Digital Gene Expression Assay

The nCounter PanCancer Pathways Panel is a highly multiplexed, digital gene expression assay that offers a unique way to investigate cancer biology across all major cancer pathways. From a single tube, the PanCancer Pathways Panel simultaneously analyzes all of the key cancer pathways: PI3K, STAT, MAPK, TGFβ, Notch, Hedgehog, Wnt, Apoptosis, Cell Cycle, RAS, Chromatin Modification, Transcriptional Regulation, and DNA Damage Control. The 770 genes included in the PanCancer Pathways Panel were selected using a biology-guided, data-driven methodology that provides high confidence that the gene variance within each cancer pathway was captured. Each of the canonical cancer pathways was mapped to publicly available data sources such as Kyoto Encyclopedia of Genes and Genomes (KEGG), Reactome, and the Gene Ontology (GO) databases. Then, leveraging data generated through The Cancer Genome Atlas (TCGA) and the collective work of decades of cancer research, each pathway gene and driver gene was scored and ranked based on its biological relevance to cancer.

NanoString Technologies
For info: 888-358-6266
www.nanostring.com/pancancer

Compound Screening Software

The new version of the StarDrop software platform introduces MPO Explorer, which provides innovative new methods to guide strategic decisions in research programs by helping to identify the key properties and selection criteria with which to select compounds with a high chance of success. MPO Explorer introduces unique methods that guide the development and validation of multi-parameter scoring profiles, tailored to a discovery project's specific objectives. The resulting scoring profiles can be applied with StarDrop's Probabilistic Scoring approach for multi-parameter optimization (MPO), to effectively target novel compounds with a high chance of success. The most important property criteria are also highlighted, focusing experimental resources to generate the key data with which to identify successful compounds. To promote objective decision-making, the new module also tests if a specific property criteria in a scoring profile may be artificially distorting the selection of compounds to pursue.

Optibrium
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DNA Copy Number Variation Array

The range of research-validated CytoSure Molecular Arrays has been expanded to investigate DNA copy number variation (CNV) underlying a variety of genetic disorders. The arrays are the ideal complement to DNA sequencing, providing a particularly powerful tool for investigating the variety of aberrations underlying genetic disorders. Comparative genomic hybridization arrays (aCGH) are the gold standard for CNV detection and the 60-mer oligonucleotide probes utilized by OGT's aCGH platform have been shown to deliver superior CNV detection than alternative platforms. The expanded CytoSure Molecular Array portfolio now enables detection of CNV in genes associated with over 20 genetic disorders, including cardiovascular, inherited eye, intellectual disability, and neuromuscular disorders, as well as a range of inherited cancers. In addition, genes covering each disorder can be combined to create bespoke custom arrays, or further customized by the addition of novel content to suit each individual research project. All CytoSure Molecular Arrays are supplied with OGT's class-leading CytoSure Interpret Software.

Oxford Gene Technology
For info: +44-(0)-1865-856800
www.ogt.com/cytosure

Spectral Analysis Software

KnowItAll ATR/IR ID Expert and Raman ID Expert are new technologies that provide the fastest, most accurate answers possible to scientists identifying unknown infrared and Raman spectra. The spectral intelligence built into KnowItAll ATR/IR ID Expert combined with the world's largest spectral reference collection provides the highest level of expertise to any scientist, whether a novice or power user. Scientists often employ multiple software tools to identify a spectrum depending on its chemical composition and the availability of reference spectra, and even the most experienced researchers can misinterpret results. With ATR/IR ID Expert and Raman ID Expert, the user simply opens an unknown spectrum and the software automatically performs single and multiple component searches as well as functional group analyses simultaneously and summarizes the results on a single screen. If there are problems with the user's query spectrum, ID Expert has the spectral intelligence to identify these issues and suggest ways to fix them.

Bio-Rad
For info: 888-524-6723
www.knowitall.com

High-Content Screening Platform

A new high-content screening software platform enables cancer researchers to uncover more about basic and advanced cellular function to accelerate cell-based research. The Thermo Scientific HCS Studio 2.0 is a high-content quantitative imaging and analysis software platform for a range of cancer research applications, including angiogenesis and migration/invasion, as well as the development of three-dimensional models of cancer stem cells and spheroid tumors. The new Thermo Scientific HCS Studio 2.0, coupled with Thermo Scientific high-content analysis platforms, are increasingly being used in cancer biology as they are well suited for large-scale, high throughput biology, including complex morphological analyses of cells, cell structure, and aggregations of cells in colonies, yet simple enough to be applied to everyday assays such as viability and proliferation. The challenges posed by complex cancer applications and cell models demand new types of quantitative analysis techniques, and the new software provides innovative assay techniques and functionality.

Thermo Fisher Scientific
For info: 866-984-3766
www.thermoscientific.com/highcontent

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