## **Additional files**

## Metrics.xls - Spreadsheet of results from prediction reliability metrics tests

Minimum source interaction count (Min Count) was tested ranging from 0 to 200 predictions at intervals of 10 predictions, in combination with maximum target intergenic distance (Max Dist) ranging from 0 to 150,000 base pairs at intervals of 500 base pairs. For each combination of prediction reliability metrics, the number of interactions (Interacts) obtained is listed (this is synonymous with network edges) along with the number of recovered EcoCyc gold negative interactions (GNs), the number of recovered EcoCyc gold positive interactions (GPs), the number of EcoCyc gold positive interactions that contained string "operons" in the keywords list (Operons), and the positive predictive value (PPV) obtained using the given values of the prediction reliability metrics. This was performed on the genomic orthologs (Orthologs), the genomic homologs (Homologs), and the Sargasso Sea metagenome (Sargasso). An additional set of experiments was carried out on the genomic orthologs with source interaction count held at 10 (Orthologs 10) to obtain values that yielded a positive predictive value that was comparable to the other two sets of values. The sets of values that were used to construct the respective functional interaction networks have been highlighted.