

**Biopharma  
Solutions:  
Discovery  
Biology**

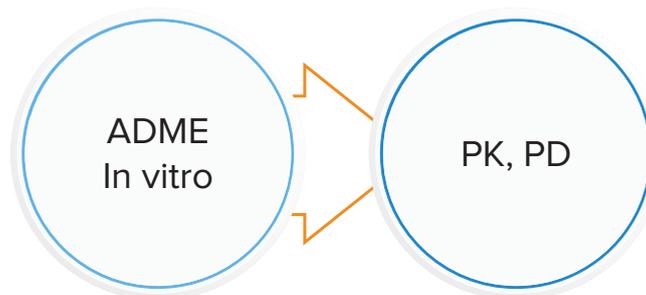
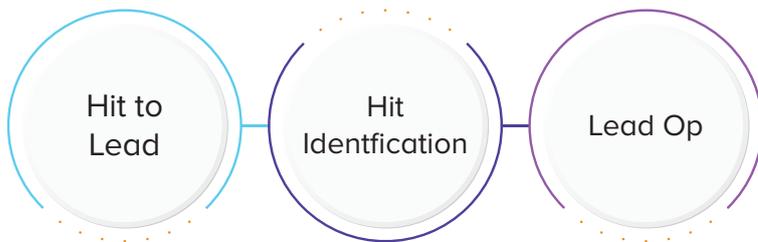
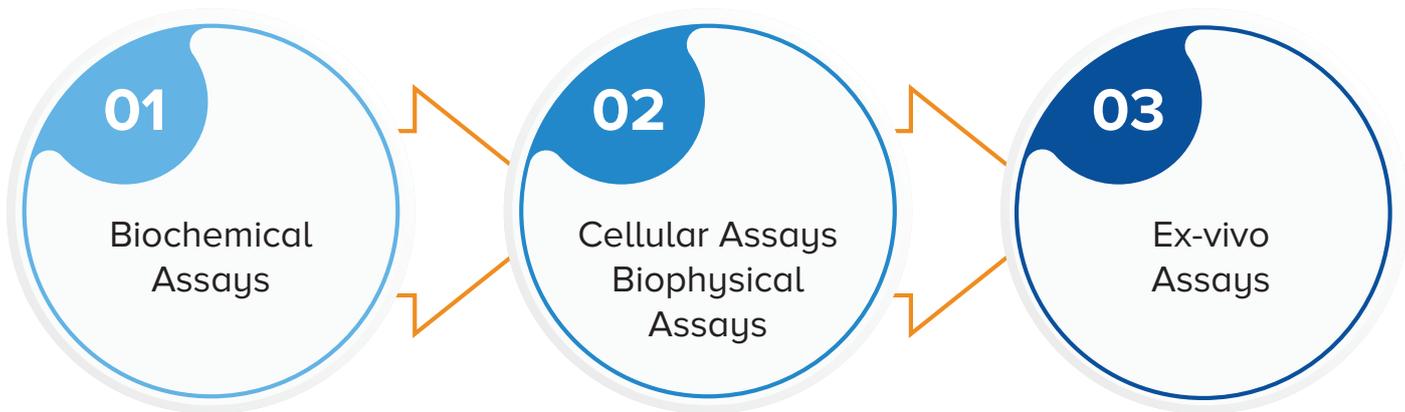


# Overview

Discovery Biology at Veeda Biopharma division, with its Assay Biology and ADMET/DMPK solutions offers a large suite of In vitro assays to support your stand-alone research needs or integrated solutions. With a wide array of assays, assay formats, industry-standard technologies and capabilities, Veeda Biopharma is uniquely positioned to provide critical data to accelerate your drug discovery and development.

Our highly trained scientists with experience in working with global pharma research groups, offer innovative and valuable solutions for your research-intensive programs.

## Assay Biology & Screening



## ADME / DMPK

# Assay Biology & Screening Solutions

**Assay biology** team offer a range of services that support various activities, ranging from the development of custom assays to providing high-throughput screening capabilities and data analysis. They play a crucial role in accelerating research and development process in the field of Drug Discovery.

## Biochemical Assays (NCE)

- **Activity and Binding Assays:**  
Multiple assay formats, various enzyme classes  
96-well and 384-well formats  
Characterization of Mechanism of action
- **PROTAC Assays:**  
Ternary complex assay Ligase binding assays
- **Primary Screening**
- **Profiling Screening:** Potency estimation & off target activity.
- **Mechanism of inhibition and action assays**

## Cellular Assays (NCE)

- Target binding Assays
- Target phosphorylation Assays
- cAMP Assays
- Target degradation Assays
- Proliferation & viability Assays
- Apoptosis Assays
- Cytokine profiling
- Immunophenotyping
- Cell cycle analysis
- Reporter gene Assays
- Protein expression
- Biomarker Assays
- Multiplexing Assays



# Assay Biology & Screening Solutions

## Other Assays

- **Biophysical Assays:**  
Surface plasmon resonance:  
Association and dissociation  
rate constants,  $k_a$  and  $k_d$
- **Ex-vivo Assays**
- **Multiple formats**  
Luminex  
Fluorescence  
Gene expression  
Biomarkers assays
- **Early Translational Biology**
- **Multiple formats**  
Flow cytometry  
Luminex  
Fluorescence  
Gene expression  
Biomarkers assays

## Functional Characterization (Biosimilars)

- Innate immunogenicity
- Adaptive immunogenicity
- Receptor and Fc binding:  
SPR
- ADCC
- CDC
- C1Q
- MLR Assays (1-way, 2-way)
- cAMP Assays
- Potency Assays



# Diverse class of Targets



## Screening solutions

- Assay Development & Validation
- Screening
- Weekly TAT
- FFS, FTE models

## Assay QC

- Validations with multiple references
- Reproducibility of the assays
- Z'
- Reference compounds
- Run charts for QC monitoring

## Assay Technologies:

- Absorbance
- Fluorescence
- Fluorescence polarization
- TR-FRET, HTRF®
- Luminescence
- AlphaScreen®
- LC-MS/MS
- 96 and 384 well plate formats, Automation and barcoding
- Experience in working with global pharma research groups
- ALCOA++
- 21 CFR part 11 compliance
- Audit ready labs



# ADMET / DMPK Solutions

In-vitro ADMET / DMPK team offers routine to advanced DMPK studies for wide range of compounds modalities and committed to accelerate the drug discovery process using cutting edge technologies and strategic partnerships. We have established Pharmacokinetic research strategies and test service systems for each type of new drug modality.

## Absorption

### Permeability:

PAMPA, BBB-PAMPA, Caco-2, MDCK

### Transporter:

Efflux: BCRP, P-gp, BSEP, MRP2, MRP1, MATE1, and MATE2-K

Uptake: OATP1B1, OATP1B3, and PEPT1/2

## Physicochemical Characterisation

**Aqueous Solubility:** Kinetic and Thermodynamic solubility across pH, FaSSGF, FaSSiF, FeSSiF

**Lipophilicity:** Log P, Log D

**Chemical stability :** Chemical stability at different pH and matrices

**Chemical reactivity:** GSH adduct formation

## Distribution

### Protein binding (RED and ultrafiltration)

Plasma, blood, microsomal, tissue

**Red blood cell distribution** B/P Ratio

## Metabolism

### Metabolic Stability/ Intrinsic clearance

Liver, Intestinal microsomes, S9, cytosol, hepatocytes, recombinant enzymes

### CYP/UGT Phenotyping

Phase II metabolism

**Plasma and whole blood Stability**

**Non CYP mediated metabolism**

## Metabolite Identification

### Metabolite Identification

in relevant metabolizing enzymes (hepatocytes, S9, microsomes, recombinant enzymes, whole blood, plasma)

- Soft spot assessment
- Metabolite finger printing
- Reactive metabolite screening

## Quantitative Bioanalysis

**Rapid and sensitive LC-MS/MS methods in various biological matrices**

**Qualified for purpose methods**

## In vitro Toxicity study

**They play a crucial role in accelerating research and development in the field of Drug Discovery**

## Drug-Drug Interactions

### DDI (CYP and UGT)

#### • Reversible CYP Inhibition:

1A2, 2B6, 2C8, 2C9, 2C19, 2D6, 3A4/5

#### • Mechanism based CYP inhibition:

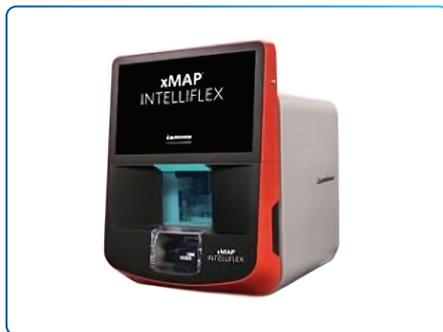
$IC_{50}$  shift,  $K_{obs}$ ,  $K_I/k_{inact}$

#### • CYP induction:

- HepG2 cell line (CYP3A4)
- Hepatocytes - enzyme activity and mRNA (AhR, PXR, CAR)

# In-vitro ADMET / DMPK Capabilities

- Highly qualified scientists with successful track record.
- Validated protocols & customized study designs.
- Full suite of In vitro ADMET assays.
- Services across modalities: NCEs, PROTACs, small peptides, ADCs, and oligos.
- Flexible models: FFS, FTE models.
- Quick turnaround time.
- Best-in-class infrastructure: Thermo Q Exactive Orbitrap, Sciex 6500, Waters ToF Xevo G3.
- ALCOA++, 21 CFR part 11 compliant instruments, Audit ready labs.





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Excellence  
In Everything