

# SUMMARY

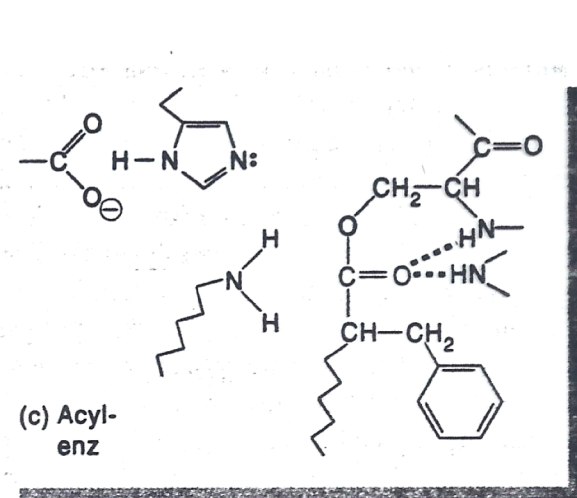
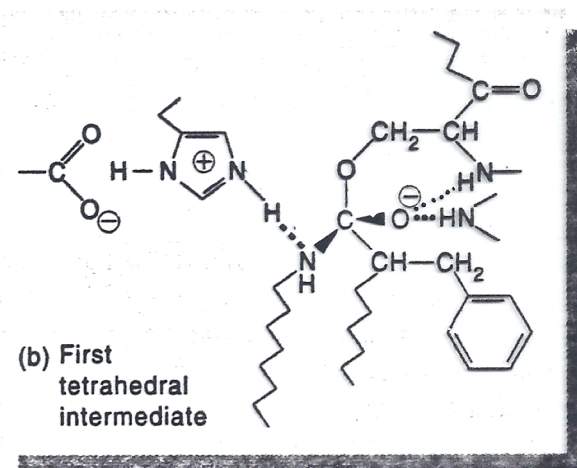
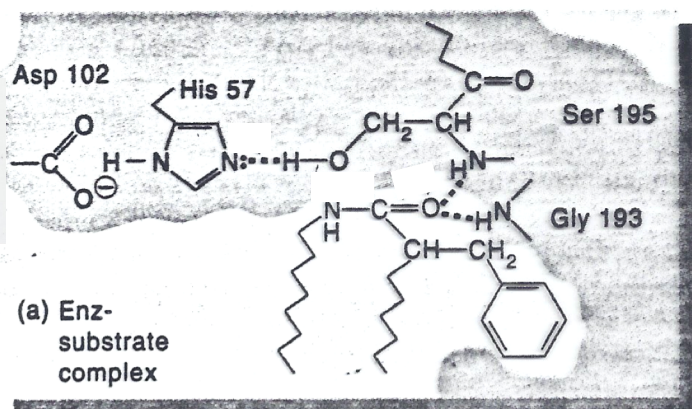
The probable mechanism of action of chymotrypsin. The six panels show (a) the initial enzyme-substrate complex, (b) the first tetrahedral (oxyanion) intermediate, (c) the acyl-enzyme (ester) intermediate with the amine product departing, (d) the same acyl-enzyme intermediate with water entering, (e) the second tetrahedral (oxyanion) intermediate, and (f) the final enzyme-product complex. In the transition states between these intermediates there probably is a more even distribution of negative charge between the different oxygen atoms attached to the substrate's central carbon atom.

Recall, the second half-reaction is slow

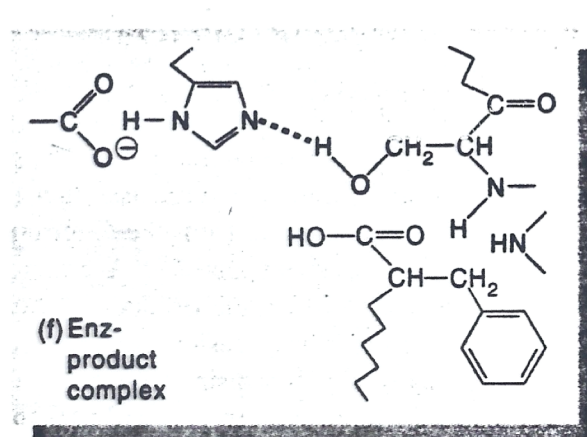
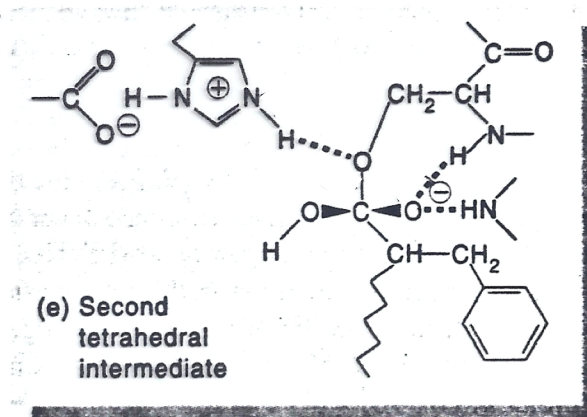
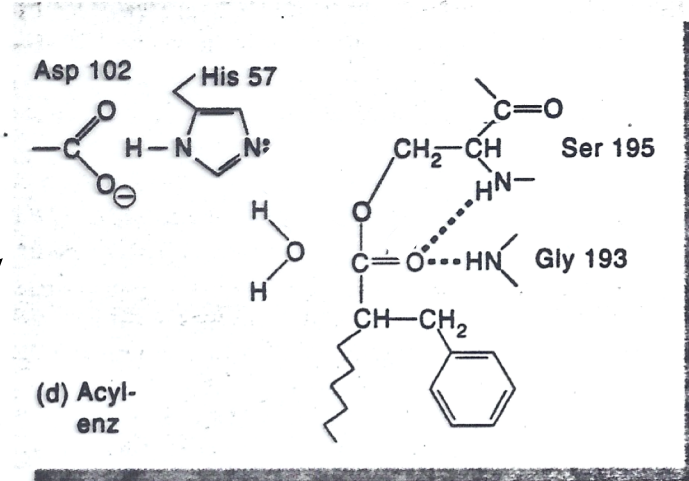
# E

What evidence is in support of this mechanism?

## 1<sup>st</sup> half-reaction



## 2<sup>nd</sup> half-reaction



1

2

5

4

3

6

7