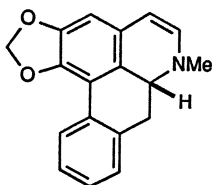
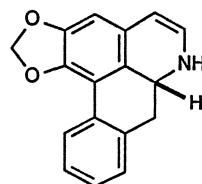


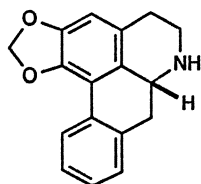
Dehydronuciferine (89-4)



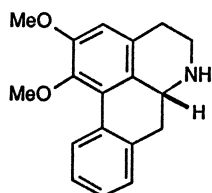
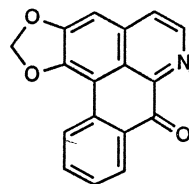
Dehydroremerine (89-5)



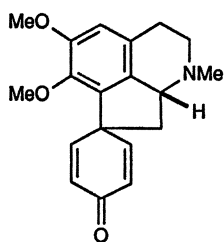
Dehydroanonaine (89-6)



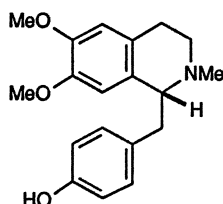
Anonaine (89-7)

*N*-Nornuciferine (89-8)

Liriodenine (89-9)



Pronuciferine (89-10)



Armepavine (89-11)

Furthermore, the alkaloids armepavine (89-11) [4, 5], anonaine (89-7), pronuciferine (89-10), *N*-nornuciferine (89-8), liriodenine (89-9), methylcoclaurine [6], dehydroremerine (89-5), dehydronuciferine (89-4), dehydroanonaine (89-6), and *N*-methylcoclaurine [7] were isolated. Armepavine is an alkaloid of the 1-benzylisoquinoline type; remerine, nuciferine, nornuciferine, anonaine, liriodenine are all aporphine-type alkaloids, whereas pronuciferine is a proaporphine-type alkaloid, which can be converted into nuciferine by treatment with acid after reduction (Fig. 89.1) [8].

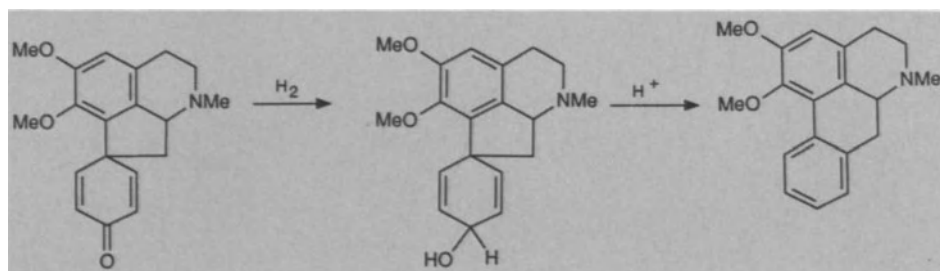


Fig. 89.1. Conversion of pronuciferine into nuciferine