

Correlation between functional annotation and topology of protein
interaction network

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Abstract

The functional annotation of proteins was believed to be related to the topology of protein-protein interaction network. People utilized the protein-protein interaction network to infer the protein function by various methods. Here we select the protein interaction data of *Saccharomyces cerevisia* and calculated the correlation between functional annotation of proteins and topology of protein-protein interaction network. The result shows that the functional correlation decays exponentially with the distance between two proteins, and beyond the characteristic distance it has no correlation.

Keyword : protein-protein interaction; network; correlation.