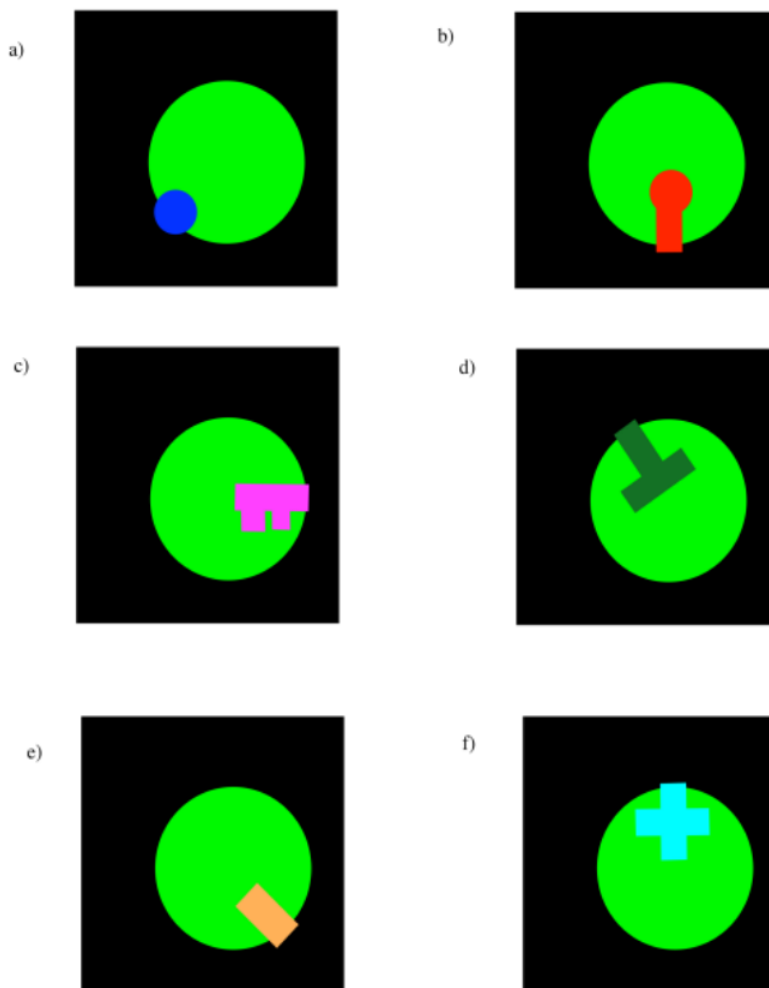


6.7: Enzyme Solutions

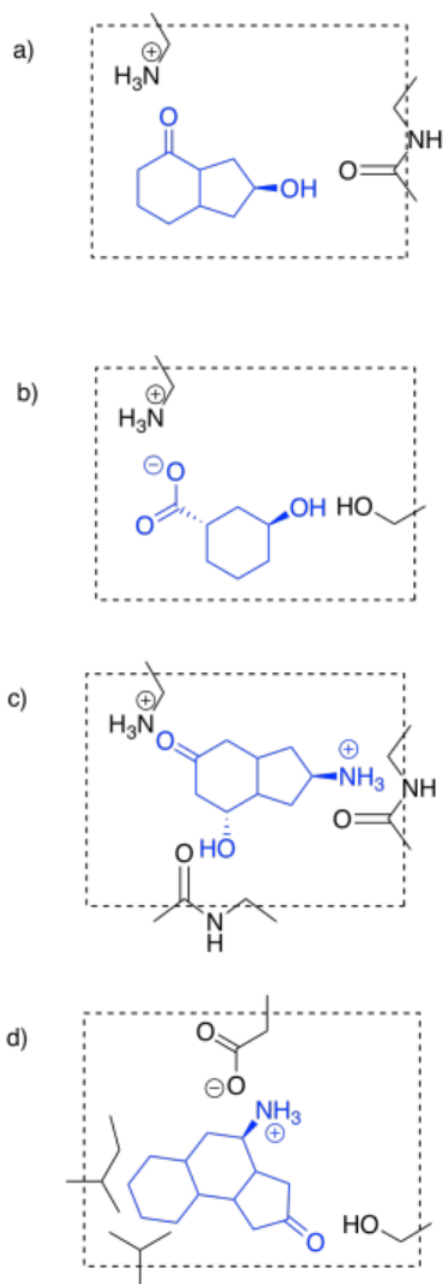
Exercise 6.1.1:

- a. isomerase v) reorganize atoms from one isomer into another
- b. hydrolase vii) add water into a molecule, helping to break it down
- c. oxygenase i) add oxygen from O_2 into a molecule
- d. dioxygenase ii) add both oxygens from O_2 into a molecule
- e. reductase iv) reduce or add electrons to the substrate
- f. transferase ix) transfer a functional group to or from a molecule
- g. phosphatase vi) cleave a phosphate group off a protein
- h. oxidase iii) oxidize or remove electrons from the substrate
- i) ligase viii) cause two molecules to be bound together

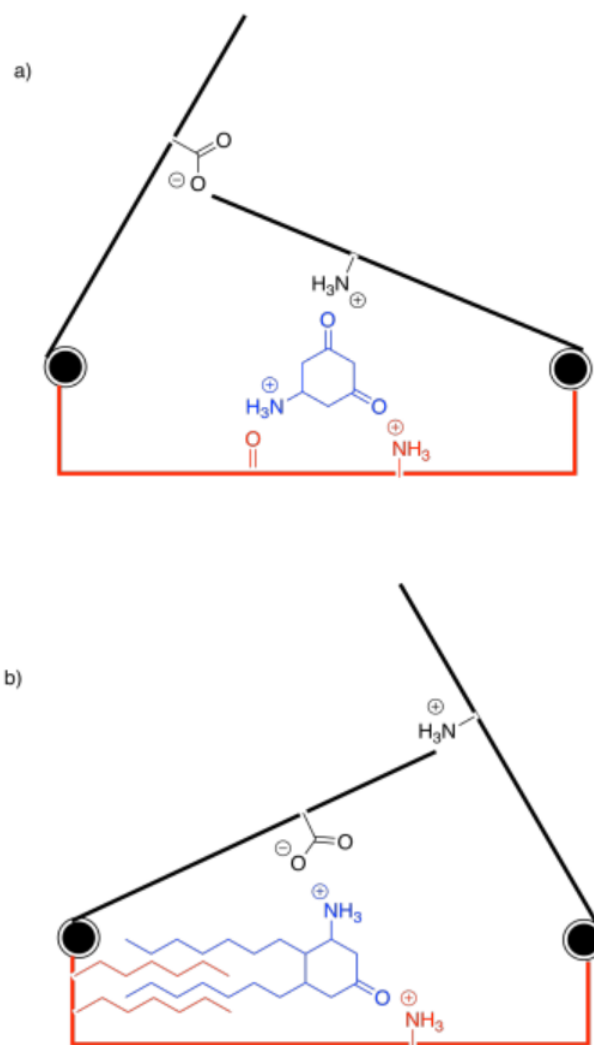
Exercise 6.2.1:



Exercise 6.2.2:



Exercise 6.2.3:



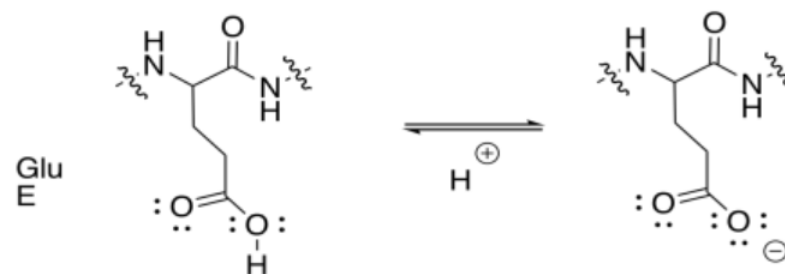
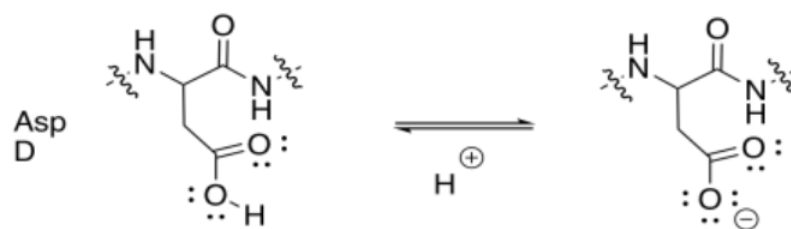
Exercise 6.3.1:

Aspartic acid (abbreviations Asp or D) and glutamic acid (abbreviations Glu or E).

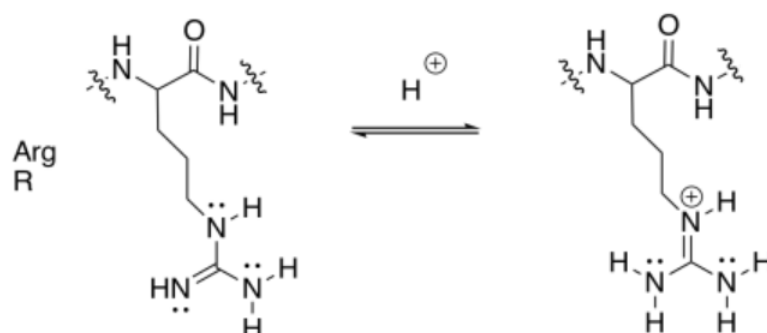
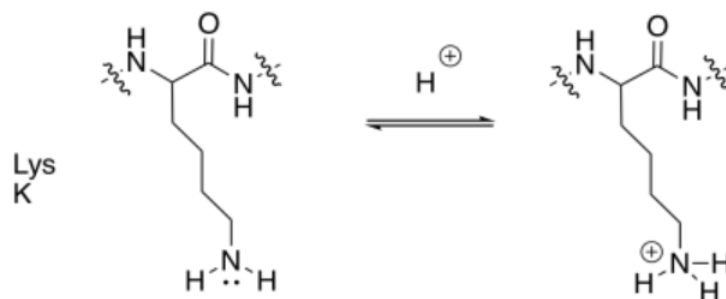
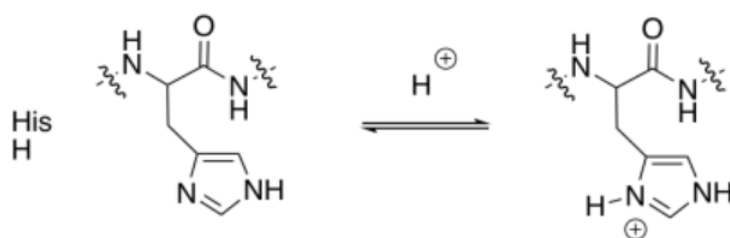
Exercise 6.3.2:

Histidine (abbreviations His or H), lysine (abbreviations Lys or K) and arginine (abbreviations Arg or R).

Exercise 6.3.3:

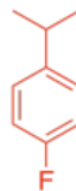
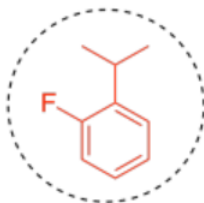
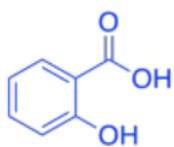


Exercise 6.3.4:

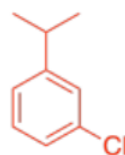
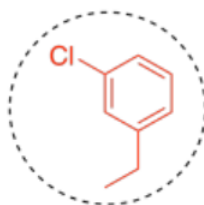
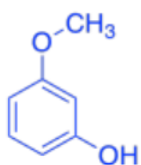


Exercise 6.4.1:

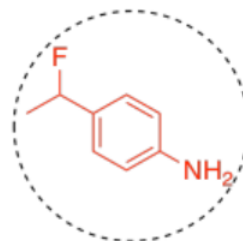
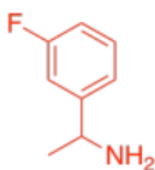
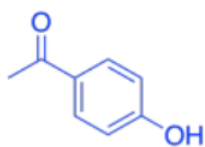
a)



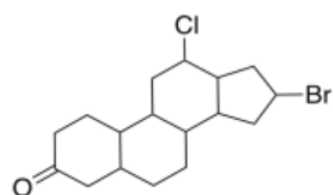
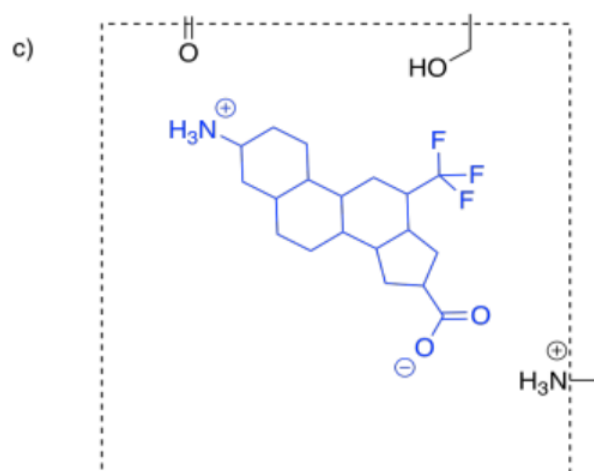
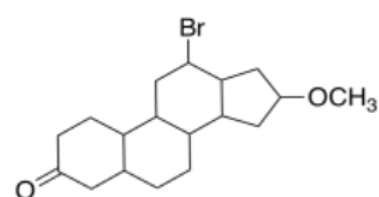
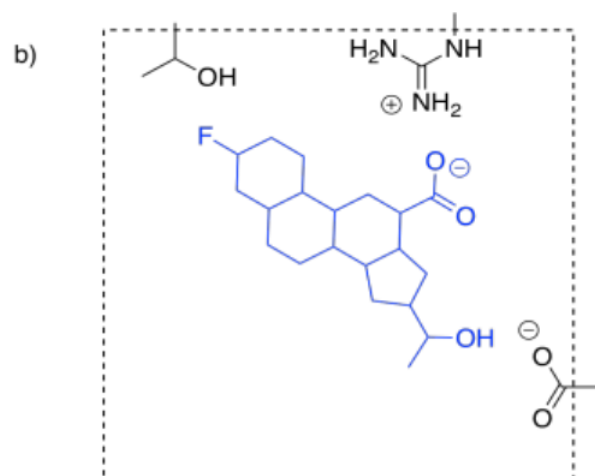
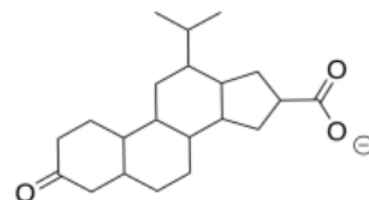
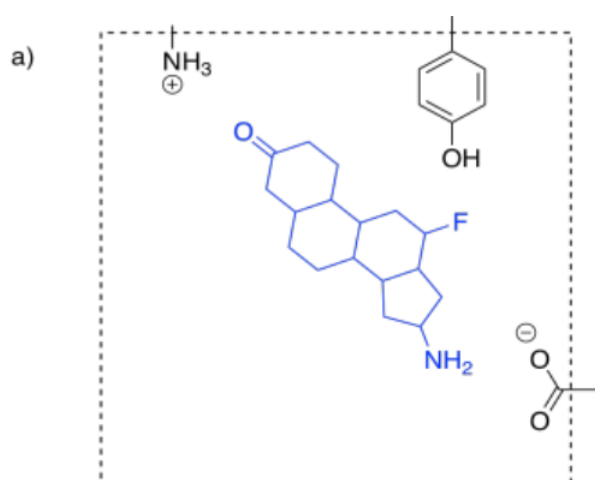
b)



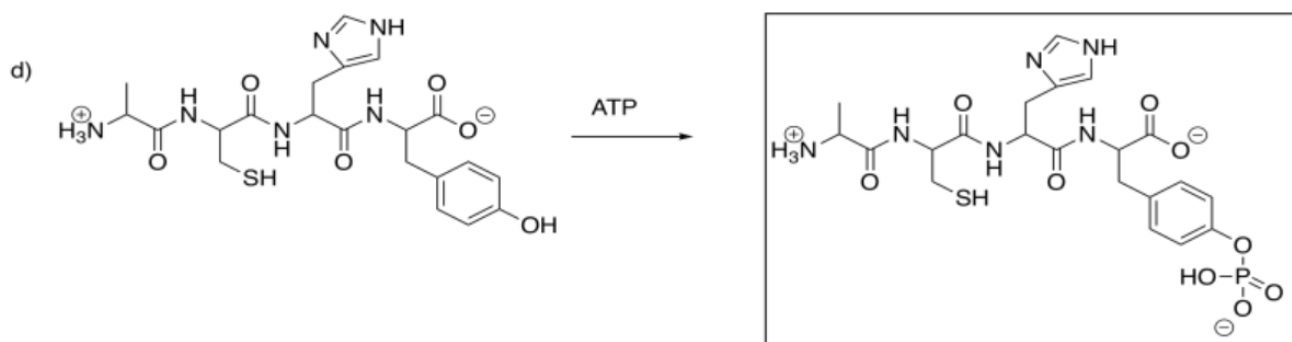
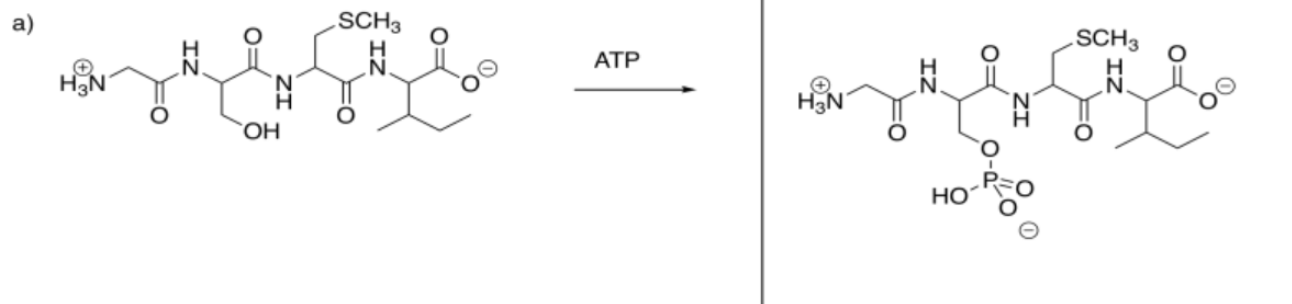
c)

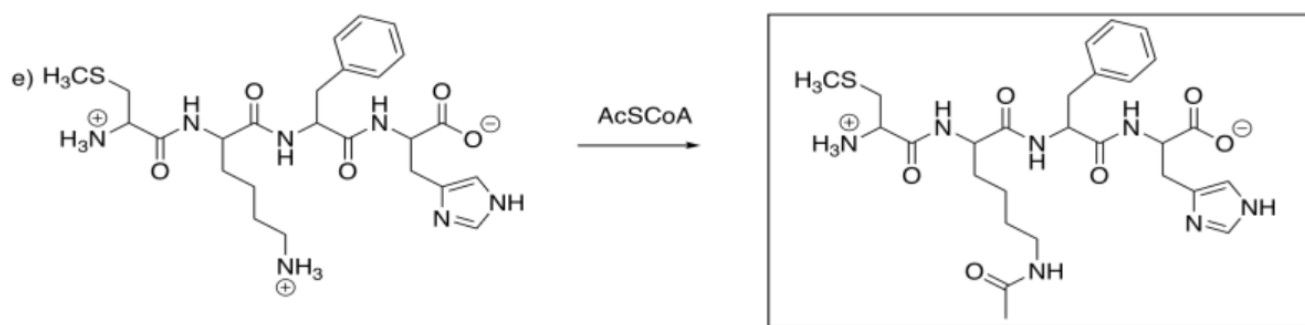


Exercise 6.4.2:

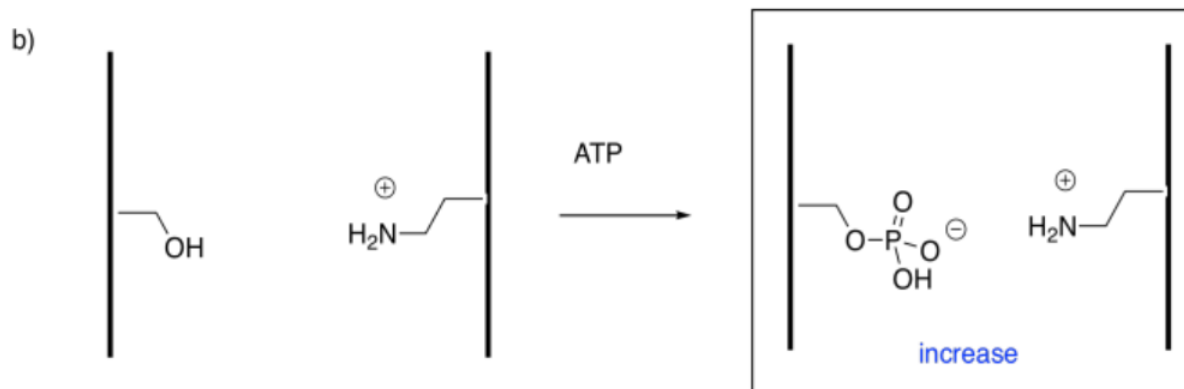
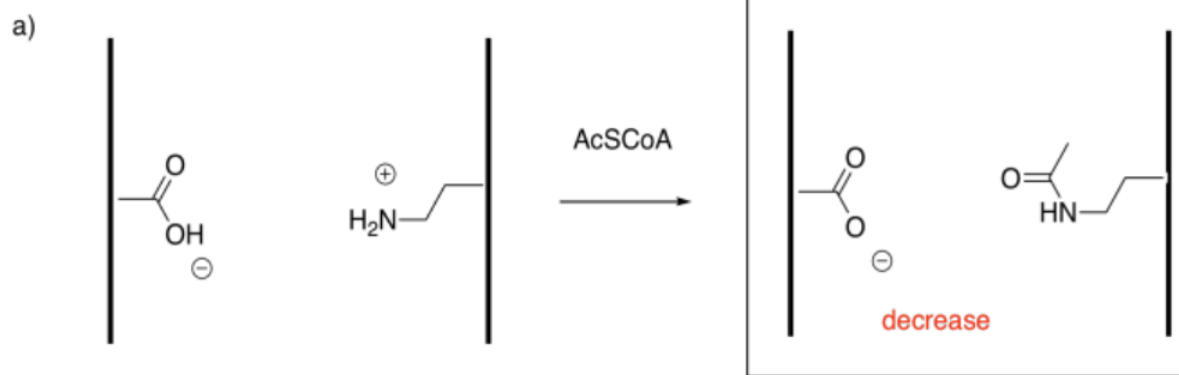


Exercise 6.6.1:

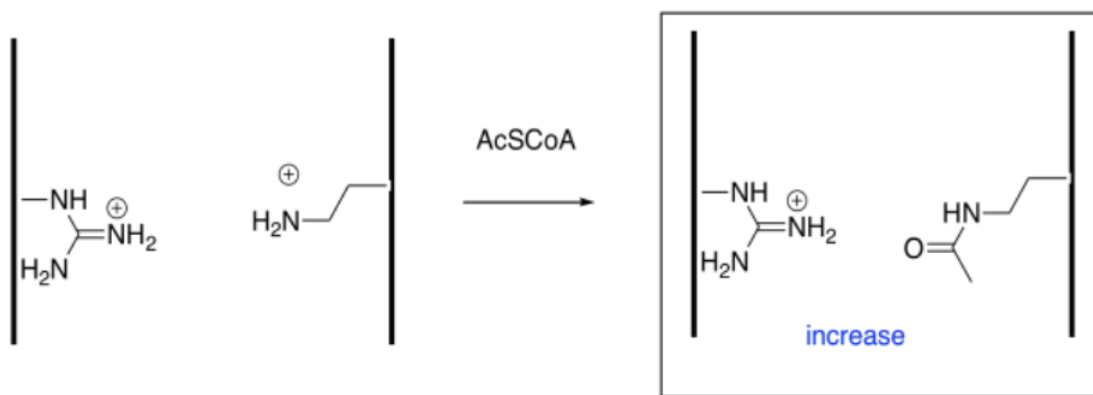




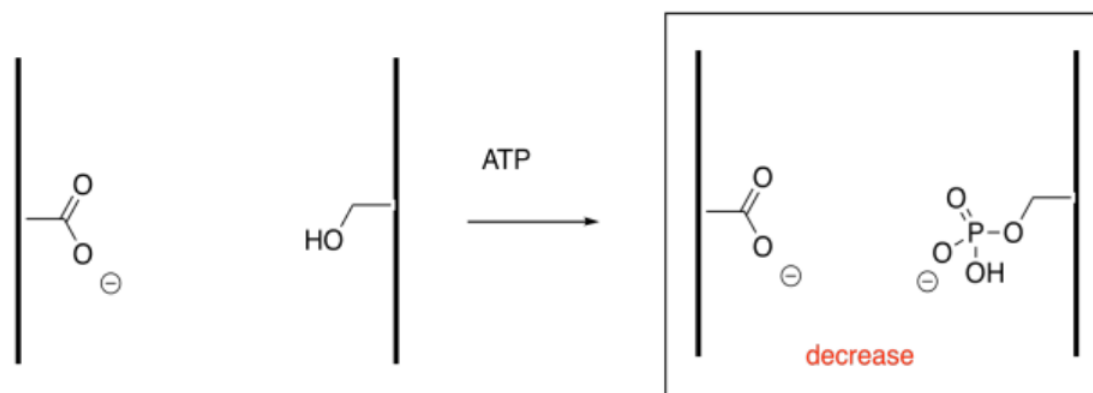
Exercise 6.6.2:



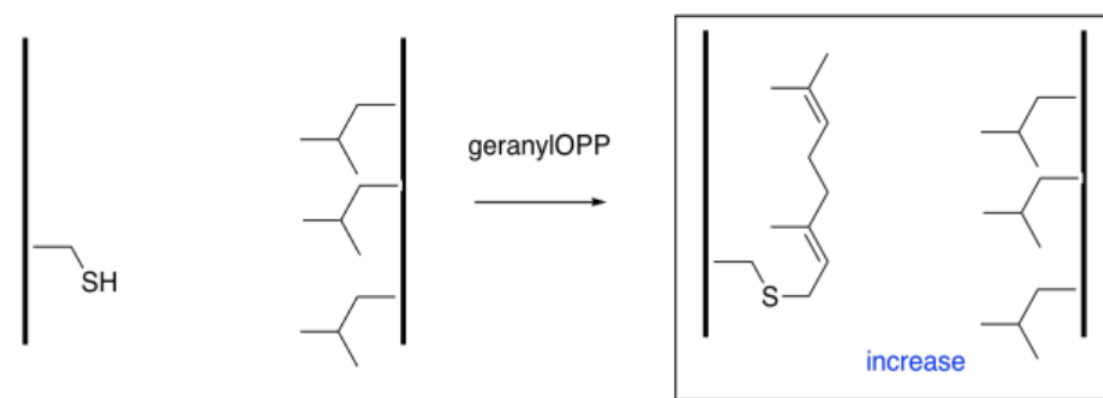
c)



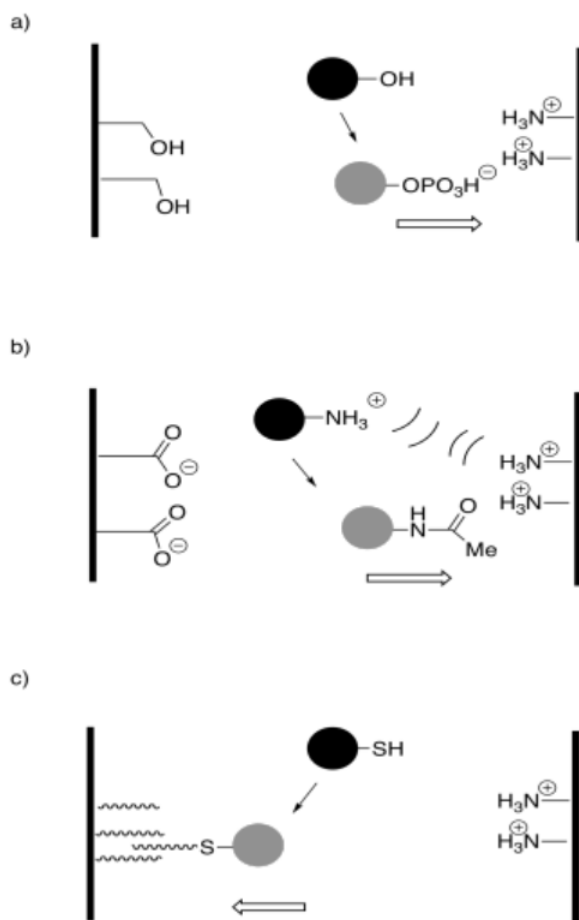
d)



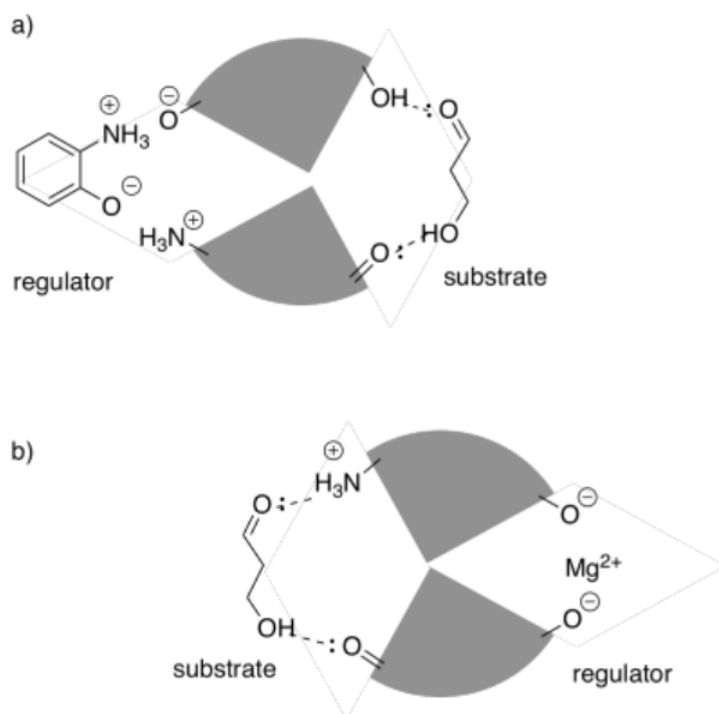
e)

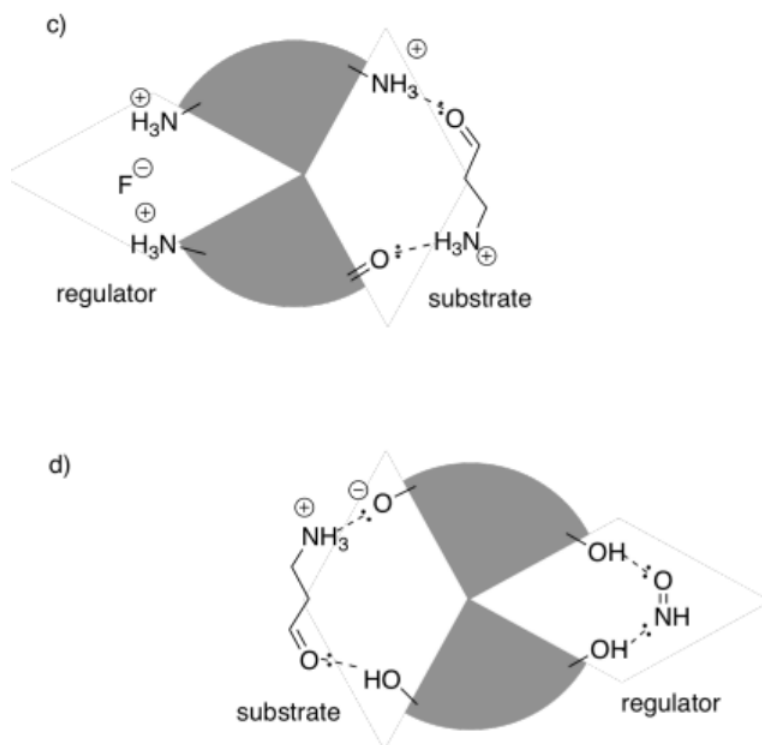


Exercise 6.6.3:



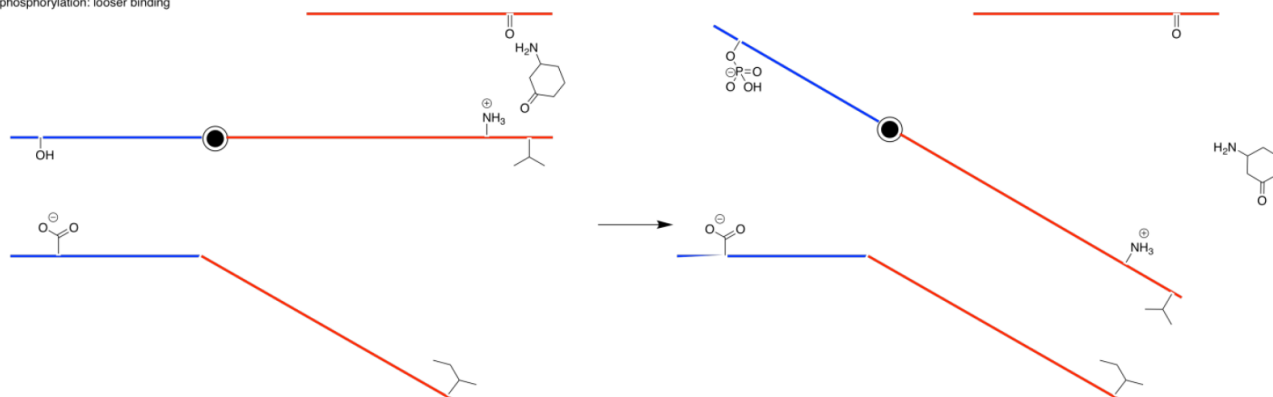
Exercise 6.6.4:



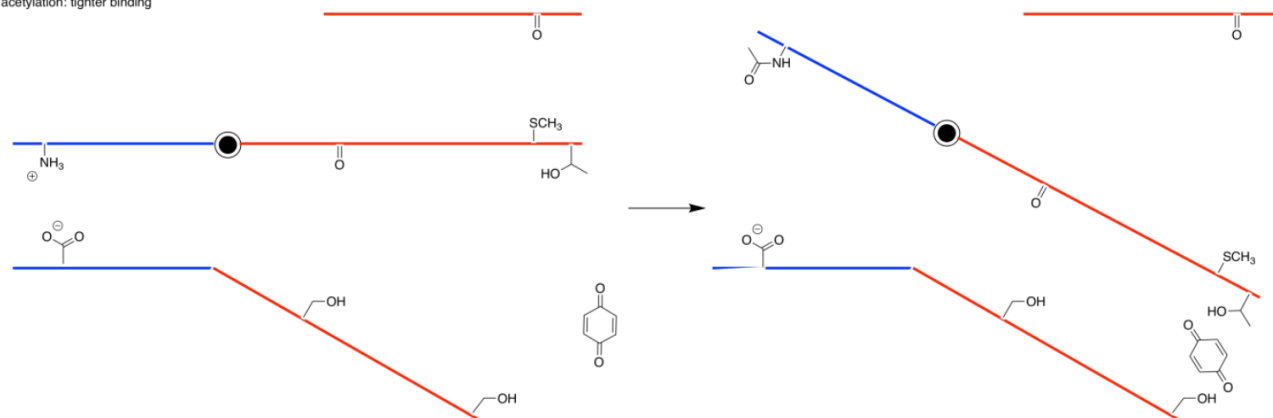


Exercise 6.6.5:

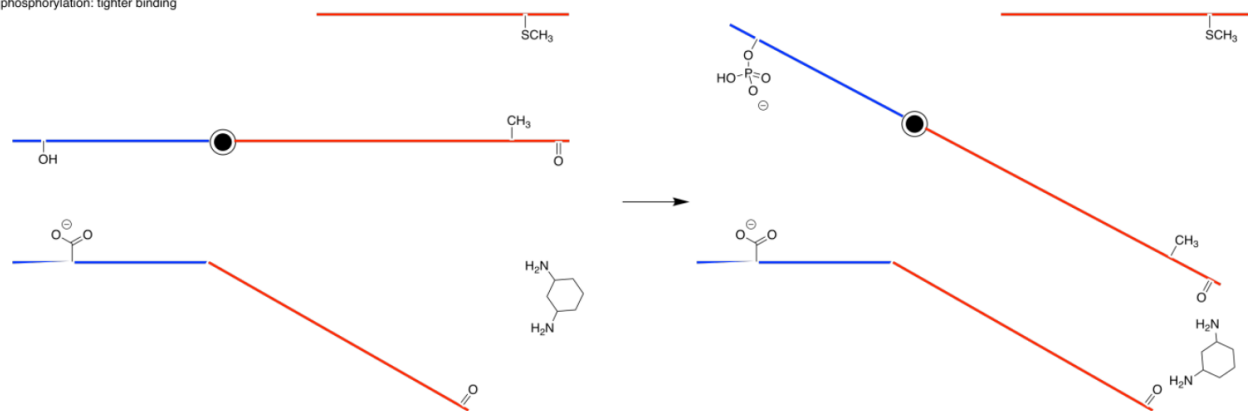
a) phosphorylation: looser binding



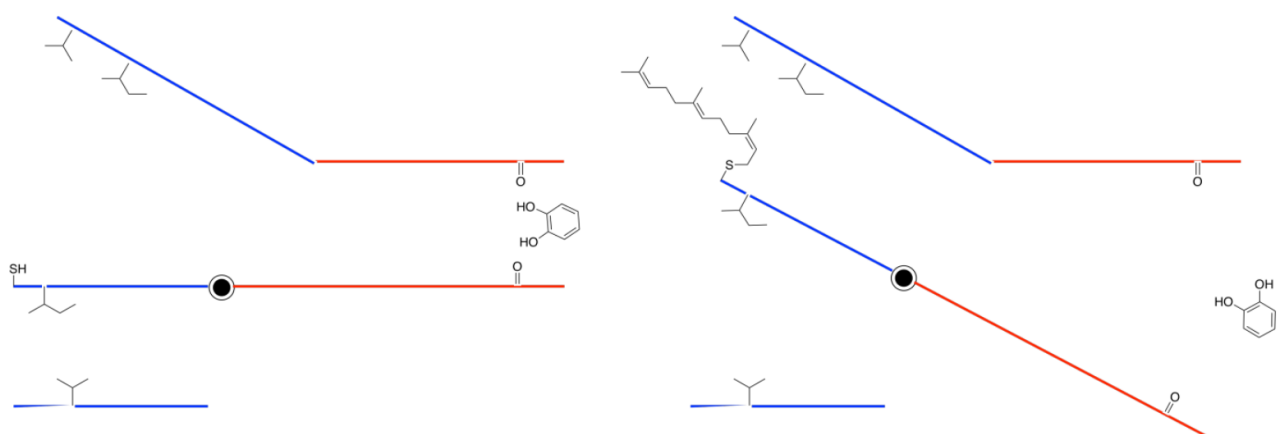
b) acetylation: tighter binding



c) phosphorylation: tighter binding



d) prenylation: looser binding



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