

2nd International Conference on Clinical Trials and Therapeutic Drug Monitoring

August 22-24, 2016 Philadelphia, USA

Emerging role of bioinformatics tools and softwares in evolution of clinical research

Supreet Kaur Gill, Ajay Francis Christopher, Vikas Gupta and Parveen Bansal
Baba Farid University of Health Science, India

Clinical research is making toiling efforts for promotion and wellbeing of the health status of the people. There is a rapid increase in number and severity of diseases like cancer, hepatitis, HIV etc., resulting in high morbidity and mortality. Clinical research involves drug discovery and development whereas clinical trials are performed to establish safety and efficacy of drugs. Drug discovery is a long process starting with the target identification, validation and lead optimization. This is followed by the preclinical trials, intensive clinical trials and eventually post marketing vigilance for drug safety. Softwares and the bioinformatics tools play a great role not only in the drug discovery but also in drug development. It involves the use of informatics in the development of new knowledge pertaining to health and disease, data management during clinical trials and to use clinical data for secondary research. In addition, new technology likes molecular docking, molecular dynamics simulation, proteomics and quantitative structure activity relationship in clinical research results in faster and easier drug discovery process. During the preclinical trials, the software is used for randomization to remove bias and to plan study design. In clinical trials software like electronic data capture, Remote data capture and electronic case report form (eCRF) is used to store the data. The eClinical, Oracle clinical are softwares used for clinical data management and for statistical analysis of the data. After the drug is marketed the safety of a drug could be monitored by drug safety software like Oracle Argus or ARISg. Therefore, softwares are used from the very early stages of drug designing to drug development, clinical trials and during pharmacovigilance. This review describes different aspects related to application of computers and bioinformatics in drug designing, discovery and development, formulation designing and clinical research.

Biography

Supreet Kaur Gill has completed her Bachelor of Dental Surgery from Adesh Institute of Dental Sciences and Research, Baba Farid University of Health Sciences, India. Currently she is pursuing her Post-graduation (MSc) in Clinical Research from University Centre of Excellence in Research, Baba Farid University of Health Sciences, India. She has published one paper in *Asian Journal of Pharmaceutics and Clinical Research*.

supyigill42@gmail.com

Notes: