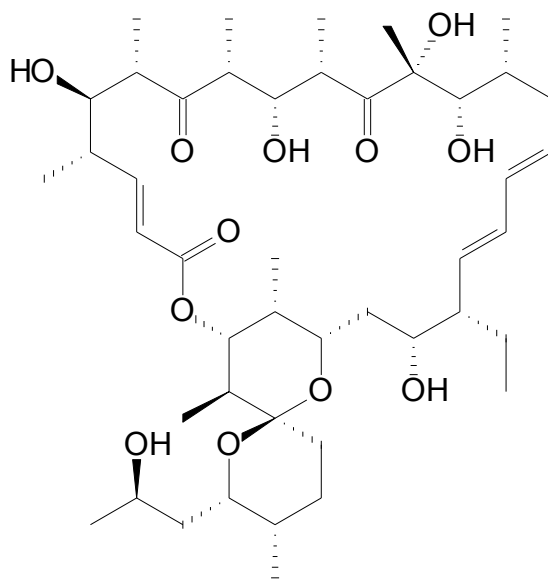
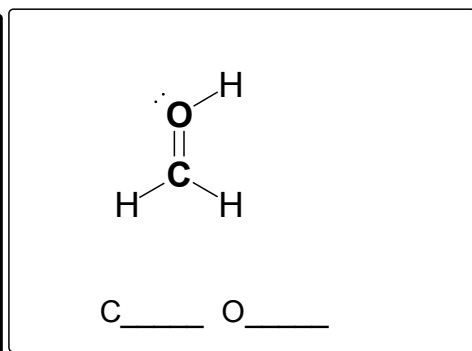
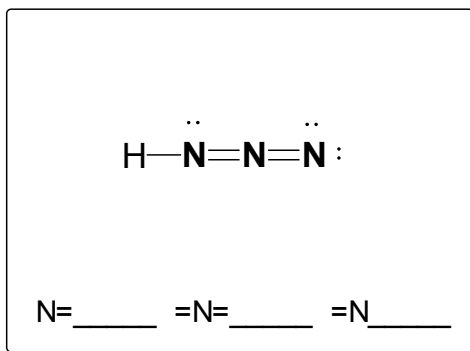
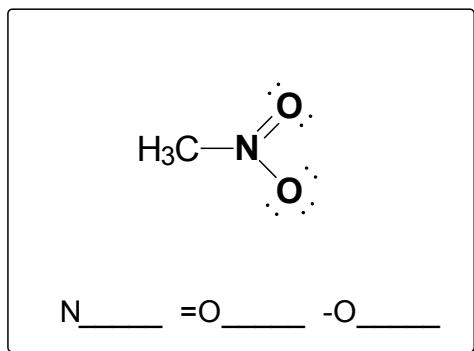


1. (3 pts) Circle all of the atoms in 21-hydroxyoligomycin A (below) that are sp^2 hybrid.



2. (4 pts) Calculate the formal charge on each **ATOM** in **BOLD** in the Lewis structures below. All non-bonded electrons are shown. Do not calculate the formal charge on any atom that is not in **BOLD**.



3. (3 pts) Draw a 3-D representation of $\text{Cl}_2\text{C}=\text{C}=\text{CH}_2$ (use wedges and dashes where needed). Indicate the direction of the Dipole for $\text{Cl}_2\text{C}=\text{C}=\text{CH}_2$.