

A study of the Immune Epitope Database for some fungi species using network topological indices

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In the last years, the encryption of system structure information with different network topological indices has been a very active field of research. In the present study, we assembled for the first time a complex network using data obtained from the Immune Epitope Database for fungi species, and we then considered the general topology, the node degree distribution, and the local structure of this network. We also calculated eight node centrality measures for the observed network and compared it with three theoretical models. In view of the results obtained, we may expect that the present approach can become a valuable tool to explore the complexity of this database, as well as for the storage, manipulation, comparison, and retrieval of information contained therein. © 2017, Springer International Publishing Switzerland.

B-cells epitopes

Network theory

Topological indices

epitope

epitope

Article

data base

fungus

Immune Epitope Database

information processing

information retrieval

information storage

nonhuman

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artificial neural network

data mining

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human

immunology

theoretical model

Data Mining

Databases, Factual

Epitopes

Fungi

Humans

Models, Theoretical

Neural Networks (Computer)