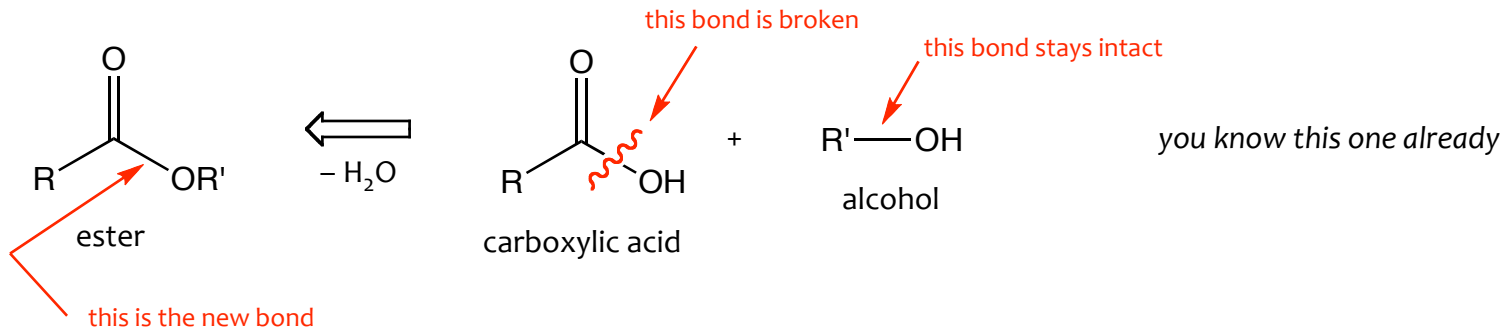
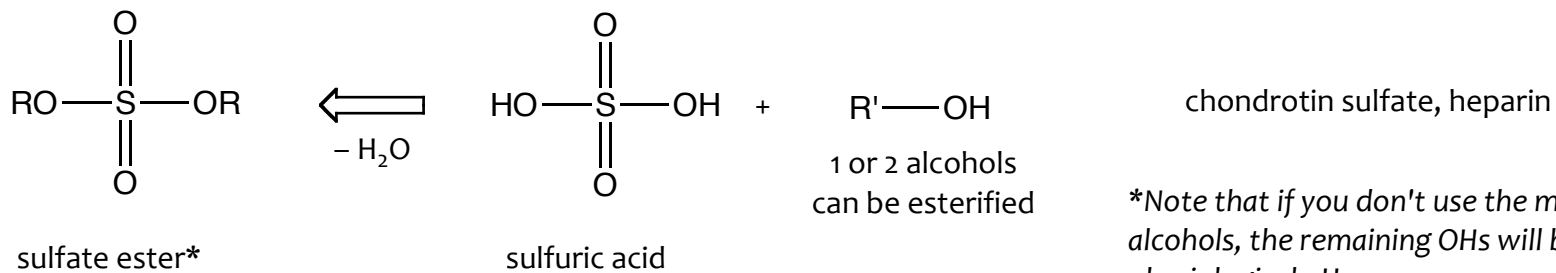
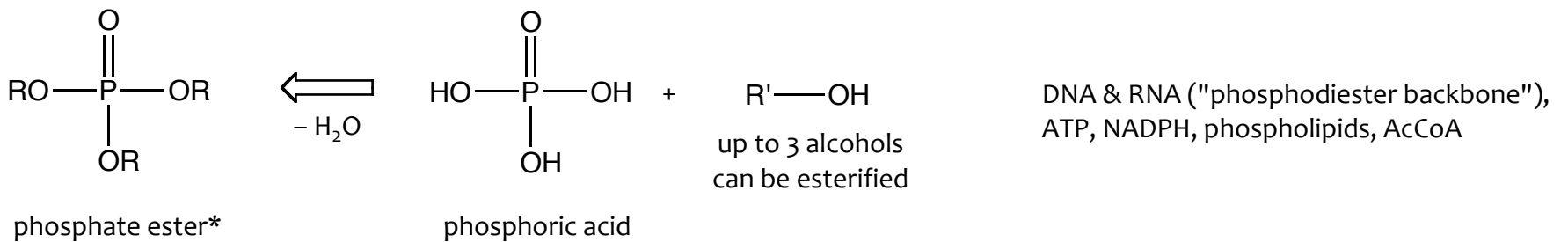
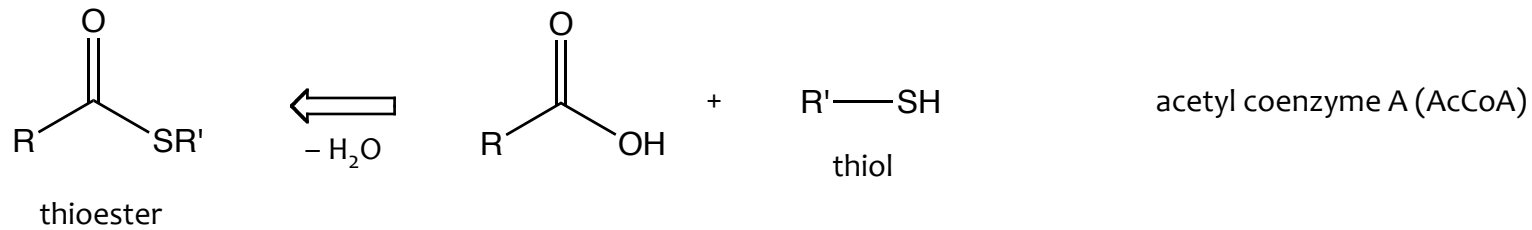


Biochemically Important Functional Groups Analogous to the Ester

Prof. B. Hanson

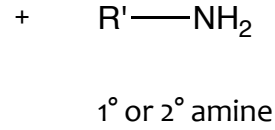
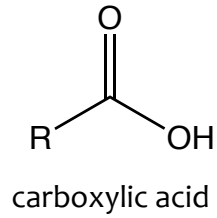
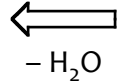
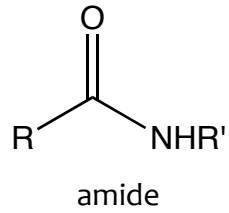


important examples



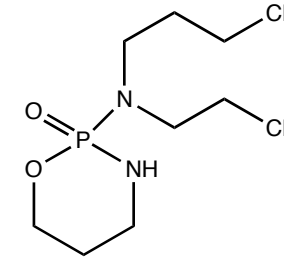
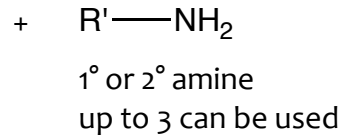
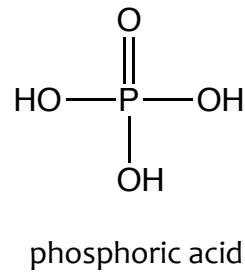
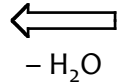
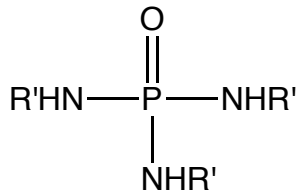
**Note that if you don't use the maximum number of alcohols, the remaining OHs will be ionized at physiological pH.*

Biochemically Important Functional Groups Analogous to the Amide

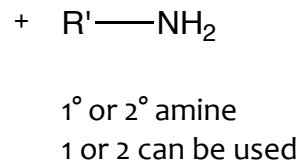
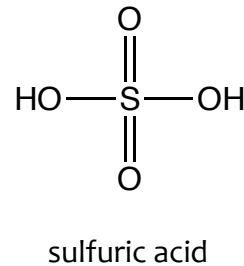
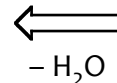
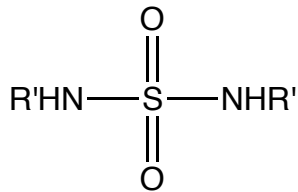


you know this one already
peptide bonds, AcCoA

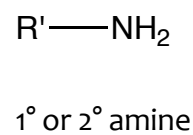
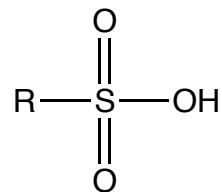
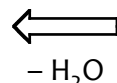
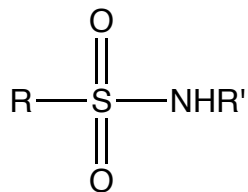
bond breaking and making here is the same as for the ester shown on page 1



Cyclophosphamide is an important anticancer drug. Note the functional groups present.



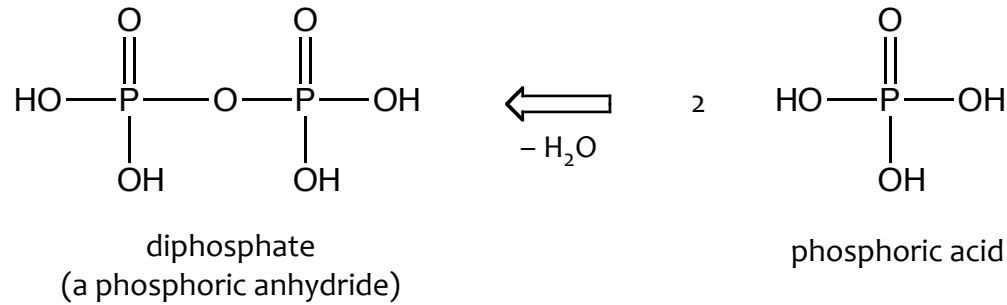
found in heparin



found in sulfa drugs, which inhibit bacterial tetrahydrofolate synthesis

sulfonamide

Biochemically Important Functional Groups Analogous to the Anhydride



Note: none of these phosphate species are shown in proper ionization state at physiological pH.

