OBJECTIVE OF THE RESEARCH WORK:

In recent years drug companies have worked together to combine complex regimens into simpler formulae, termed fixed dose combinations. The quantification of these drugs alone or in combination then becomes of utmost importance as they deal directly with human life. Hence more sensitive and robust methods which give more throughput and lesser time consumption is need of pharmaceutical industries for these newly introduced formulations.

The ultimate objective of this proposal is to develop bioanalytical methods which employed for the quantitative determination of drugs and their metabolites in biological matrix (plasma, urine, saliva, serum etc) play a significant role in evaluation and interpretation of bioavailability, bioequivalence and pharmacokinetic data.

Bioanalytical method development and validation will be carried out by using Liquid chromatography/electrospray ionization tandem mass spectrometry (LC/ESI-MS/MS) which is one of the most prominent analytical techniques owing to its inherent selectivity and sensitivity. UPLC improves the chromatographic separation, and enhances the mass spectrometric ionization efficiency and MS/MS detectability.

A new method will be developed, which is selective, precise, accurate and with appropriate sensitivity for the determination of both Paracetamol and Piroxicam simultaneously in different matrices using LC-MS/MS. there is no evidence from literature survey that a common method for their estimation simultaneously exists using LC-MS/MS chromatographic technique.

Similarly, drugs from different therapeutic categories can be selected and methods for their estimation individually or simultaneously can be developed if the literature reveals that none are available for the same.