



Speed Innovation

Drug Discovery

Toxicogenomics

Epigenetic Profiling

Proteomics

**Lead Optimization**

Toxicology

Pharmacokinetics

Bionalytical Services

Pharmacodynamics

Food Industry

Chemical Industry

Cosmetic Industry

**Lead Optimization**

The lead optimization process aims at improving the hit/lead molecules properties for ADME profile, reduction of off-target effects and improved efficacy. Series of compounds with altered properties are assayed and their drug like properties are optimized.

Lead optimization process is the balancing between multiple properties, including efficacy, safety and toxicity, chemical stability, metabolite formation, routes and stability, solubility and absorption. Ability to handle this process requires expertise and technologies from multiple disciplines.

A key aspect in ADME/DMPK lead optimization studies is the deep understanding of the various methods and study types, the aims of the discovery project and the characteristics of the molecule(s). The different ADME studies, including in vitro and in vivo, should not be seen as independent experiments, yet as part of the whole process to rank compounds and optimize their properties, to be developed from the typical efficacious hits to drug like candidates.

Going with a service provider that only has the expertise in some of these areas easily leads to expanding in studies in the particular expertise area, instead of understanding the whole approach of the lead-optimization project.

Our uniqueness comes from the ability to provide customers with comprehensive expertise and technologies for the lead optimization process. We help our customers through all the stages - planning the projects and individual studies - executing the in vitro and in vivo studies - interpreting the results and suggesting the follow-up actions.

We provide not only the highest expertise in these areas, but aim to help customers understand the whole lead optimization process and plan each project with the right sequence of the various in vitro and in vivo studies, including the physicochemical studies, metabolism and drug interaction studies, permeation studies, pharmacokinetics studies, toxicology and safety studies as well as the in vivo efficacy studies. Not excluding the scientific judgment of selection of the correct preclinical in vivo species for the various studies.

Our expertise can help you to also understand the studies done previously in other laboratories and how the results should be interpreted - what is behind the numbers of the analytics and what should be the next step forward. We help you to understand the results from different done studies to see the whole picture in depth and plan the next steps.

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