

Poster G-4

Sequence structure of the proteins based on the conservative elements



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Short Abstract: The set of decamers which are present in at least 8 prokaryotic genomes of total 15 is selected. They are clustered into 200 groups of closely related decamers. For each group the set of proteins which contain decamer from a this group is described.

Long Abstract:

15 prokaryotic genomes from different families were selected. Conserved decamers which are present in at least 8 of them were obtained. These decamers were clustered in 200 groups of closely related. It turns out that for most of the groups the proteins which contain at least one decamer from the definite group have almost identical names and so have the same properties and functions. Each protein may be presented as a combination of these conservative groups. This combination is a sequence of groups which are present in the definite protein and separated with definite distances between them. Closely related proteins have the same combinations of groups in their structure (taking into account the possible mutations) with the same or closed distances between them.