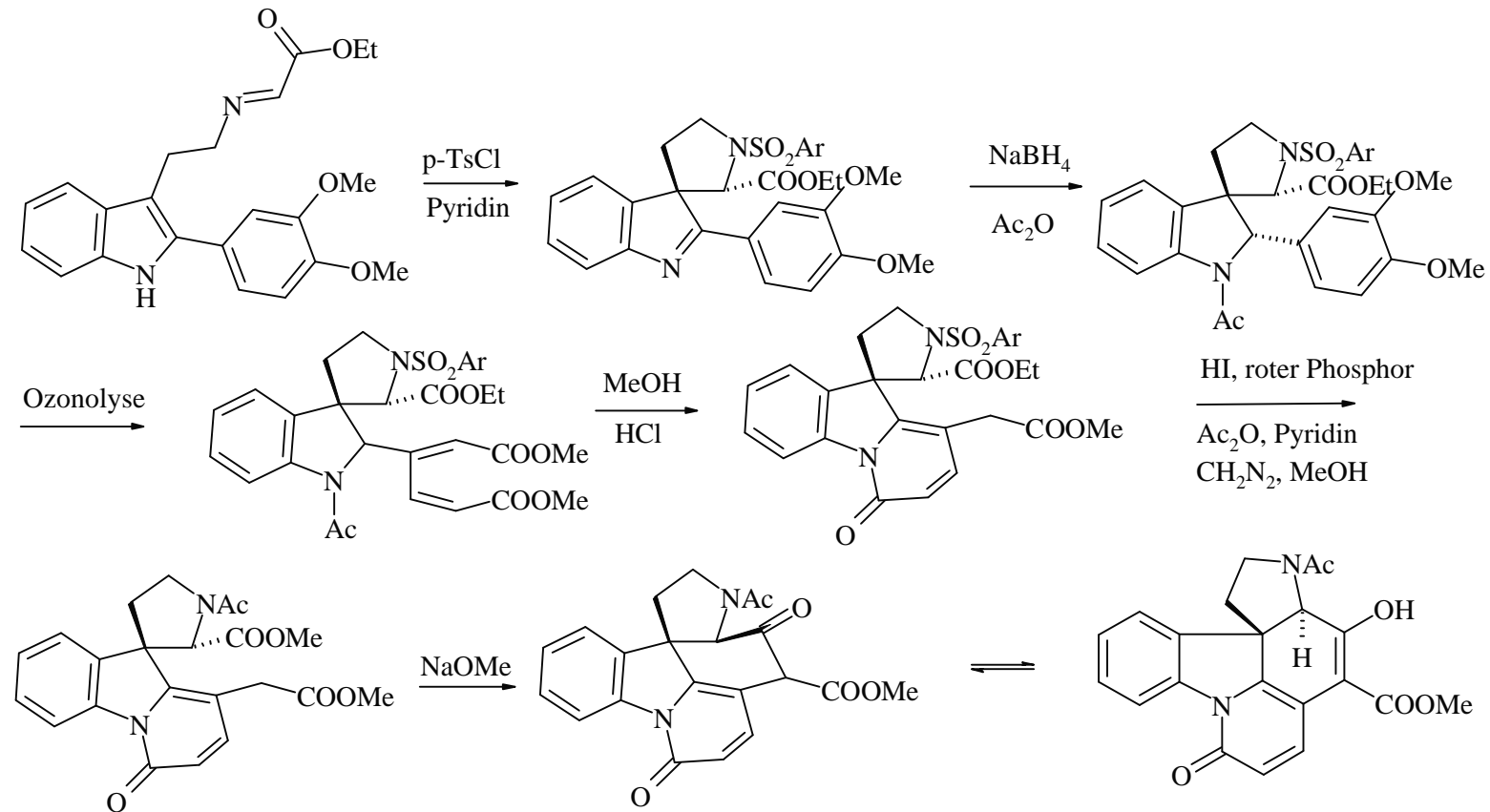
# Synthese des Harmans



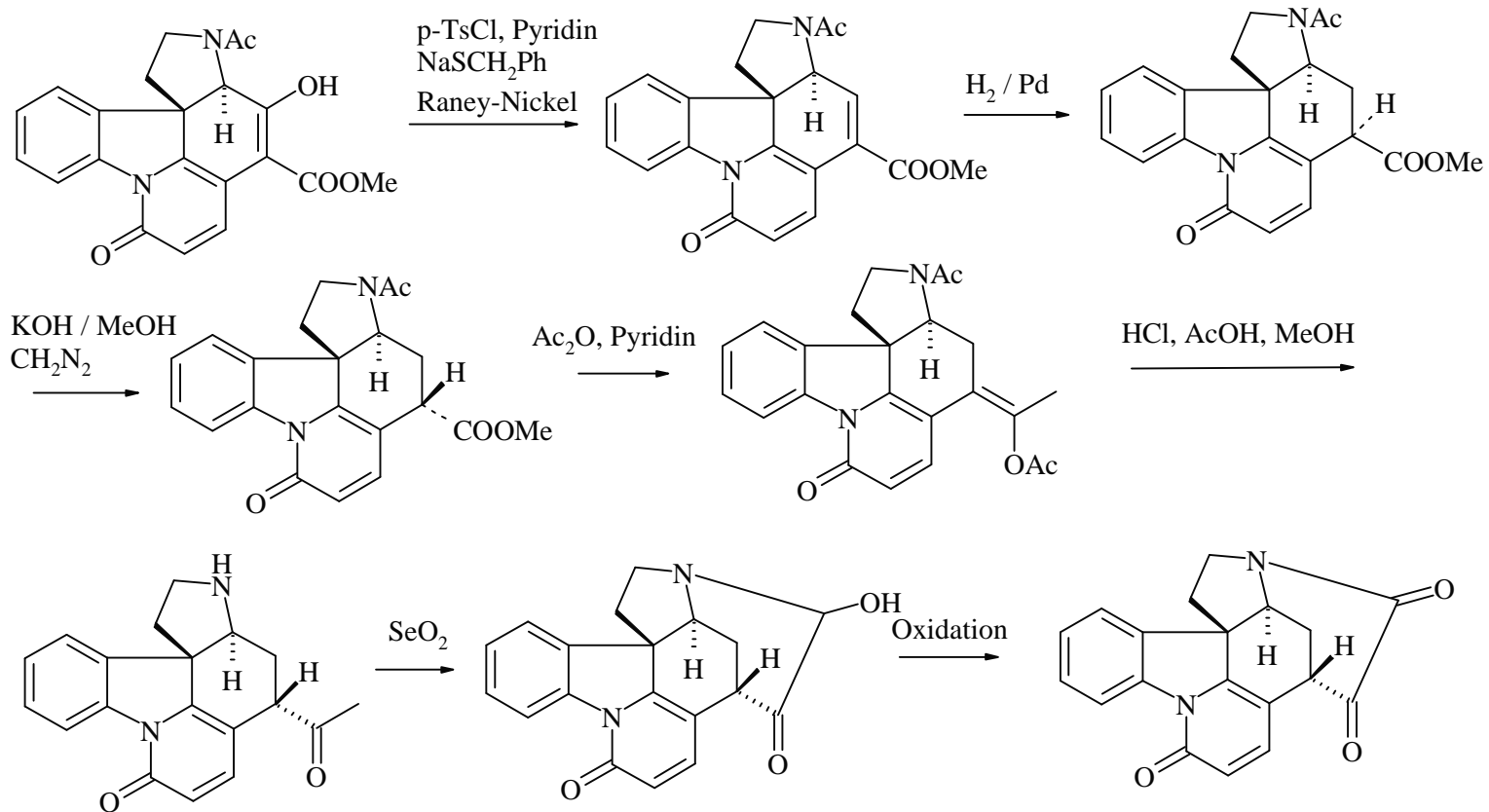
# Synthese des Strychnins – Teil 1



# Synthese des Strychnins – Teil 2



# Synthese des Strychnins – Teil 3



# Synthese des Strychnins – Teil 4

