**Supplement#2 Organic Chemistry II CHEM 4524 SUNY Alfred State 1/3**

***2-Center Chiral Molecule Relationships and Language***

**FISCHER 2-CENTER CHIRAL MOLECULE**

 **REPRESENTATIONS**

**Example Where the Chiral Molecule**

 **Has A Non-Superimposable Mirror Image**



Assumed 3D orientation

In Fischer (eclipsed)

**ENANTIOMERIC PAIR**

 **mirror images**

 **NOT superimposable**

*Supplement #2: 2-center chiral molecules…(continued)* **2/3**

Example Where Chiral Molecule is a Meso Structure



Assumed 3D orientation

In Fischer (eclipsed)

 **MESO STRUCTURES**

 **mirror images**

 **superimposable**

*Supplement #2:: 2-center chiral molecules…(continued)* 3/3

**None of the above….**



**THREO FORM**

**ERYTHRO FORM\***

mirror

**\*helpful (?) memory aid: E = Erythro groups everything on one side (big with big, small with small)**

**DIASTEREOMERS**

 **NOT mirror images**

 **NOT superimposable**

**case chemically different ? physically different ?**

meso structures no no

enantiomers yes no

diastereomers yes yes