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Calculating protein-protein interactions in proteomes in both health and disease

Many, if not most, diseases alter the number, the kind or the properties of the proteins expressed in cells—the cellular proteome. Using a combination of database searching, predictive algorithms and the traditional tools of protein chemistry, scientists are beginning to systematically unravel the human proteome into discrete, functional components of interacting proteins. Through the identification of protein-protein interactions that are altered in diseased states we gain new insights into the mechanisms of pathology and new hopes for effective treatments.