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**Editorial**

## **EDITORIAL NOTE ON USE OF BIOANALYSIS IN DRUG DISCOVERY AND DEVELOPMENT**

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### **EDITORIAL**

Bioanalysis is the quantitative determination of drugs and their metabolites in biological fluids. This technique is used very early in the drug development process to provide support to drug discovery programs on the metabolic fate and pharmacokinetics of chemicals in living cells and in animals.

Bioanalysis is a sub-discipline of analytical chemistry and generally involves the identification and quantification of a substance of interest (usually xenobiotics or biotics) in a given biological sample, for example blood, plasma, serum, urine or tissue extracts.

Common applications of bioanalysis performed at North-East BioLab include testing drug and metabolite exposures, bioavailability, bioequivalence, pharmacokinetics, and toxicokinetics, and diagnostic biomarkers in various studies conducted during preclinical (animal) and clinical (human volunteers) .

Recent years have witnessed the introduction of several high-quality review articles into the literature covering various scientific and technical aspects of bioanalysis. Now it is widely accepted that bioanalysis is an integral part of the pharmacokinetic/pharmacodynamic characterization of a novel chemical entity (NCE) from the time of its discovery and during various stages of drug development, leading to its market authorization. In this compilation, the important bioanalytical parameters and its application to drug discovery and development approaches are discussed, which will help in the development of safe and more efficacious drugs with reduced development time and cost. It is intended to give some general thoughts in this area which will form basis of a general framework as to how one would approach bioanalysis from

inception (i.e., discovery of a lead molecule) and progressing through various stages of drug development.

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