KU CANCER CENTER SHARED RESOURCES

LEAD DEVELOPMENT & OPTIMIZATION SHARED RESOURCE

The Lead Development and Optimization Shared Resource (LDOSR) is composed of high-throughput screening, medicinal chemistry and formulation drug delivery expertise. The LDOSR supports KU Cancer Center investigators to accelerate projects from early development around cancer pathways or targets to *in vivo* proof of concept. The services of the LDOSR are provided either as an integrated package through the Target Acceleration Group or on a stand-alone basis to researchers based on specific project activities.

WHY IS THIS IMPORTANT TO YOUR RESEARCH?

In the development of new drugs, the transition between biological research and clinical development is often referred to as "the valley of death." The LDOSR provides high-throughput screening to identify "hit" compounds, support synthesis of additional compounds to be screened and evaluates lead and clinical candidate compounds in order to select the optimal drug for further testing.

SERVICES

The LDOSR has four major services:

1. High-throughput Screening (HTS) – assay method development for biochemical, biophysical or phenotypic screens; assay optimization for HTS adaptation and assay validation; large compound libraries; and hit identification/confirmation/prioritization.
2. Medicinal Chemistry – synthesis and medicinal chemistry consultation, application of structure-activity and structure-property relationship optimization, identification of resources for compound synthesis for hit-to-probe, probe-to-lead and lead-to-preclinical candidate progression.
3. Biotechnology Innovation & Optimization Center – drug delivery, bioanalytical method development, *in vitro* pharmacology testing, *in vivo* pharmacokinetic and tissue distribution testing, dosage-form development, compound solubility and stability enhancement, drug-substance and dosage-form analysis
4. Target Acceleration Group (TAG) – integrated service development plans to assist researchers to select appropriate testing to facilitate and accelerate development plans in grant applications and for optimized decision making; assist researchers to access critical core laboratories (mass spectrometry, NMR, molecular graphics, protein chemistry, etc.)

LEARN MORE

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