

Evolutionary study and prediction of protein-protein interactions in chromatin modification complexes

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SickKids



Chromatin modification

Chromatin Modification (CM): The alteration of DNA or protein in chromatin, which may result in changing the chromatin structure.

1. Data Sources

- CM genes (GO:0016568, literature curation)
- Complete eukaryotes (111 species)
- PPI networks (Collins et al. 2007, IrefIndex - Razick et al. 2008)

2. Homology identification

- Inparanoid (Remm et al. 2001)
- BLAST

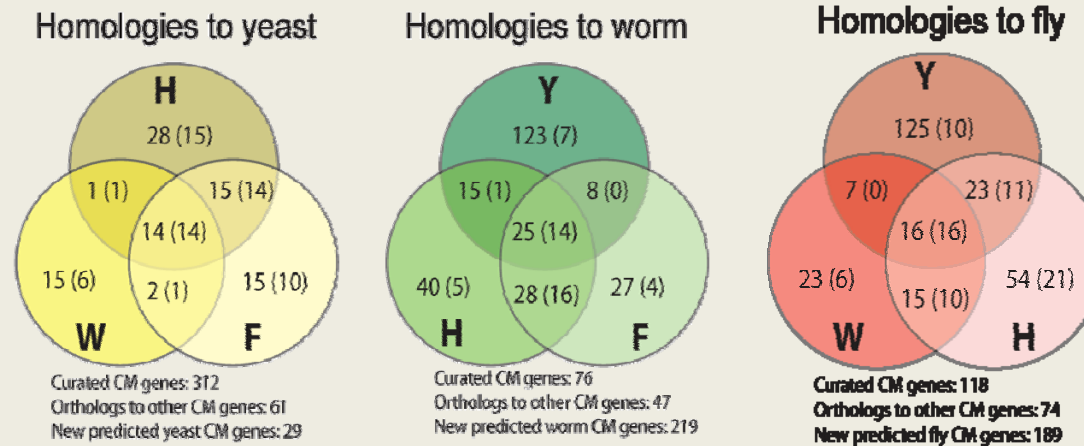
3. Phylogenetic analyses

- Hierarchical clustering
- MAFFT, PHYLIP

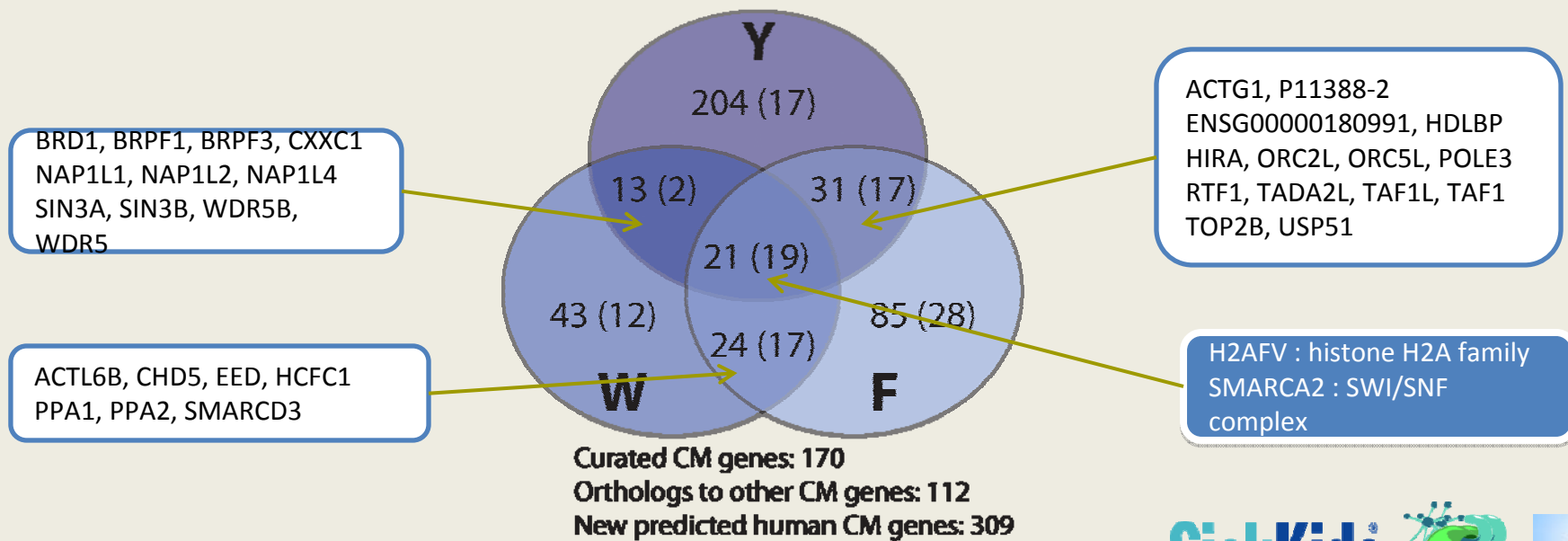
4. Integration

- Polygenetic profile
- Conserved protein interaction
- Conserved co-expression
- Conserved domain-profile

Predicting orthologous relationships of curated CM genes across the four model organisms



Homologies to human



Protein-protein interaction map correlating conservation profiles with known CM complexes in yeast

