

# In Vivo Services

*in vivo* lead discovery/lead optimization is an important stage using animal models of disease to assess target mechanism of action, efficacy, safety profiling, unpredicted toxicity and further investigation of the drug metabolism and pharmacokinetics (DMPK) properties. Compared to *in vivo* screening, *in vivo* testing is better suited for observing the overall effects of an experiment on a living subject. In addition, whole-organism [\*in vivo\* screening](#) holds several advantages to small molecule discovery for its target agonistic and holistic. The *in vivo* experiments of drug discovery give the convincing evidence for preclinical trial at the physiological level.

Early-stage pharmacokinetic (PK), blood-brain barrier (BBB) studies are prerequisites for interpreting preclinical efficacy and toxicology results. Using qualitative measurements of drug exposure, a solid interpretation of preclinical efficacy can be provided by our expert team. PK data, oral bioavailability, and BBB data can also help in species selection and design of preclinical toxicology studies to evaluate your new molecular entity.

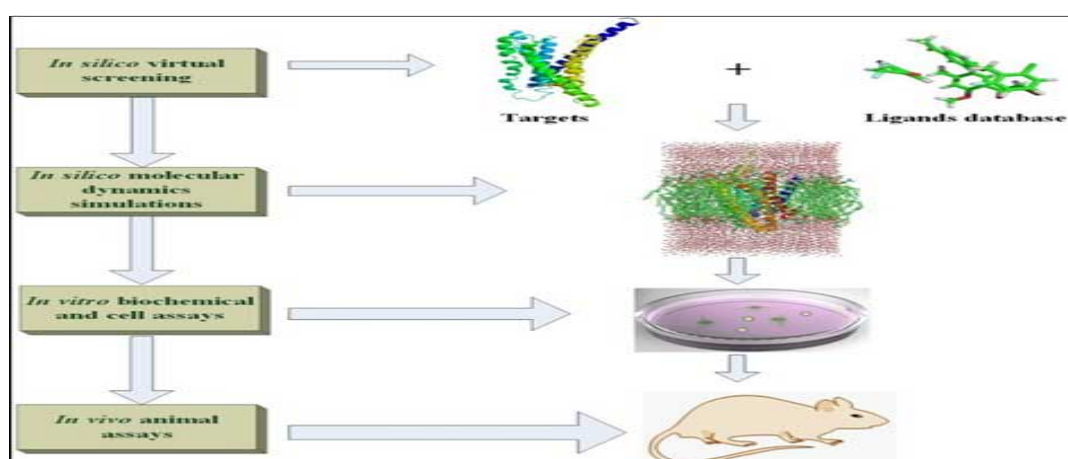


Figure 1. The diagram of *in silico*, *in vitro* and *in vivo* for drug design.

The development of information technology and big data accelerate the speed of drug discovery because the high effective and targeted databases are constructed

under specific circumstances. The candidate compounds screened *in silico* still need to be validated to make sure the compound has pharmaceutical activity. *In vitro* trial and *in vivo* experiments are essential steps for modern new drug design.

CD ComputaBio provides services with disease models across different therapeutic areas that incorporate biomarkers and outcome measures to enable greater prediction of success in the clinic. To meet the special needs of your drug discovery project, our laboratory staff with years of experience may also develop custom *in vivo* models.

## Our Well-Characterized *In Vivo* Models include

- Patient-Derived Xenograft (PDX) Models
- Immuno-Oncology Models)
- Cell Line Derived Xenograft Models

We support molecules of all classes, from small molecules and biologics to gene and cellular therapeutics. Along with the *in vivo* conduct, we also provide:

- Full histopathology support
- Dose formulation analytical development, validation, and analysis
- Bioanalytical development, validation, and analysis
- Pharmacokinetics/toxicokinetics (PK/TK) data analysis and interpretation

We are dedicated to providing leading pharma and biotech companies with attentive, decisive analytical services, and high-quality data to advance your pre-clinical research. You can work with us to select the most appropriate platform, study design, and screening method tailored to each of your individual drug candidates and research question.