عنوان مقاله:
Polypharmacology in Drug Discovery

محل انتشار:
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نویسنده:
Sajjad Gharaghani - *Laboratory of Bioinformatics and Drug Design (LBD), Institute of Biochemistry and Biophysics, University of Tehran, Tehran, Iran*

خلاصه مقاله:
Traditional approaches for the identif ication of bioactive compounds use a chemical library, asingle target protein, and an assay, which allows us to measure the activity of thesecompounds against one-target. The refore, one target, one drug, one disease model has longbeen the standard str ategy for discovering new drugs in pharmaceutical research.Computational drug discovery techniques such as quantitative structure-activity relationships (QSARs) have been carried out to design potent inhibitors against the selected target target. Unfortunately QSAR model cannot consider the information of the target and in many studies has a minimal ability to predict selective inhibitors. Therefore, recently a meaningfuldecrease in the rate of discovery of new drug candidates has been observed observed. Because ofcompl ex physiological processes in the body, considering only one target in drug discoveryprojects is not rational. The main reason for this is that, the multiple activities of drugsagainst several targets might be lead to dramatic side effects and toxicity. Nowadaysincreasing evidence that several drugs exert their biological effects through interactions withmultiple targets is boosting the development of new research such as chemogenomicspolypharmacology and proteochemometrics . Therefore the purpose of d rug discovery haschanged from one drug, one target strateg y to a multi drug, multi target. In this lecture, I willdescribe the current state of drug discovery and the concepts of QSAR, polypharmacolog andproteochemometrics

کلمات کلیدی:
Drug discovery, Po lypharmacologlypharmacolog, Proteochemometrics, QSAR