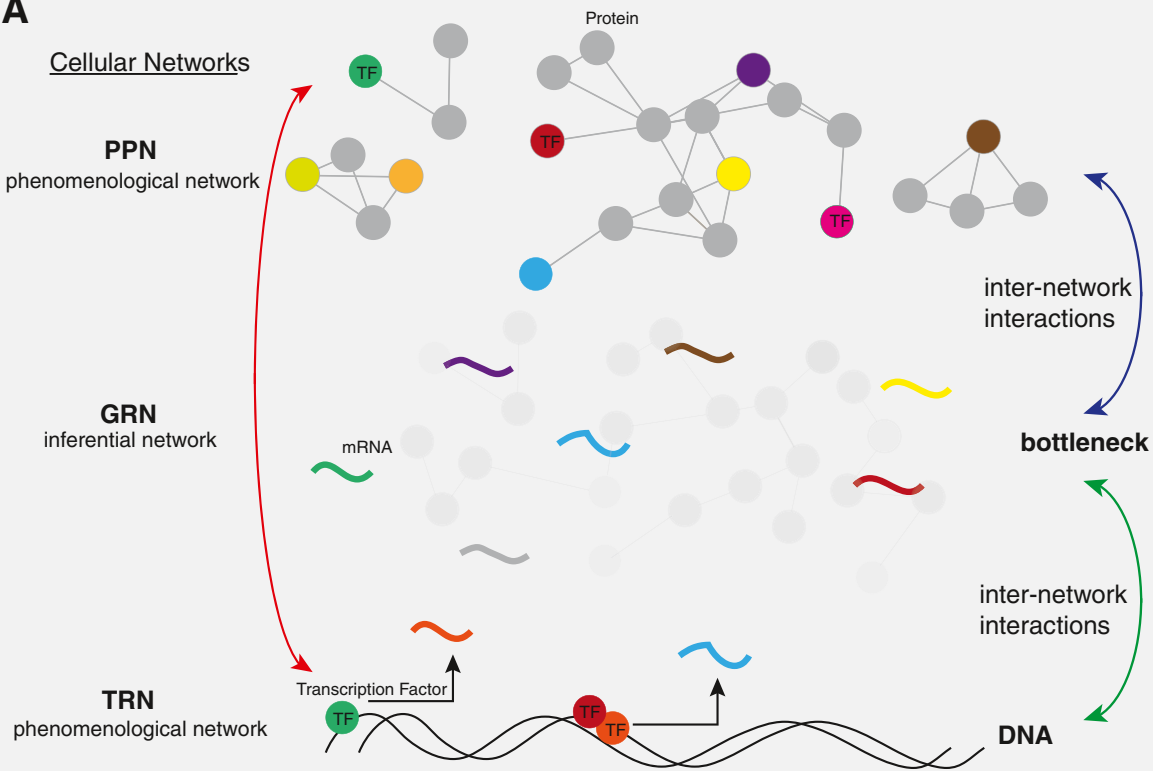


A**B**

Cellular networks for *S. cerevisiae* and *E. coli*:
transcriptional regulatory network, protein-protein network and gene regulatory network



chromosomes

1. structural network analysis:

individual networks

- general overview statistics

pairs of networks

- degree-rank correlation (global)
- structural overlap (global)

2. functional network analysis:

individual networks

- functional congruence (global)

pairs of networks

- gene pair enrichment analysis (local)

3. integrated structural and functional network analysis:

pairs of networks

- structural correlation of functional modules (local)
- + degree centrality
- + betweenness centrality
- + transitivity

4. chromosome analysis:

individual networks

- co-occurrence of interacting genes (global)
- chromosomal distance of interacting genes (global)

pairs of networks

- chromosomal degree-rank correlation (global)
- gene pair enrichment analysis within chromosomes (local)
- gene enrichment analysis within chromosomes (local)
- gene pair enrichment analysis between chromosomes (local)
- gene enrichment analysis between chromosomes (local)