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Educational Qualification: **M. Pharm**

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Research Abstract:

The related substances/impurity present in retroviral drug may directly influence the alter of quantitative structural-activity relationship (QSAR) and docking score which will be observed by competitive direct or indirect immunoassay. The present study aim has been derived from the hypothesis based on the increasing of retroviral drug structure quality may induce the binding efficiency of drug towards the above-said receptor. The proposed study hypothesis will stress the importance of synthetic chemist and drug discoverer role in designing of synthetic route and molecule with the least interactive related substances/impurity. The proposed study can be achieved with different stages. The first stage, retroviral drug QSAR study, docking score will be compared with and without the presence of the official monograph impurity structure, the P value of docking score and the study will be taken forward to direct and indirect competitive immunoassay to prove the probability. Further, the in vitro cell line study will be used as a tool to assess the extent of resistance mechanism to compare the efficacy of ART in the virus-cell line with and without the presence of related substances/impurity effects during revise resistance mechanism in the clinical implications. Genotypic resistance testing will benefit in guiding individual-level treatment decisions but successful models delivering resistance testing in low- and middle-income countries have not been reported.

The study will similarly support the ART mission to succeed with a proper and reduced dosage of antiretroviral drug to prevent resistance of ART during clinical therapy.

Fellowships: NA

Awards & Scholarships:

- Published 02 National papers with total Impact factor of 1.2

Way Forward:

Over the next five years, I would like to make enough progress at a personal and professional level so that I can be seen myself as an able A R&D scientist, while continuing my research on impurity profiling and genotoxicity.