



**BECAUSE  
BREAKTHROUGHS  
CAN'T WAIT**

**SCREENING SOLUTIONS**

Automated Liquid Handling

Assays and Reagents

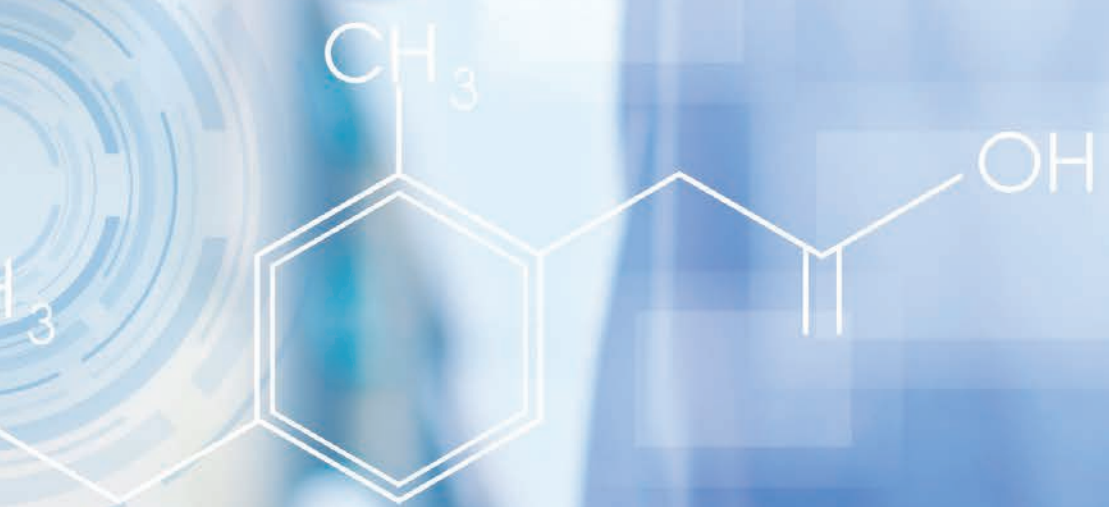
Imaging and Detection Systems

Informatics

**Drug Discovery Screening Solutions**

  
**PerkinElmer**<sup>®</sup>  
*For the Better*

# DRUG DISCOVERY SCREENING SOLUTIONS



As the premier provider of complete, integrated solutions for screening (including automated liquid handling, assays and reagents, imaging and detection systems, and informatics), PerkinElmer is streamlining drug discovery workflows in pharmaceutical, biotech, academic, and government laboratories worldwide.

Working independently or together, our screening solutions deliver consistent, accurate, physiologically relevant results and easy data interpretation to facilitate drug discovery.

### DISCOVER THE DIFFERENCE

By accelerating the identification and characterization of effective and safe drug candidates, the PerkinElmer portfolio optimizes efficiency in the lab and delivers more actionable, real-world results. Partner with us and discover smarter, more effective, data-driven breakthroughs in the critical screening stages of drug development.

## STREAMLINING SCREENING SOLUTIONS FOR EVERY STEP

### HIGH-THROUGHPUT SCREENING

- Assays and Reagents
- Multimode Detection
- Radioimmunoassays
- Radiometric Detection
- Microplates
- Automation and Liquid Handling

### PHENOTYPIC SCREENING

- Label-Free Detection
- High-Content Screening
- 3D Cell Culture Plates
- Automation and Liquid Handling

### DATA ANALYSIS

- PerkinElmer Signals™ for Screening
- Columbus™
- High Content Profiler™

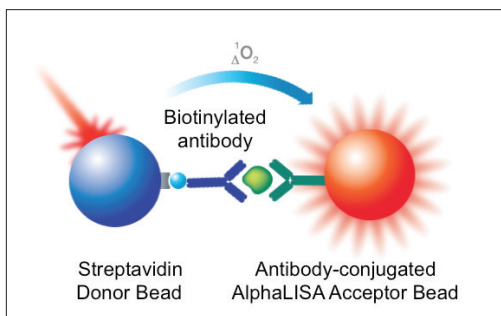
# AMID ALL THE MISSES ONE HIT FINALLY BREAKS THROUGH

One of the only companies developing assays and optimizing reagents on its own liquid handling platforms and plate readers, PerkinElmer offers a unique level of product integration, personalized service, and proven performance.

From validated assays to verified workflows, our HTS solutions for target-based screening enhance efficiency in your lab and confidence in your results.

## REAGENT TECHNOLOGIES

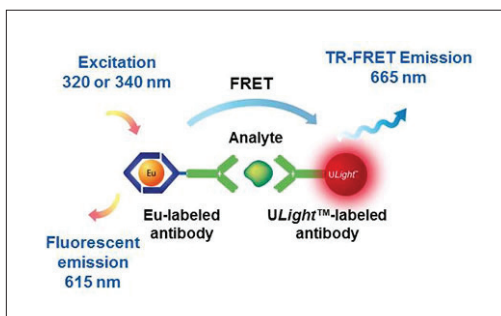
Enjoy exceptional performance and flexibility with a range of validated platforms offering speed, simplicity, and sensitivity across a range of applications.



### Alpha Technology

A faster, easier alternative to ELISA, this unique, bead-based platform offers:

- Ease-of-use – homogeneous, no-wash assay with no separation steps
- Speed – results in three hours for most applications
- High sensitivity – detect down to femtogram target levels
- Flexibility – multiple formats to meet your specific target and plexing needs: AlphaScreen® *SureFire*®, AlphaLISA®, AlphaPLEX, AlphaLISA *SureFire Ultra*, and Alpha *SureFire Ultra* Multiplex assay kits.



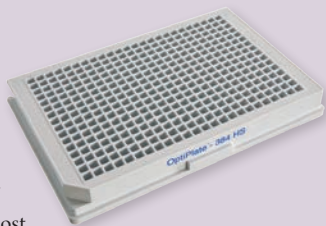
### LANCE®/LANCE *Ultra* TR-FRET TECHNOLOGY

Delivering the fastest time to results on a variety of plate readers, this simple, homogeneous, highly sensitive and reproducible platform provides:

- Time-resolved measurement for clearer signal resolution
- Robust sensitivity and long signal stability
- Ease-of-use – homogeneous, no-wash assay with no separation steps
- Fastest time to results of any TR-FRET assay on the market

## Microplates

Our wide variety of microplate options allows you to optimize assay performance and effectively scale volumes for time and cost savings. Designed for virtually every application and throughput, all plates are validated to ensure quality results with technologies including Alpha, TR-FRET, fluorescence, luminescence, absorbance, 3D cell culture, and radiometric assays.



With fully automated, walkaway operation, PerkinElmer's liquid handling platforms offer 24/7 productivity and more reliable, reproducible results. Easy to use, each solution can be tailored to your specific needs and applications with a wide range of deck capacities, accessories, and pipetting technologies.





EnSight and EnVision Multimode Plate Readers

## DETECTION PLATFORMS

Designed to meet the diverse needs of your laboratory, PerkinElmer plate readers feature a wide range of modes for complete application flexibility and leading technologies for unsurpassed performance.

### EnSight™

The first benchtop system to offer well imaging, label-free, and labeled detection technologies, EnSight allows you to compare and combine results from orthogonal assays using a range of technologies to make new findings. And, all on a single system that's flexible and upgradeable to meet your needs – today and tomorrow.

### EnVision®

Industry-leading multilabel plate reader offering the highest speed, ultra-high throughput, and maximum sensitivity across all detection technologies.

## RADIOMETRIC ASSAYS AND DETECTION

From assays that combine the sensitivity of radioactivity with the convenience of a homogeneous, no-wash platform, to a line of high-performance detectors for all major radiometric and luminescence applications, PerkinElmer is the industry leader in low-level detection.

### Scintillation Proximity Assay (SPA)

A homogeneous, versatile technology for the fast, cost-effective, sensitive assay of a wide range of biological processes and molecular interactions.

### MicroBeta<sup>®2</sup> Counters

Designed for both radiometric and glow luminescence assays, MicroBeta<sup>2</sup> platforms combine liquid scintillation counter reliability with plate reader simplicity, saving significant time and consumables while reducing waste.



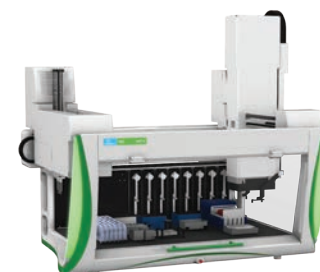
MicroBeta<sup>2</sup>

## AUTOMATION AND LIQUID HANDLING SOLUTIONS



### cell::explorer

Save time and reduce costs with an integrated robotic system that lets you run faster, run more efficiently, and run lower volumes. Upgradable for increased functionality and throughput, the platform supports 24-, 96-, 384-, and 1536-well plate formats with full process control and easy assay setup using plate::works™, the proven scheduling software. Seamlessly integrates with PerkinElmer's Opera Phenix and Operetta CLS platforms for fully automated high-content screening, as well as EnSight and EnVision plate readers.



## PHENOTYPIC SCREENING

# BREAKTHROUGHS HAPPEN WHEN CELLS REVEAL THEIR DEEPEST SECRETS

From image acquisition to hit selection, PerkinElmer offers integrated solutions for every step of your phenotypic screening workflow. There from the start, we offer the in-depth knowledge and robust, high quality data you need to make informed decisions about which compounds to take forward in the drug discovery process.



Operetta CLS and  
Opera Phenix Systems

## DETECTION PLATFORMS

Industry-leading platforms provide cell imaging, labeled, and label-free detection technologies for comparing and combining target-based and phenotypic approaches - and with EnSight you can do it all on a single system.

### EnSight

Multimode plate reader that performs per-cell imaging to generate univariate data on the same system as label-free and labeled detection for simpler workflows and easier data comparisons.

## HIGH-CONTENT SCREENING

Designed to generate high-quality images and information-rich, multiparametric data quickly and easily, our HCS systems provide highly sensitive imaging and feature intuitive Harmony® image analysis software that simplifies even the most complex assays and screens.

### Opera Phenix™

HCS system that performs phenotypic screens with greater speed and sensitivity using extremely sensitive confocal imaging and simultaneous acquisition - without the issue of crosstalk. That means higher throughput than ever and richer content, making it ideal for discriminating phenotypes and studying complex disease models, such as primary cells and microtissues.

### Operetta® CLS

Uncover subtle phenotypic changes and reveal deep biological understanding from everyday assays and innovative applications. A unique combination of technologies delivers all the speed, sensitivity, and resolution you need to reveal fine subcellular details. Uses Harmony™ software, which also powers the Opera Phenix system, so you can transfer Operetta CLS assays to higher throughput with ease.

### JANUS G3

Enhanced software and hardware capabilities allow the seamless automation of everything from cellular high-content analysis to high-throughput screening workflows. Proprietary Modular Dispense Technology™ (MDT) creates an automated liquid handling solution that offers a unique level of flexibility in terms of throughput, plate capacity, and dynamic volume range (0.5 µl to 5000 µl).

## Microplates

### High-Content Screening

Manufactured with the finest materials to ensure exceptional image quality, our CellCarrier™ Ultra microplates are ideal for high-throughput cell imaging using high-resolution fluorescence and brightfield microscopy.

### 3D Cell Culture

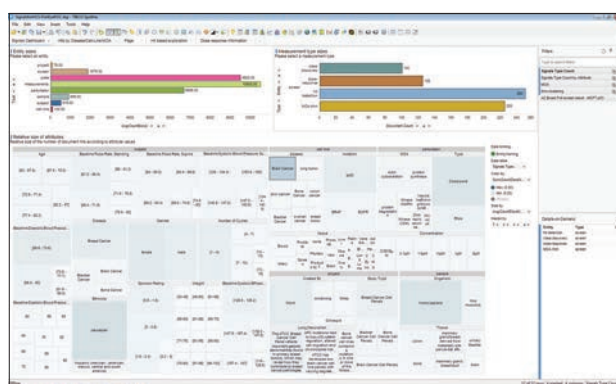
Accelerate your research with a range of microplate technologies engineered to help you generate lifelike data *in vitro* to better predict what may happen *in vivo*.

# THIS IS HOW BIG DATA BECOMES BREAKTHROUGH DATA

With the large volumes of data generated by high-throughput and phenotypic screening, you need software solutions that can quickly and clearly aggregate and interpret results to help you make informed, confident decisions. PerkinElmer delivers on all fronts with scalable platforms that make it easy to access and manage all relevant data for enhanced speed and efficiency in drug discovery.

## PerkinElmer Signals™ for Screening

From data acquisition to hit stratification and profiling, PerkinElmer Signals for Screening offers everything you need to effectively unite target-based high-throughput screening with phenotypic high-content screening to phenotypic high-content screening. The only product that fully enables seamless phenotypic screening workflows in a single application – and the only cloud-based platform of its kind – the software offers the easiest, fastest, most cost-effective solution on the market.



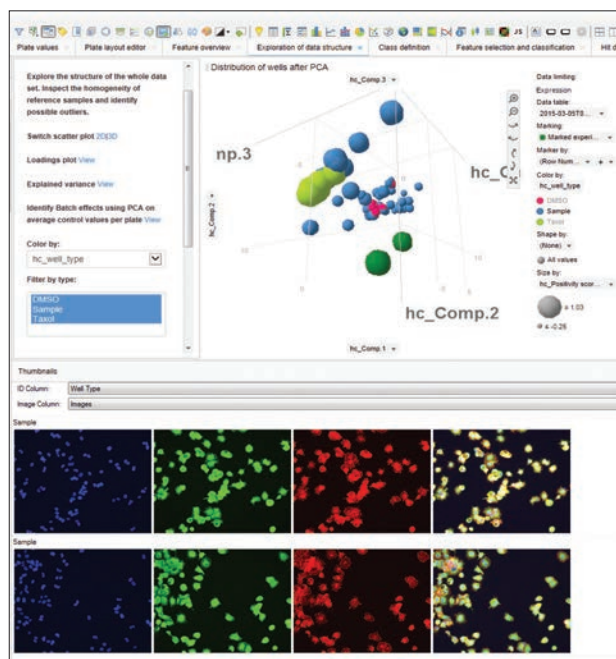
PerkinElmer Signals for Screening facilitates Data Query and Retrieval in a screening-focused data warehouse. An overview of entire screening and project history enables users to perform Cross-Screen/Project analysis, compare results across diseases and cell lines and characterize candidates (compounds) of interest.

## Columbus™

The first-to-market, best-in-class universal image analysis and storage platform, Columbus makes it easy to store, share, and analyze large quantities of data from phenotypic screens and to perform robust image analyses of cellular phenotypes. A single, automated platform that can perform your entire screening analysis, the software enhances data integrity, traceability, efficiency, and costs, while improving profiles of hits and genes.

## High Content Profiler™

With powerful visualizations and guided workflows using the industry's most advanced statistics and machine learning routines, High Content Profiler helps you quickly and easily transform phenotypic analyses into actionable biological conclusions. Developed to overcome the lack of easily accessible, advanced, multivariate statistical tools for true phenotypic analyses, the user-friendly platform takes full advantage of the rich volume of multiparametric data from high-content screening, making it easy to unravel complex and subtle phenotypic responses and perform accurate drug response profiling.



High Content Profiler software's powerful visualizations help turn data into actionable insights. This illustration shows a principal component (PCA) plot for exploring the phenotypes caused by positive controls (light green) and samples (blue).

For Research Only. Not for use in diagnostic procedures.

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