

From
biology
to target
engagement.



revvity

Comprehensive drug discovery workflows



Workflows that keep your research on target

The next big breakthrough therapy gets its start right here: with researchers able to optimize and simplify their drug discovery workflows so that promising compounds can be identified and progressed quickly.

And that's where our comprehensive drug discovery solutions come into play.

From target selection to product development, our extensive experience and expanding solutions portfolio help enable faster discoveries and reliable, physiologically relevant models - so you can move your discovery campaign forward with confidence.

We support you in:

- Accelerating preclinical drug development with our comprehensive portfolio of drug discovery solutions
- Optimizing your workflow with our complementary tools and technologies spanning the entire development pipeline
- Benefiting from the multidisciplinary experience of our in-house experts across multiple therapeutic areas

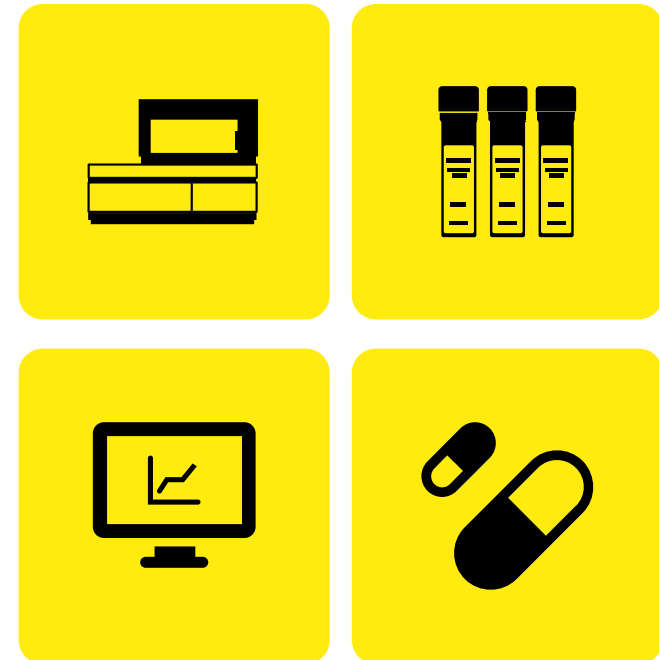




Smarter solutions for faster discoveries

The discovery and development of small-molecule drugs is a long, complex, and expensive endeavor. All stages of the workflow – from early discovery to scale up and commercialization – require the tools, technologies, and support to enable deeper biological disease understanding and address the inherent challenges of development pipelines.

Our proven product portfolio of tools for complete solutions serves every stage of the discovery workflow, with technologies ranging from instruments, reagents, consumables, data analysis, and bioinformatics tools to expert customer service and support. Solutions that support your research and help accelerate the drug discovery and development process toward commercialization, clinical success – and new cures.

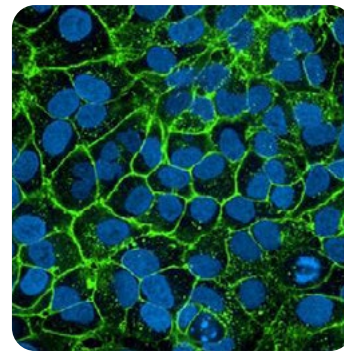




From biology to drug development: selection and validation

From target selection to drug development is a multilayered process to determine whether the identified target is relevant to the disease being studied and suitable for pharmaceutical development. Following validation, researchers will search for a molecule or compound that acts on this target and then optimize it for efficacy and safety.

Explore our complete solutions serving all parts of the discovery and development workflow.



Identifying and validating disease-relevant targets



Screening promising leads faster



Maximizing selectivity and potency of compounds



Accelerating drug development



Target discovery

Taking aim at relevant targets

Our imaging and detection technologies can enable research scientists to unravel disease pathways and mechanisms of actions from physiologically relevant cells or tissues. Together, they can provide relevant, reliable results, to help you move your discovery campaign forward with confidence.



Liquid handlers

Assist your science to minimize errors, reduce hands-on time, and increase throughput and reproducibility.



Functional genomic screening

Support the modulation of thousands of genes in a single experiment to identify genetic pathways, cellular processes, and novel therapeutic targets.



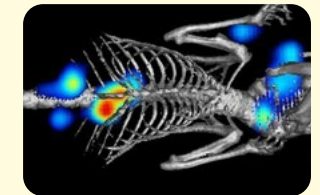
Assays and readers

Smoothly shift from target to hit with our screening reagents supported by multimode microplate readers.



High-content screening

Enhance target-based and phenotypic profiling of physiologically relevant 2D and 3D cell models with our dedicated reagents, imaging systems, and image- and data-analysis packages.



In vivo preclinical imaging solutions

Increase your molecular and physiological understanding across a broad range of disease models with our *in vivo* preclinical imaging solutions.

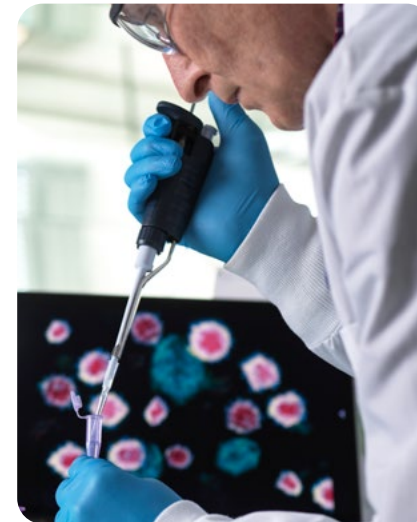


Lead identification

Identify leads with speed and confidence

To maximize probability of hit discovery and lead identification, you need multiple screening techniques to engage and confirm findings orthogonally. You can select lead compounds from a collection of hits by refining the screening criteria, allowing the most promising compounds to be developed further.

Our drug discovery screening solutions can help identify and confirm your drug compounds quickly, so you can advance them to the next stage of the development workflow with confidence.



Dig deeper

Click each image to read more about lead identification and our relevant products and services.

Two paths to discovery

Target-based drug discovery screens compounds against a validated molecular target that's considered to have an important role in disease.

Phenotypic screening tests multiple compounds against a relevant biological disease model to find those that revert the disease phenotype to a healthy one. Phenotypic screening doesn't require prior knowledge of a specific target or mechanism of action.



Lead optimization

Maximize selectivity and potency of your compounds

During lead optimization, analogs of leads are prepared and synthesized to improve biological properties for clinical development. This improves target selectivity and biological activity and reduces your compound's potential toxicity.

Our validated screening assays, imaging solutions, and analysis software can help progress your hits into high-quality lead series during every step of the lead optimization process.



Dig deeper

Click each image to read more about lead optimization and our relevant products and services.



Drug development

Solutions for every step of the development process

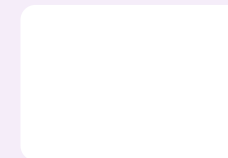
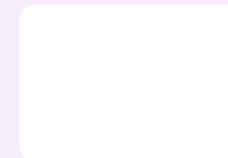
Once a lead compound is selected, you need to perform studies to evaluate its biological effects and gain valuable information on its efficacy, biodistribution, toxicity, and safety.

Our innovative instrumentation, reagents, consumables, and software support you in determining efficacy and safety of those drug candidates, accelerating the drug development process and ensuring that compliance requirements are met.



Dig deeper

Click each image to read more about drug development and our relevant products and services.





Understanding biology

The journey to discovering better targets requires a comprehensive understanding of human biology and diseases at the molecular level. Unravelling the underlying pathways and disease mechanisms smooths the way for discovery of novel therapeutic targets and helps decipher how we can best interfere with disease processes in the human body.

To then obtain the most relevant and robust data from cells and model systems, you need to choose the right assays, instrumentation, and informatics-based solutions to address the biological question being explored, which enable you to identify new cures. And our solutions support every step of that discovery workflow, from basic research to data analysis.



Interrogate biology



Detect and measure

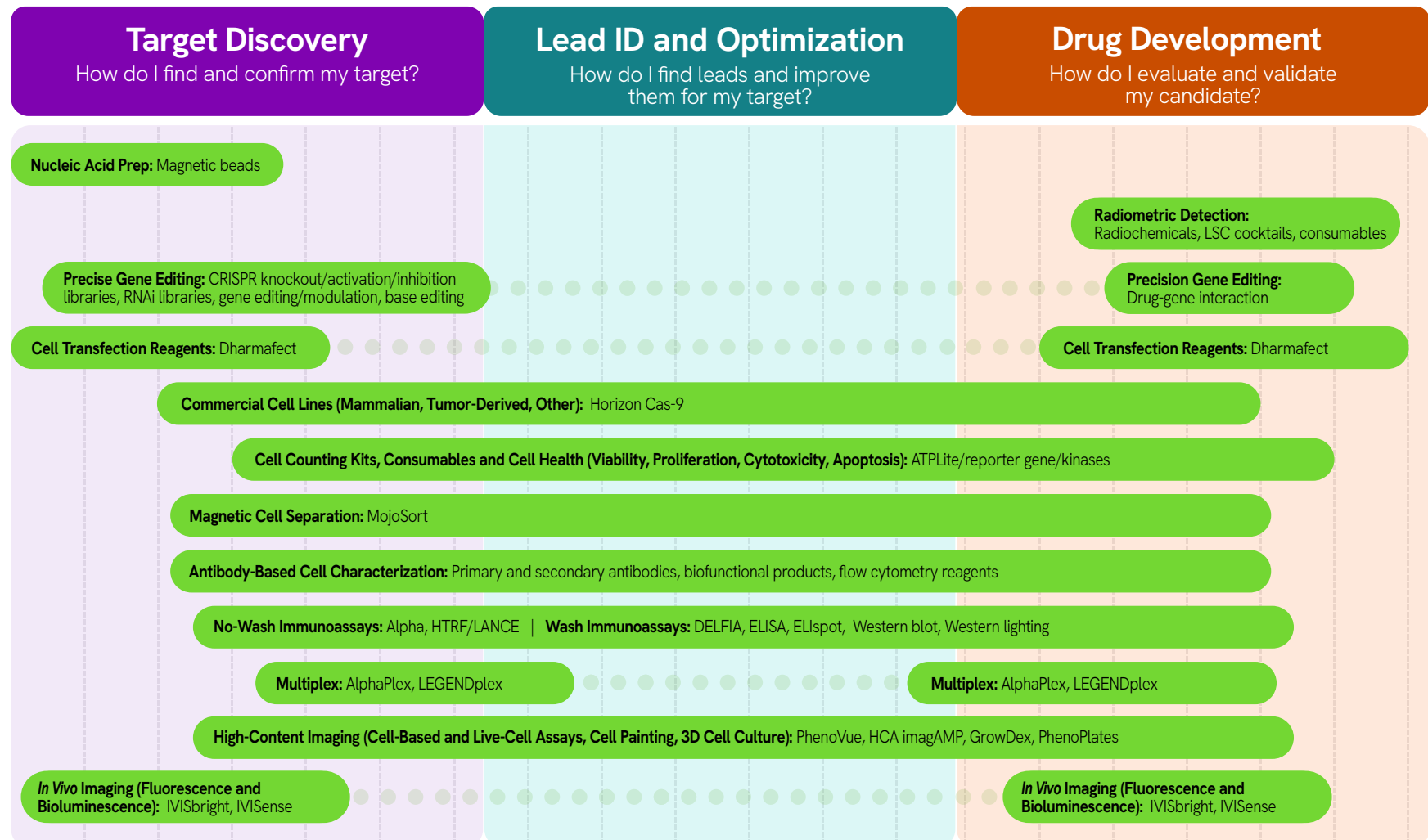


Automate and analyze



Interrogate biology

Discovering better targets requires a comprehensive understanding of human biology and disease at the molecular level – demonstrated by biological assays.





Interrogate biology

Nucleic acid purification

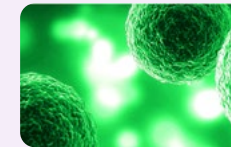
Isolation of high-quality nucleic acids from patient samples or model systems is a key component of today's genomic analysis methods. Our high-performance workflows provide an innovative and efficient answer for this challenge.

Our **chemagic™ kits** are designed for use with chemagic automation, liquid handling instruments, and magnetic stands and enable purification of high yields of DNA and RNA from a huge variety of sample materials, including whole blood, serum and plasma, and saliva. All chemagic kits for DNA and RNA isolation include our proprietary M-PVA Magnetic Beads.



Dig deeper

Read more about nucleic acid purification and our relevant products and services.



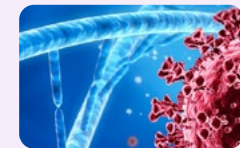
Genomic DNA kits



Total RNA kits



Cell-free DNA kits



Pathogen nucleic acid kits



Interrogate biology

Radiometric solutions

Radiometric detection is one of the most trusted, proven techniques for molecular quantitation. Our radiometric detection solutions range from radiochemicals, liquid scintillation cocktails, and detectors to custom labeling services. These offerings help streamline your workflows and empower your assay detection limits, assisting you in answering biological questions and retaining your competitive edge.



Dig deeper

Click each image to read more about nucleic acid purification and our relevant products and services.



Vials

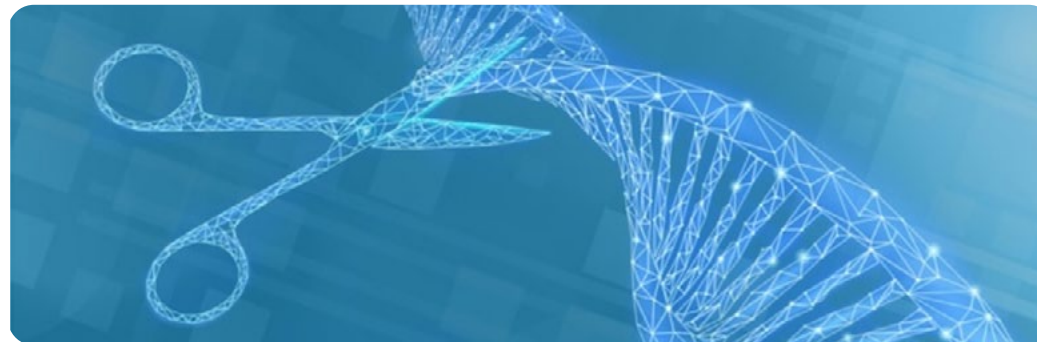


Interrogate biology

Precision gene editing and modulation

Gene editing techniques are among the most powerful tools to unravel molecular pathways. They involve inactivating a gene's function (knockout), adding a reporter tag to an endogenous gene (knock-in), or introducing or correcting an SNP mutation. These changes are permanent and heritable, resulting in a newly engineered cell line. With our **Dharmacon™ Edit-R™ CRISPR-Cas9 reagents**, you can make targeted, specific edits to any gene in practically any cell type. Plus, we provide a wide selection of premade, edited cell lines and expert genome engineering services.

One of the key success factors in gene modulation experiments (RNAi, overexpression, gene editing, or CRISPR modulation) is to introduce RNA and/or DNA components into your cell line or *in vivo* system. **Dharmacon lipid-based transfection reagents** are designed for small RNA transfection, co-transfection of plasmid and small RNA, and plasmid transfection.



Dig deeper

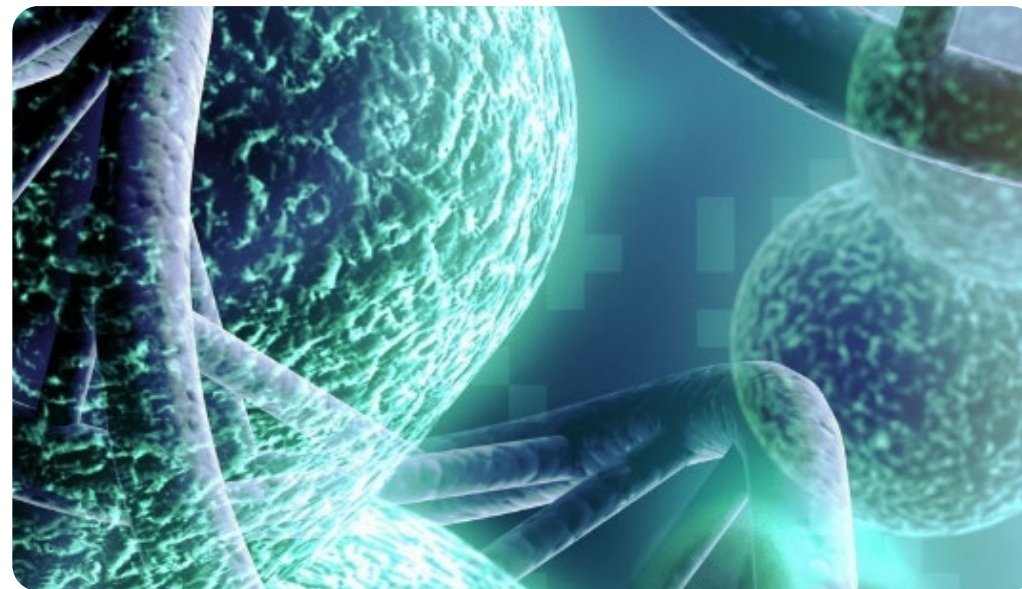
Click each image to read more about precision gene editing and reliable transfection of small RNA and plasmids into any cell type.



Interrogate biology

Commercial cell lines

Our Horizon products and services combine innovative technology with deep practical expertise to provide advanced cell line engineering solutions. Our dedicated team delivers quality and timely results, with editing experience in hundreds of cell lines - including many challenging-to-edit lines such as iPSCs and primary cells. And we have an extensive catalog of more than 7,500 ready-to-go cell lines to further your research right away.



Dig deeper

Click each image to read more about custom-engineered and ready-to-go commercial cell lines.



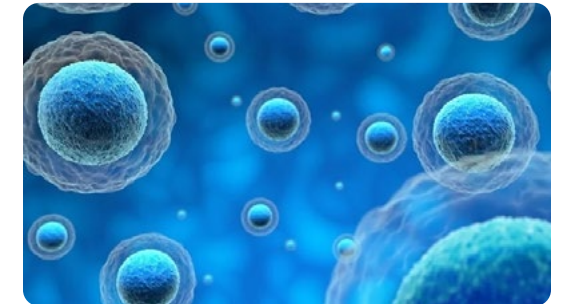
Interrogate biology

Cell counting and health

Our Nexcelom family of fluorescent reagents and kits for cell counting and cell-based assays are optimized to work with Cellometer™ and Celigo™ imaging systems, as well as other fluorescence-based instruments. These dependable, high-performance products give scientists better tools for interrogating biology.

What's more, our **BioLegend Apotracker™** fluorogenic probe binds to apoptotic cells in a Ca^{2+} independent manner, so no special buffers are required.

And our luciferase assays are significant tools in the study of transcriptional gene expression, virus lifecycles, and cell viability.



Dig deeper - Click each image to read more about cell counting and health and all our relevant products and services.

Fluorescent reagents

Luminescent reagents

Interrogate biology

Magnetic cell separation

Specific antibodies that are conjugated to magnetic particles bind to cells expressing the target antigen. Applying a magnetic field attracts these cells toward the magnet, separating them from the rest of the cells. On the other hand, a two-step separation process can be conducted - for example, biotin-antibody conjugates followed by streptavidin-conjugated beads, or a similar approach.

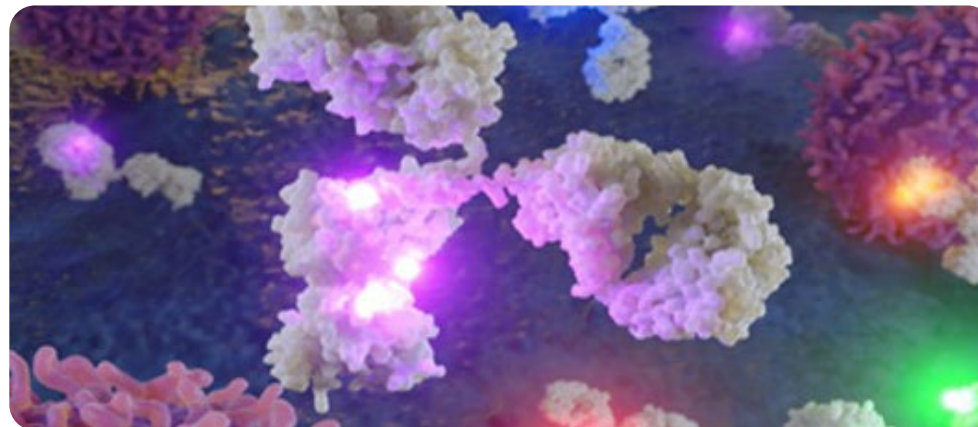
**Dig deeper**

Click the image to read more about the BioLegend MojoSort™ magnetic cell separation system for isolation and purification of cells from heterogeneous populations.

Interrogate biology

Antibody-based cell characterization

Antibodies form the backbone of immune-based cell characterization with imaging or flow cytometry. Primary antibodies conjugated to fluorophores are used predominantly in flow cytometry, as they allow for easy multiplexing. Unlabeled primary antibodies are frequently used in imaging, where they're targeted by labeled secondary antibodies. This allows for use of a single primary antibody across multiple applications, which is beneficial if there's no directly conjugated primary antibody available. Secondary antibodies can also boost detection of low-expression antigens, since polyclonal secondary antibodies can attach to a primary antibody at more than one site and amplify its signal.

**Dig deeper**

Click each image to read more about our BioLegend clone library, one of the largest in the industry.



Interrogate biology

No-wash and wash immunoassays and Western Blot

Today's researchers study a wide variety of targets, from large endogenous protein complexes to very small molecules. Samples can range from serum and plasma to crude cell lysates and purified reagents.

We offer immunoassay platforms to easily assess your biologically relevant samples, including reliable and easy-to-use immunoassays such as **Alpha technologies**, **HTRF™**, **LANCE™ Ultra™**, and **DELFIATM**.



Dig deeper - Click each image to read more about our comprehensive array of immunoassay technologies.

No-wash immunoassays

Wash immunoassays



Interrogate biology

Multiplex immunoassays

AlphaPlex™ homogeneous, all-in-one-well multiplexing reagent technology provides detection of two or three analytes (duplex or triplex) in a simple no-wash assay format based on our proven Alpha technology. It facilitates the easier quantification of a wide range of analytes, including large and small proteins and scarce biological samples such as primary cells and stem cells. It can be applied to a wide range of applications to help increase predictivity and give you confidence in your results.



The BioLegend **LEGENDplex™ bead-based immunoassay** uses the basic principles of sandwich immunoassays, in which a soluble analyte is captured between two antibodies. Up to 14 soluble analytes can be quantified simultaneously in biological samples using a flow cytometer. LEGENDplex assays are available as predefined or customized panels.

Dig deeper

Click each image to read more about our multiplexing technologies.

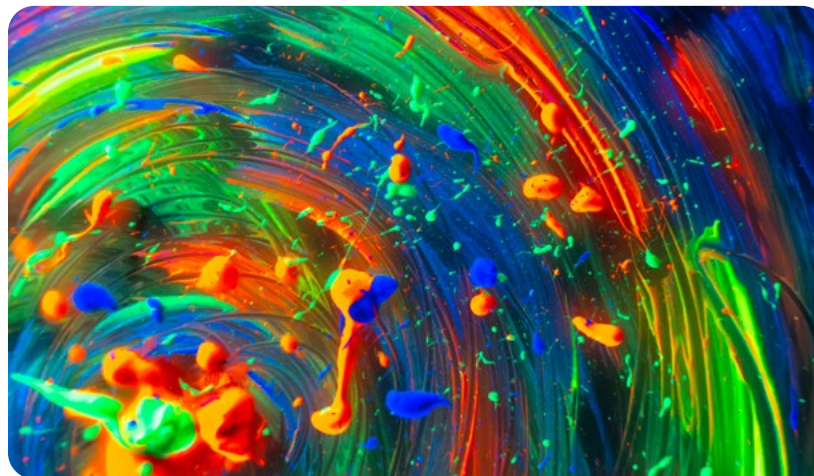


Interrogate biology

High-content imaging reagents

Cellular imaging supports detailed phenotypic profiling using molecular, morphological, and kinetic readouts and can accelerate molecular and physiological understanding across a broad range of normal and disease-related cellular models.

Our **PhenoVue™ suite of cellular imaging reagents and dedicated microplates** – cell painting kits, organelle and cell compartment stains, and fluorescent labeled secondary antibodies – complements our proven high-content screening instruments and image analysis software. They're suitable for use in high-content screening and other cellular imaging applications.



Dig deeper

Click each image to read more about our comprehensive offerings for high-content imaging.

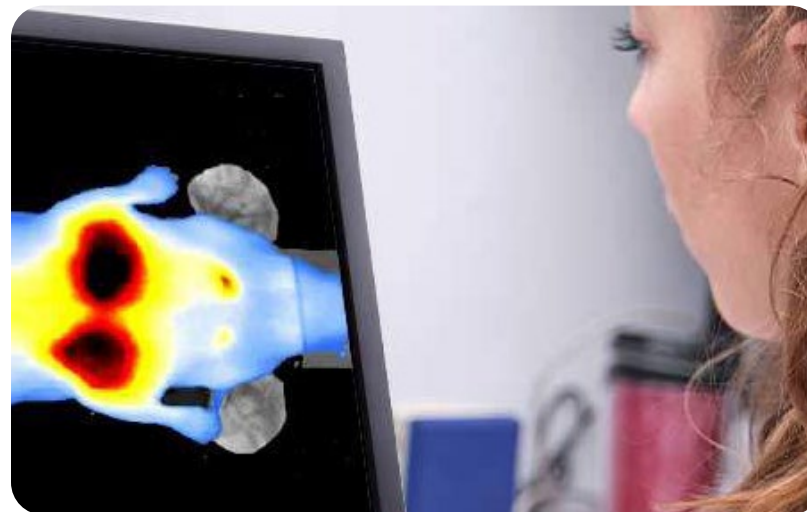


Interrogate biology

In vivo imaging reagents

In vivo imaging gives you tools to better understand early disease-related biological changes, visualize and track disease progression, guide the drug discovery process, and evaluate efficacy and safety of drug candidates in model organisms.

Our comprehensive portfolio of **IVISbrite™ bioluminescent** and **IVISense™ fluorescent reagents** have been optimized and validated in a broad range of imaging applications using our **IVIS™ imaging platform**. In addition to optical imaging reagents, we offer **VesselVue™ microbubble contrast agents** to help with the study of tissue perfusion and blood flow characteristics for ultrasound imaging with the **Vega™ ultrasound system**.

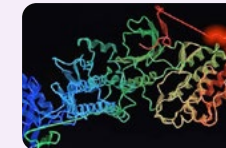


Dig deeper

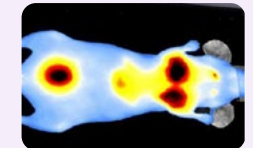
Read more about how our *in vivo* products can further your oncology research.



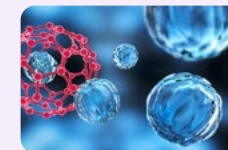
Fluorescent probes



Fluorescent labels and dyes



Fluorescent imaging panels



Fluorescent nanoparticles



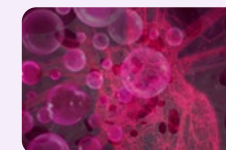
Bioluminescent substrates and lentiviral particles



Bioluminescent tumor cell lines



Bioluminescent bacterial strains

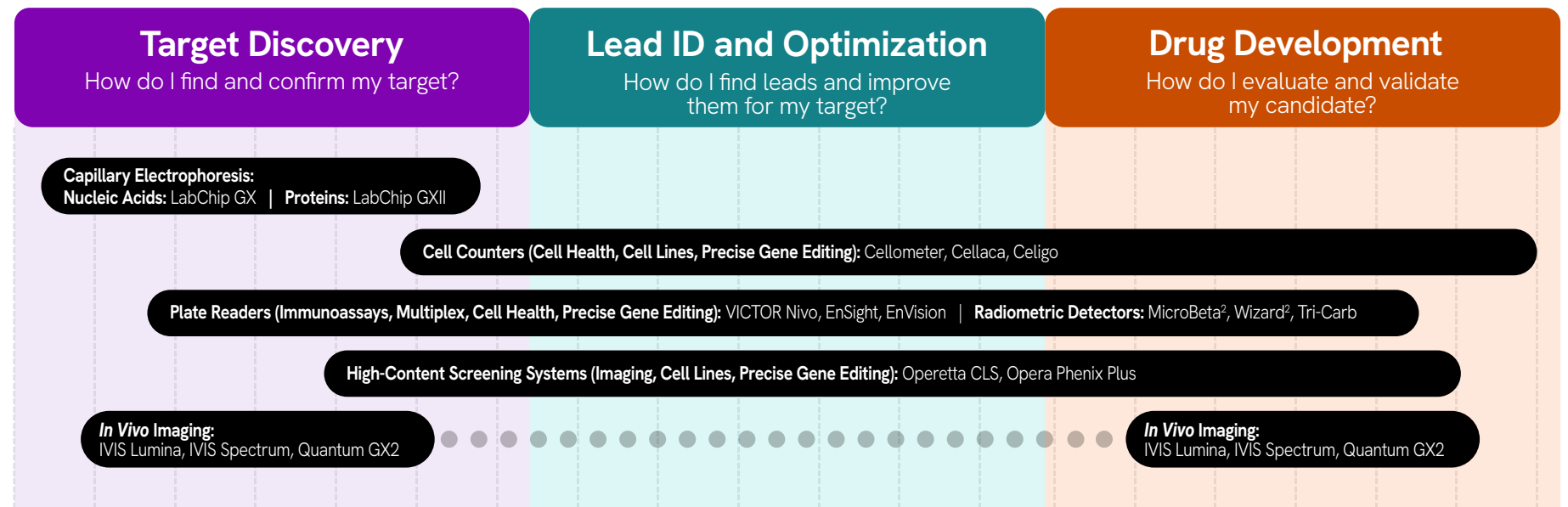


VesselVue microbubble contrast agent



Detect and measure

Discovering better targets requires a comprehensive understanding of human biology and disease at the molecular level – demonstrated by biological assays.





Detect and measure

Capillary electrophoresis for nucleic acids and proteins

DNA and RNA quantitation and sizing can be done in seconds using automated capillary electrophoresis separation. Our **LabChip™ GX Touch™** microfluidics technology offers nucleic acid analysis, including gDNA and RNA integrity assessment, library-preparation quality assurance, and PCR fragment sizing and quantitation.

The LabChip GX Touch system quantifies DNA at concentrations as low as 2 pg/uL and is used in many applications, including cell-free DNA research, CRISPR modeling, and PCR-free library preparation.

The LabChip GXII Touch protein characterization system offers rapid peak quantification and quality control throughout the protein purification workflow.



Dig deeper

Click each image to read more about how our LabChip microfluidic technology generates high-resolution data.



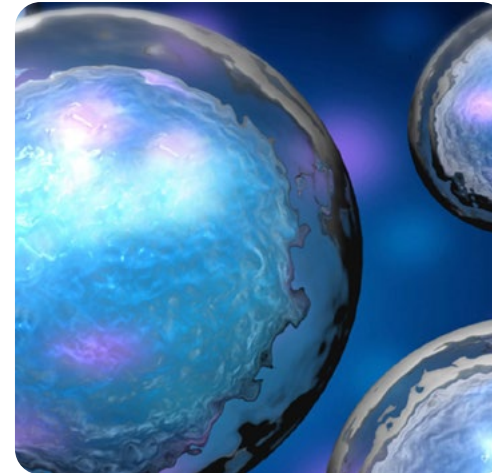
Detect and measure

Cell counting

Our image cytometers give you increased control of your samples and the data generated from their cell-based assays. The Cellometer™ Ascend™ automated cell counter is a benchtop instrument offering fast analysis and reliable cell counts with small sample volumes. It has multiple pre-defined assays, can analyze numerous cell types, and is 21 CFR Part 11 ready.

The **Celigo image cytometer** offers a plate-based high-throughput solution for adherent and suspension cells, eliminating the need to trypsinize cells. It is very well suited for a broad range of applications, including 3D multicellular tumor spheroids, proliferation, cell line development, colony counting, wound healing, and more.

The **Cellaca PLX system** with Matrix analysis software and dedicated reagents and consumables provides a benchtop solution for accurate measurements of small sample volumes to easily perform rapid subpopulation analysis for downstream process.



Dig deeper

Click each image to read more about our clone library, one of the largest in the industry.



Detect and measure

Plate readers

Our **multimode microplate readers** deliver all major detection modalities – absorbance, Alpha, luminescence, fluorescence intensity, fluorescence polarization, time-resolved fluorescence, and more – all in one instrument. These plate readers are configurable, so you can add technologies when you need to futureproof your lab. And they're ideal for applications such as cell viability/proliferation/toxicity, drug screening, pathway analysis, receptor panning, biomarkers, protein:protein interaction, gene expression, and epigenetics.

All our plate readers offer the Enhanced Security software option. It's your technological tool to help you reach compliance for 21 CFR Part 11 for integration into regulated environments.



Dig deeper

Click each image to read more about our complete line of plate readers.



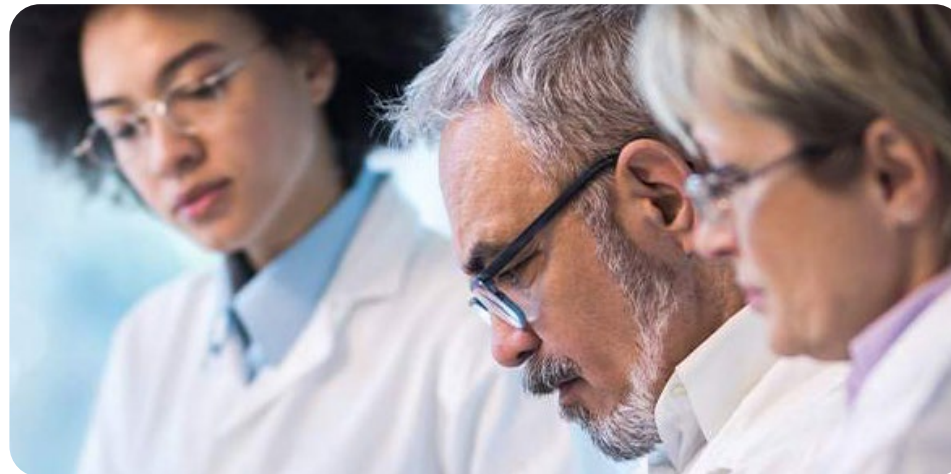
Detect and measure

Radiometric detectors

The **MicroBeta²™ system** provides advanced radiometric and luminescent detection abilities for GPCRs, kinases, reporter gene assays, and traditional liquid scintillation counting. It delivers the performance and flexibility you can depend on.

The **Wizard²™ automatic gamma counter** unites the flexibility, robustness, and accuracy for applications requiring gamma radiation analysis.

With a wide variety of flexible options, the **Tri-Carb™ liquid scintillation counter** is well suited for everything from basic to advanced research and nonclinical ADME studies.



Dig deeper

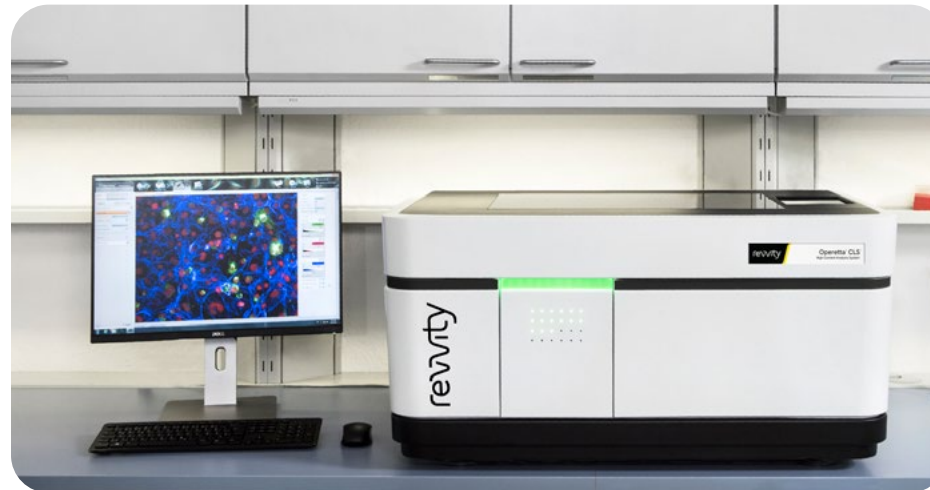
Click each image to read more about radiometric detection and relevant solutions and services.



Detect and measure

High-content imaging

The **Operetta CLS™ high-content analysis system** for HCA acquires, analyzes, and manages fluorescence, brightfield, and digital-phase contrast images. And the **Opera Phenix™ Plus** is ideal for high-throughput, high-content assays; target-based and phenotypic screening; assays using complex disease models such as live cells, primary cells, and microtissues; and fast-response assays, such as Ca²⁺ flux.



Dig deeper

Click each image to read more about all our high-content systems and where they fit in your research.



Detect and measure

In Vivo imaging

Tracking, monitoring, and visualizing biological processes and disease progression in anatomical context is key to helping you better understand those processes and evaluate the effectiveness of drug candidates earlier in development.

Our industry-leading **IVIS™ optical in vivo imaging systems** deliver high-throughput capability to image down to a single cell. And our **Quantum™ GX3 microCT system** can be used for an array of research applications, such as lung and cardiac imaging, made possible through fast image-based gating techniques, *in vivo* and *ex vivo* bone imaging, and other soft-tissue applications.

In addition to optical and microCT modalities, the **Vega™ ultrasound system** provides fully automated, hands-free, high throughput imaging accelerating drug discovery.



Dig deeper

Read more about the clear advantages *in vivo* and other imaging technologies can bring to your research.



IVIS Spectrum 2 series 2D and 3D optical imaging



IVIS Lumina S5 and X5 2D optical imaging



IVIS Lumina Series III 2D optical imaging



Quantum GX3 MicroCT imaging system



Vega Ultrasound system

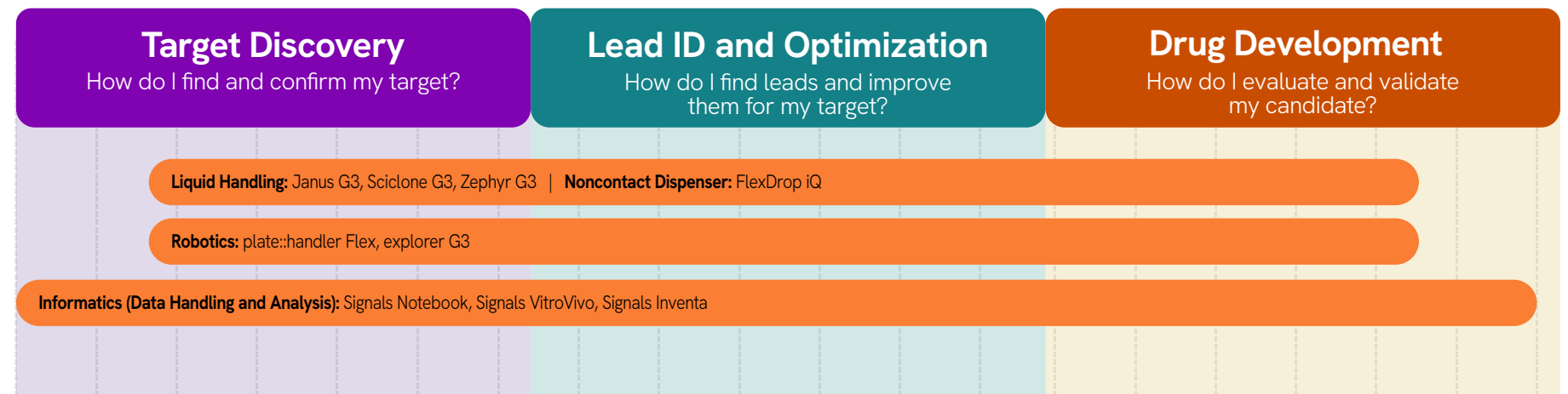


In vivo imaging accessories



Automate and analyze

Obtaining the most relevant and robust data from cells and model systems necessitates the right combination of assays and instrumentation for the biological question at hand.



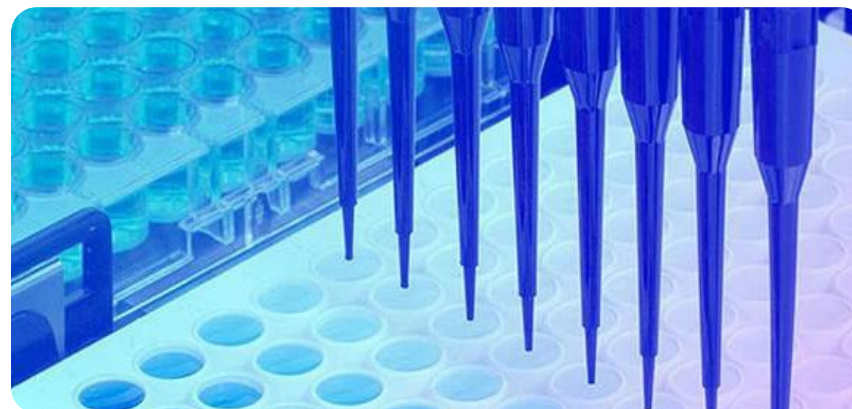


Automate and analyze

Liquid handlers and noncontact dispensers

We offer a comprehensive lineup of robotic liquid handlers to automate all your laboratory workflows. From benchtop application-specific workstations to complex customized integrated solutions, our liquid handling portfolio, supported by our industry experts, can help accelerate your science.

Whatever your liquid handling and automation needs, we can provide a solution tailored to fit your individual requirements. Our dedicated in-house and field-applications support teams can support you with your research challenges.



Dig deeper

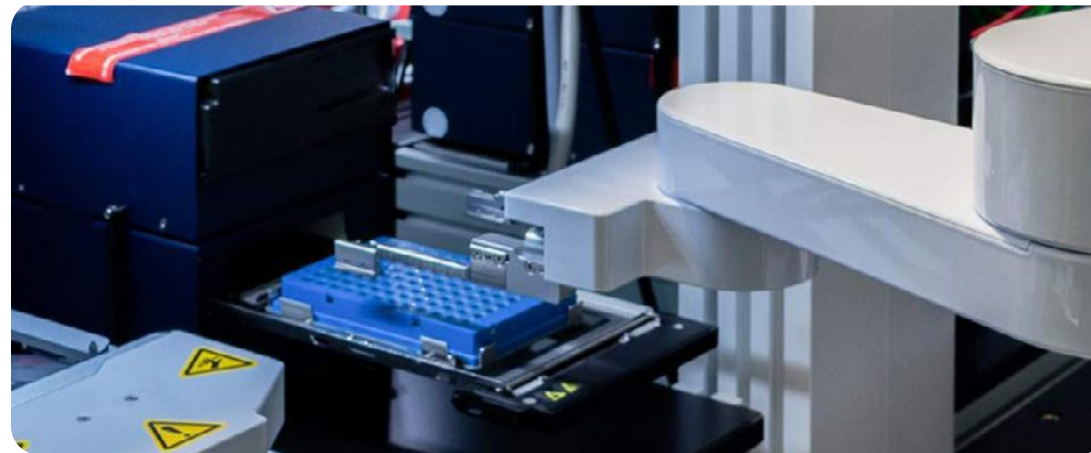
Click each image to read more about how liquid handling solutions can make your lab more efficient and productive.



Automate and analyze

Robotics for high throughput

From cellular screening and imaging applications to high-throughput screening and genomics-based applications, custom **explorer™ G3 integrated workstations** provide innovative, application-focused laboratory automation solutions that simplify microplate handling, liquid handling, and detection.



Dig deeper

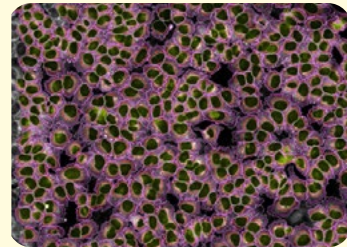
Click each image to read the whole story on robotics for high-throughput applications here.



Automate and analyze

Informatics

Secure and scalable, our **Signals™ Research Suite** features a modern, intuitive interface that offers you complete control in configuring workflows for every technique, modality, and data type. You can easily transform raw data into actionable results and seamlessly analyze and publish results from disparate data sources. Now you can manage the vast amounts of experimental, instrument, and outsourced data to identify therapeutic candidates or targets quicker and facilitate modern biology workflows.



Signals Image Artist™

Quickly process, analyze, share, and store the vast volumes of data generated by high-content screening and cellular imaging, including 3D imaging, phenotypic screening, and cell painting .



Signals Notebook™

Make informed decisions and improve productivity and data transparency with our futureproof electronic notebook solution.



Signals VitroVivo™

Benefit from assay development, low- and ultrahigh-throughput production assays, HCS, and *in vivo* studies on a single platform.



Signals Inventa™

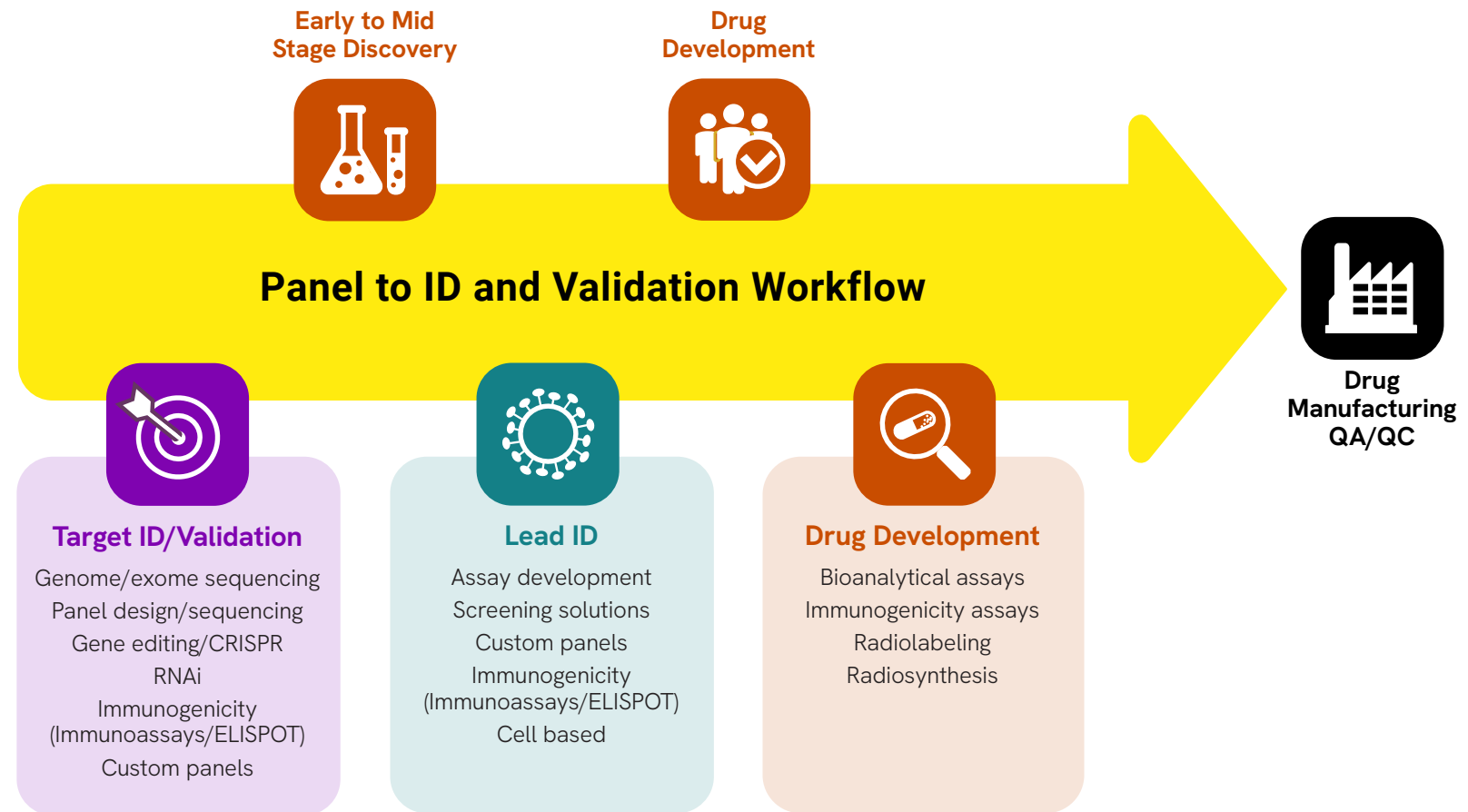
Efficiently access and analyze all scientific results collected throughout the research and development lifecycle.

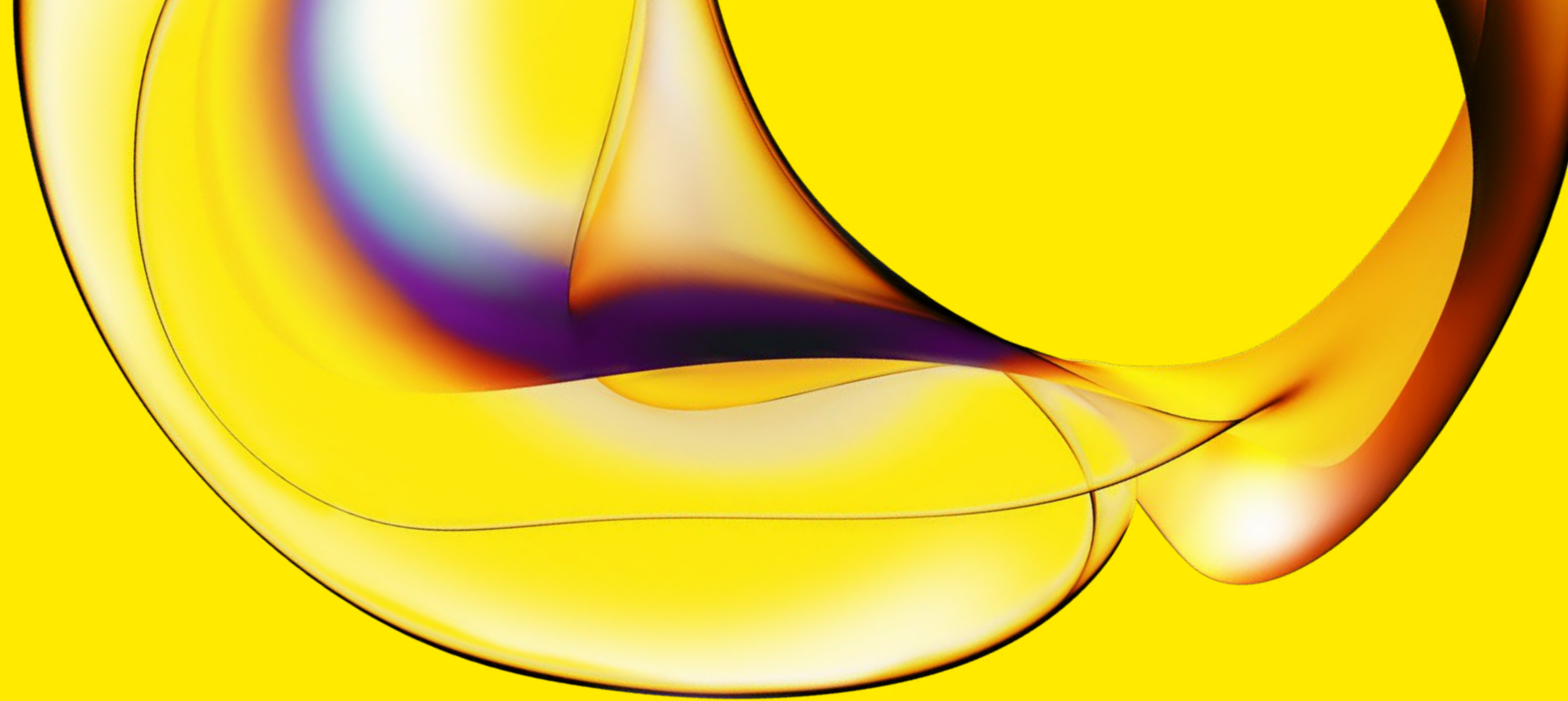


Pharma services

Broad array of service solutions

We assist you to detect and validate biomarkers early and offer predictive or prognostic value further downstream in preclinical and clinical development.





www.revivity.com

revvity

Copyright ©2024, Revvity, Inc. All rights reserved.

1123792