**Figure S1:  a 1-connected cyclic QN**

Supplementary figure 1 shows a 1-connected cyclic graph where R3 is a cut, that is, a node which disconnects the graph if removed.  By the cyclic coupling hypothesis, this graph has two allosteric units: R1-R2-R3 and R3-R4-R5.  All motion within R1-R2-R3 can occur if R3-R4-R5 is held rigid as a unit, though steric constraints may give rise to limited coupling between the motions in the two respective allosteric units.