

Advanced drug designing and their application in medical research

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Studies of the structure and activity of the human and other genomes has over the last decade lead to a revolution in biological and medical research. Diseases associated genes can now be identified through the application of bioinformatics. Pharmacogenomic database add to the knowledge of diseases and can be used in different ways e.g. to analyze mechanisms to retrieve retrospective and prospective information on clinical presentations, SNP's based clinical trials, diseases phenotypes, long-term prognosis and efficacy of therapeutic options. These tools are now being applied to pharmaceutical research and development with the view to increase the efficiency of the process and the quality of the product. Pharmaceutical databases were developed for cancer, neurological disorders and infectious diseases. Insilico modeling of target proteins for cancer, neurological disorders and infectious diseases were done employing pharmaceutical databases. Docking studies were done using synthetic and natural ligands. It may be concluded that the studies shall help in understanding disease process and drug designing with a view to develop novel low cost drugs for all.

Biography

B. K. Malik has done his Ph.D. from Delhi University. He did his postdoctoral studies from University of California, USA. Formerly he was deputy director, Institute of Genomics and Integrated Biology, CSIR, Delhi University Campus Mall Road Delhi. He is center head, Amity Institute of Biotechnology, Noida UP. He has published more than 85 papers in reputed journals and a software viz. open source drug discovery for TB.

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