

Custom Cell-Based Assays for Library Screening and Lead Generation, Discovery, and Optimization



Rather than moving a single lead chemistry through the development pipeline, the current practice is to use a tiered testing approach to funnel large numbers of candidate chemistries through lower complexity, high throughput *in vitro* assays to make early safety decisions and prioritize compounds for further testing and validation.

At ScitoVation, our multi-disciplinary team approach is to customize assay development for every client's unique needs. This allows us to better understand each compound's efficacy, mechanism of action (MOA), and safety. With our approach, the need for *in vivo* testing, as well as the time and cost associated with bringing a new drug or chemical to market, is greatly reduced.



Our highly customizable approach optimizes value by maximizing flexibility while simultaneously maintaining the speed at which we produce our results.

A Custom Approach to Screening and Testing Lead Compounds

ScitoVation's custom *in vitro* approach consists of developing fit-for-purpose assays in species-specific, biologically relevant models. We partner with each client to determine the appropriate model and level of complexity necessary to test their compounds of interest, and our capabilities range from simpler high throughput assays to complex, organotypic, 3D models.

Our solutions help clients achieve the following:

- Identify target patient populations
- Reduce unexpected patient toxicity in clinical trials
- Determine downstream effects
- Increase the effective drug development pipeline
- Reduce time-to-market

Our custom approach considers properties and effects (endpoints) of interest

Our custom approach considers properties of the compound

- Use
- Potential exposure
- Hypothesis on MOA
- Endpoints of interest
- A priori concerns based on experience and knowledge of compound types

Our custom approach considers various effects of interest

- Off-target effects
- MOA
- Syndrome drug responsiveness
- Molecular and cellular phenotypes
- Dose-response and human equivalent dose
- Toxicity
- Potency
- Efficacy

Advanced Testing on Lead Compounds

After identifying a compound for further testing, we use advanced in vitro and in silico tools to understand MOA in appropriate cell types, such as:

- o Transcriptomics and genome-wide association studies
- o Organotypic and 3D models (species-specific)
- o Assays targeting specific organs

Also, we perform in-house data analytics for compound and/or risk prioritization as well as high-throughput in vitro-to-in vivo extrapolation (IVIVE).



- We promise to partner with you to define metrics for success at the beginning of the project and outline a clear plan to achieve them.
- We promise to meet the timeline pending receipt of client materials or approvals within the pre-agreed timeframes.
- We promise to stand behind our pricing unless there is a change in scope. Any changes in scope that affect the price will be promptly communicated and discussed as appropriate.
- We promise to perform our work with the highest level of scientific rigor and scrutiny.
- We promise that all deliverables including experimental designs, protocols, data, analyses, and reports will be reviewed before submission to the client.

CONTACT US

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