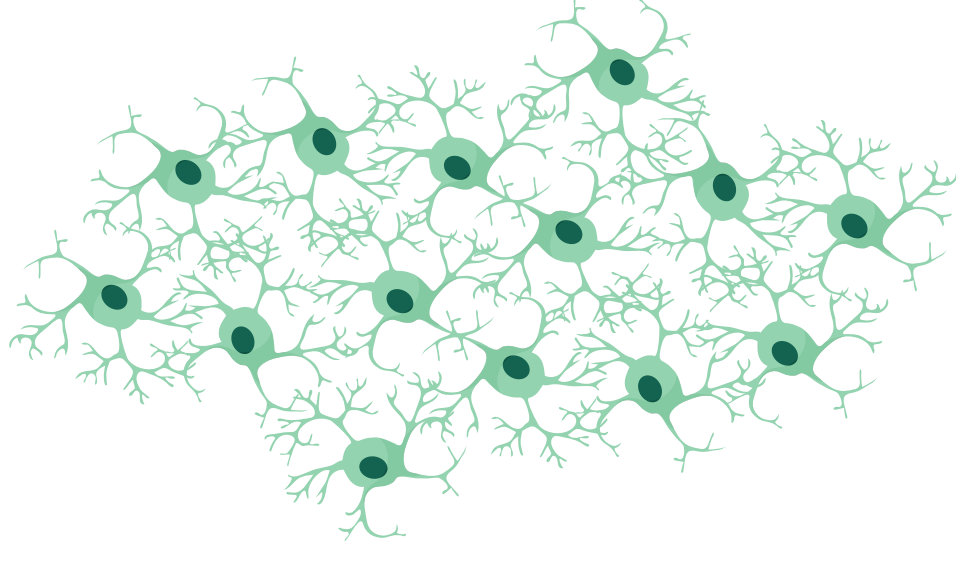


# An Overview of Cell-Based Assays



Cell-based assays utilize cell cultures to provide a model system in which the presence, quantification and functional activity of a target cell can be analyzed. These assays offer unique advantages which include the ability to monitor drug binding and pharmacologic activity at a cellular level as well as monitor neutralizing body activity.

This infographic serves as an introduction to this accompanying webinar which focuses on these particular cell-based assays approaches in drug development. The market demand for cell-based assays used in drug discovery is increasing, as is the demand for appropriate consumables and outsourcing to a CRO partner with the appropriate scientific, operational and regulatory capabilities to support cell-based assay requirements.

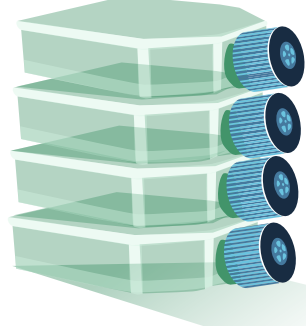
## Market Growth of Cell-Based Assays

As of 2022, the cell-based assay market is projected to be worth 22 billion dollars (USD) by 2025. As these assays become more and more utilized in drug discovery, several factors are projected to contribute to their growing market worth.



### 1 Drug Discovery Advancements

Increasing R&D investments and technological advancements supporting drug discovery studies have allowed cell-based assays to become a dominant area of interest, with drug discovery accounting for the largest share of this market.



### 2 Popularity of Consumables

As consumables for cell-based assays are extensively utilized, with repeat purchases being the norm, their market potential is considerable. In fact, consumables currently represent the largest portion of the cell-based assay market, and are poised to continue growing with the number of preliminary studies for therapeutic development increases.

### 3 Increase in Outsourcing - Cell-Based Assays Market

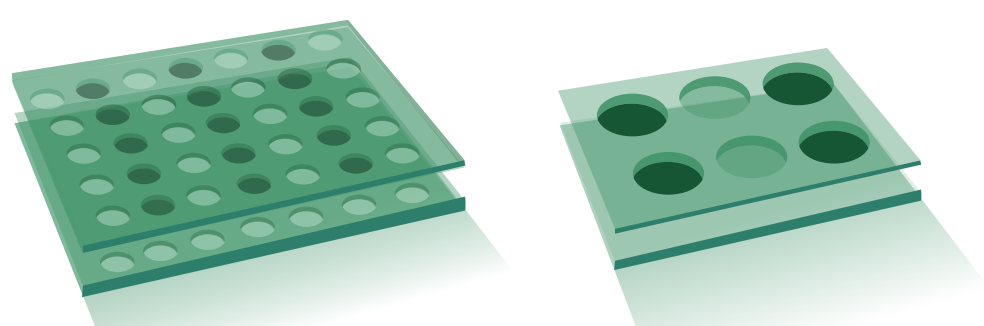
CROs are forecasted to grow at a faster rate than pharmaceutical and biopharmaceutical companies or academic and research institutes due to the growing trend of outsourcing drug discovery studies for time- and cost-effectiveness.



## Challenges

### Choosing a Type of Cell-Based Assay

Given the wide variety of cell-based assays, each coming with its own requirements, several factors need to be considered when choosing a cell-based assay for a particular biotherapeutic. This includes a clear understanding of the drug development program, the applications of relevant cell-based assays, and the stage of the program at which the assay will be used.



### Optimization, Time and Cost

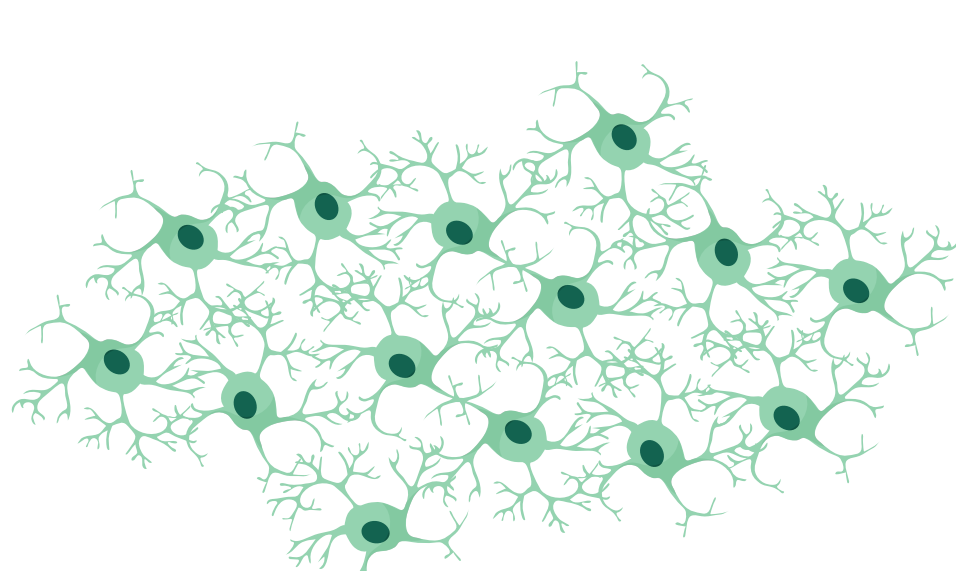
Cell-based assays require sophisticated biochemical and molecular biology technologies to allow for the quantitative analysis of cell phenotypes and characterization of cellular processes. This can be time- and cost-consuming.



## What's Next for Cell-Based Assays?

During drug development, cell-based assays can be utilized for early proof-of-concept to enable the identification of biological activity of the proposed drug candidate. In this accompanying webinar, we walk you through key considerations for developing cell-based assays for dual purposes – to support drug potency and immunogenicity characterization:

[www.bioanalysis-zone.com/webinars/development\\_of\\_cell\\_based\\_assay\\_altasciences/](http://www.bioanalysis-zone.com/webinars/development_of_cell_based_assay_altasciences/)



This infographic has been created as part of a Bioanalysis Zone feature in association with Altasciences.