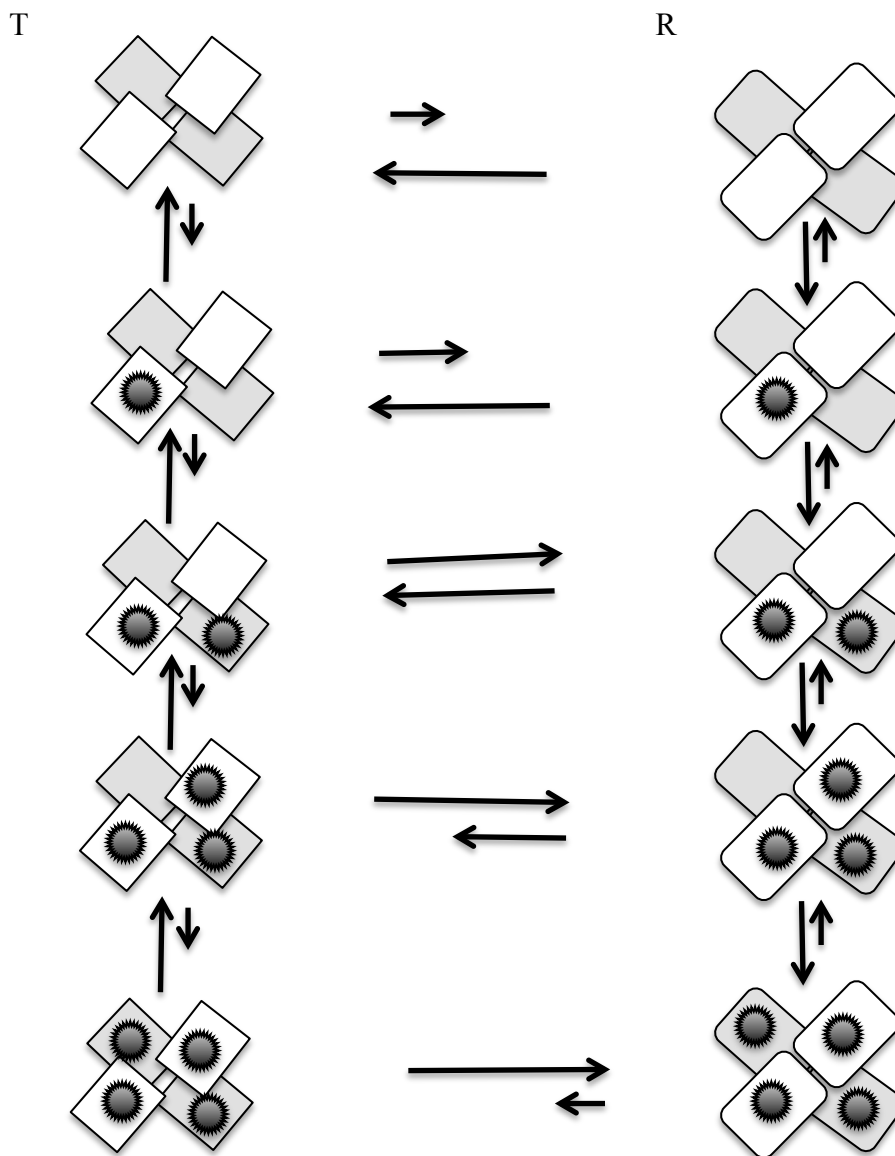


CHEM 4400 Dr. Stone  
 Concerted Model of Oxygen Binding to Hemoglobin



This is the Concerted Model (MWC). The arrows represent the equilibrium constants for each structure change. Note that the concerted switch from "all T" to "all R" has equilibrium constants that depend on how many Oxygen are bound.

The equilibrium constant for binding Oxygen to "all T" is the same for all of the reactions. It does not depend on the number of Oxygen bound.

The equilibrium constant for binding Oxygen to "all R" is the same for all of the reactions. It does not depend on the number of Oxygen bound.

This model represents a symmetrical change in the structure of hemoglobin, which is highly probable.

For each set of arrows, put one of the following values for  $K_{eq}$  on top of the arrow:  
 1, 10, 20,  $1 \times 10^{-1}$ ,  $2 \times 10^{-1}$