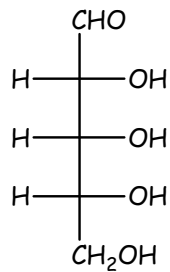
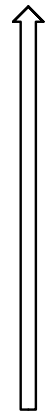
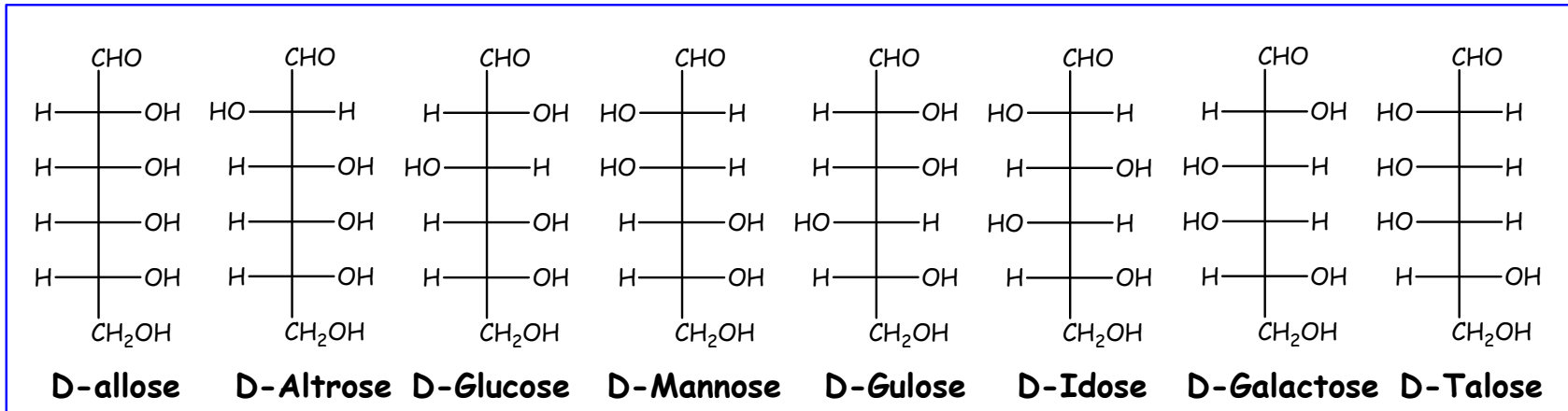
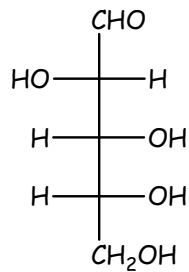


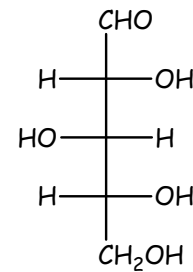
The D-Family of Carbohydrates



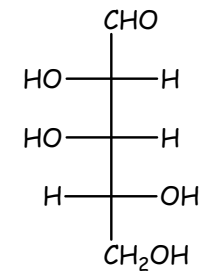
D-Ribose



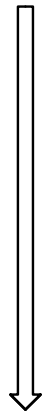
D-Arabinose



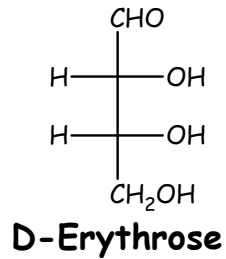
D-Xylose



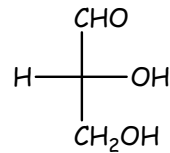
D-Lyxose



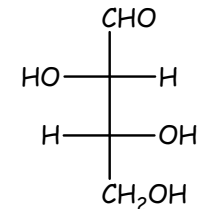
**Chain-lengthening
Kiliani-Fischer
Synthesis**



D-Erythrose



D-Glyceraldehyde



D-Threose

**Chain-shortening
Ruff Degradation**