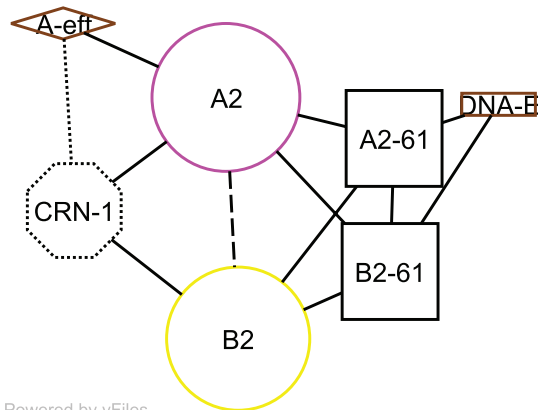
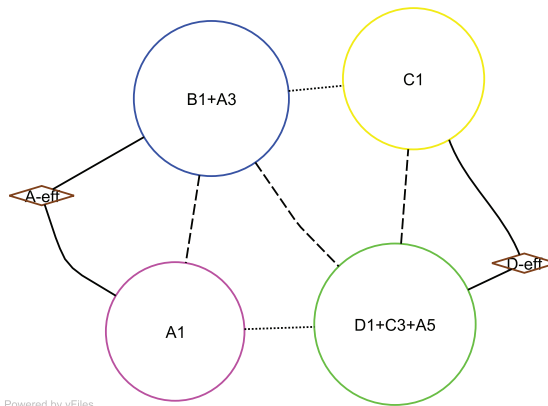


### lac repressor (A-eff to DNA-E)



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### malic enzyme (A-eff to D-eff)



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### Figure S3: Proposed pathways in the GCNs of lac repressor and NAD-malic enzyme

The complete GCNs of these two proteins are shown in figure 4 of the main text, and pathways are calculated as in figure 5 of the main text. One path is shown per protein. A pathway connecting two effectors is shown for malic enzyme because there are no substrate-effector pathways in this protein.