Assigning the Configuration

- 1. Use the Cahn-Ingold-Prelog Rules to assign priority to the four group. Orient the molecule so that the lowest priority group is in the back (away from you).
- 2. Look at the remaining three groups of priority 1-2-3. If the remaining three groups are arranged so that numbering the priorities 1-2-3 are in a *clockwise* fashion, then assign the stereogenic center as **R** ("rectus" or right). If the remainingthree groups are arranged 1-2-3 in a *counterclockwise* manner, then assign the stereogenic center **S** ("sinister" or left).

$$\begin{array}{c} 1 \\ OH \\ 2 \\ WCO_2H \\ CH_3 \\ 3 \end{array} \qquad \begin{array}{c} \text{orient lowest priority} \\ \text{group away} \end{array} \qquad \begin{array}{c} 1 \\ OH \\ H_3C \\ \\ \end{array} \qquad \begin{array}{c} CO_2H \\ 2 \end{array} \\ \text{clockwise} = R \end{array}$$

2. -or- use the "Hand Rule". Orient the lowest priority group up. Point your thumb in the direction of the lowest priority group. If you need to use your *right hand* so that your fingers point in the direction of the group priorities in the order 1-2-3, then the stereogenic center is assigned **R** ("rectus" or *right*). If your *left hand* is required so that your fingers point in the direction of the group priorities 1-2-3, the the stereogenic center is assigned **S** ("sinister" or *left*).

