heads

veeda clinical research®

BIONEEDS

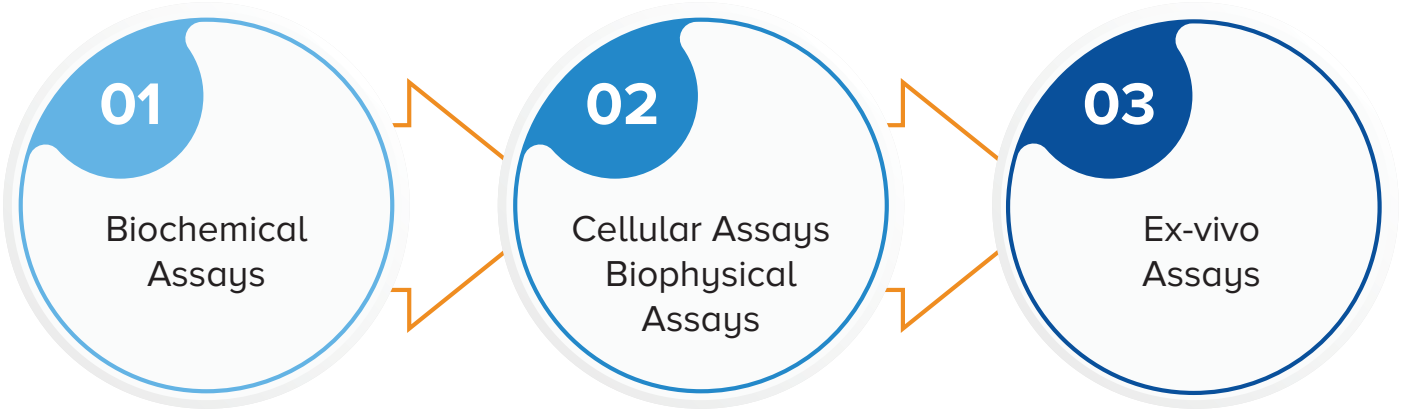
Biopharma Solutions: Discovery Biology

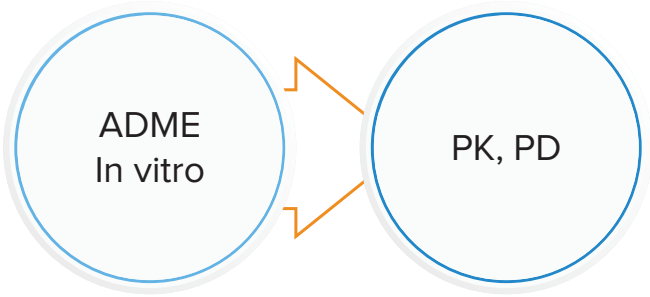
Overview

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 feild 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

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

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

Quantitative Bioanalysis

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

Qualified for purpose methods

Distribution

Protein binding (RED and ultrafiltration)
Plasma, blood, microsomal, tissue
Red blood cell distribution B/P Ratio

In vitro Toxicity study

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

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

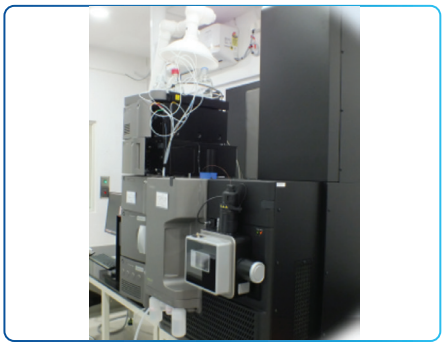
Drug-Drug Interactions

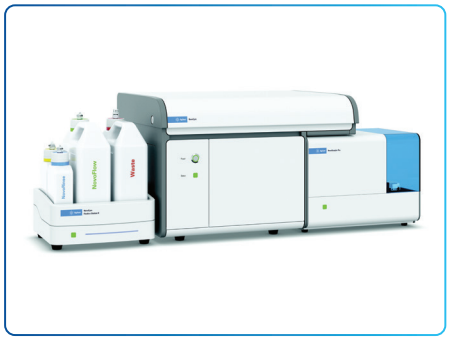
DDI (CYP and UGT)

- **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.





heads

veeda clinical research®

BIONEEDS

+91 72044 14155 Info.Biopharma@veedacr.com www.veedacr.com

Partners in creating a healthier tomorrow