

Table S10. Spearman correlation of functional similarity for orthologs between species.

networks 1 and 2	ρ	p-val	empirical p-val
Yeast-hq and Fly	0.37	$2e-05$	< 0.001
Fly and Human-all	0.25	$8e-06$	< 0.001
Athal and Fly	0.24	$4e-03$	0.004
Yeast-all and Athal	0.19	0.04	0.022
Yeast-all and Fly	0.12	0.1	0.055
Athal and Human-all	0.05	0.5	0.211
Yeast-hq and Athal	-0.02	0.9	0.424
Athal and Human-hq	-0.06	0.5	0.260

Functional similarity correlation analysis for hubs in pairs of networks: Spearman's rho, corresponding p-value, empirical p-value for 1000 random permutations of functional similarity values among hubs. Correlations with absolute value above 0.1 and both p-values < 0.05 are shown in bold. See main text and **Materials and methods** for details.