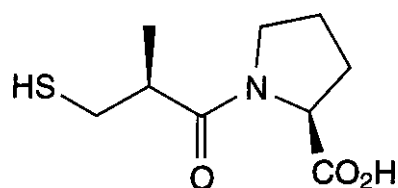
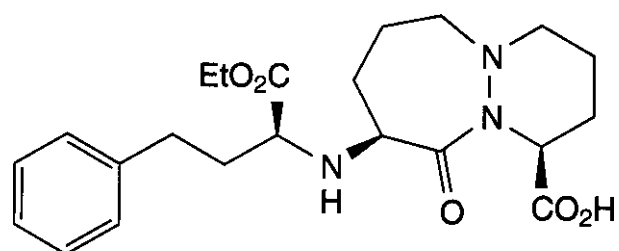
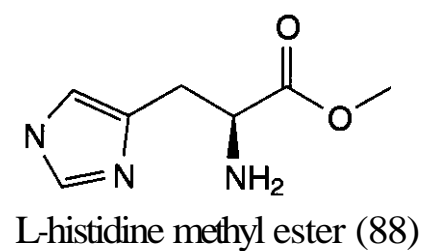
Enalapril R=CH<sub>3</sub> (80)Lisinopril R=(CH<sub>2</sub>)<sub>4</sub>NH<sub>2</sub> (81)

Captopril (82)



Cilazapril (83)

Figure 18.34.



L-histidine methyl ester (88)

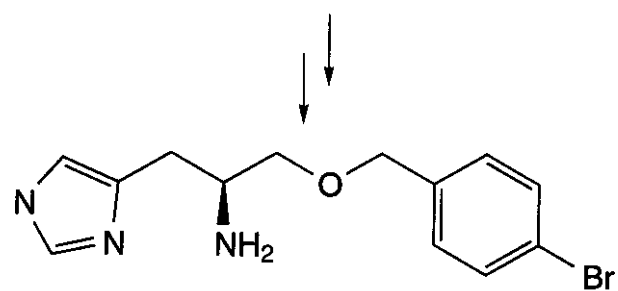
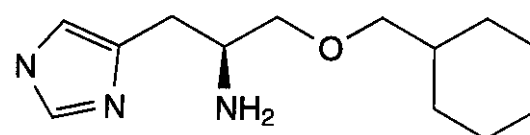
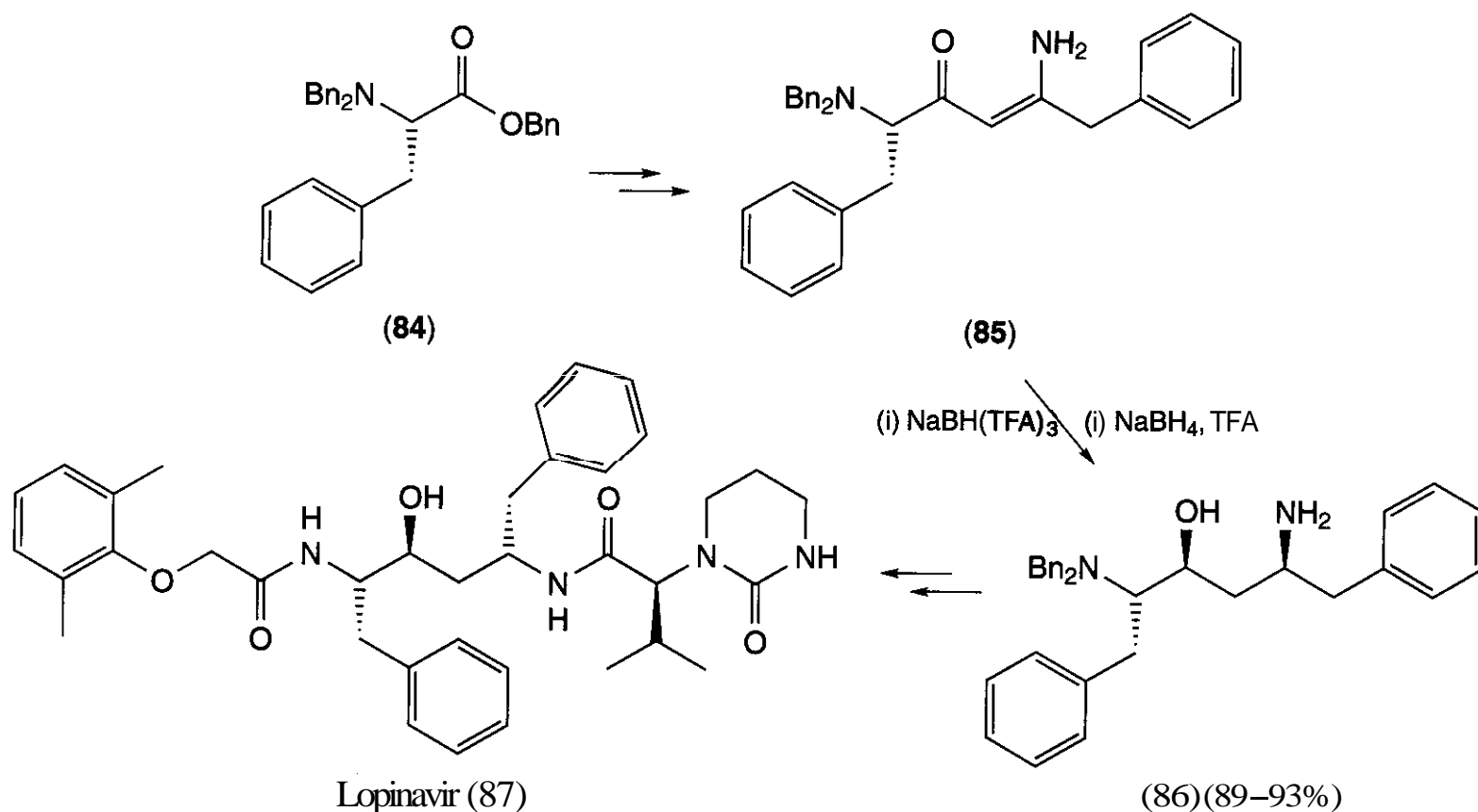
(S)-89 (p*K*<sub>i</sub> H<sub>3</sub> = 7.1)c.f. (R)-89 (p*K*<sub>i</sub> H<sub>3</sub> = 6.7)(S)-90 (p*K*<sub>i</sub> H<sub>3</sub> = 7.9)c.f. (R)-90 (p*K*<sub>i</sub> H<sub>3</sub> = 6.8)

Figure 18.36.

able (*S*)-pyroglutamic acid methyl ester (94) (139). Acetone oxime dianion was added to the methyl ester (94) to generate an intermediate (95). Racemization of the **chiral** center was found to occur under basic conditions; however, this was avoided by immediate treat-



Lopinavir (87)

(86) (89–93%)

Figure 18.35.