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PerkinElmer assists in developing global cell imaging dataset aiding drug discovery

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Supports JUMP-CP Consortium creating world's largest, Public Cell Painting Dataset to guide academic, research, and industry group in accelerating clinical trials and drug discovery



PerkinElmer, Inc., announced that it is providing its PhenoVue™ Cell Painting Kits to the Joint Undertaking in Morphological Profiling-Cell Painting (JUMP-CP) consortium.

The consortium, spearheaded by the Broad Institute of MIT and Harvard and including leading pharmaceutical companies and non-profit research organizations, is focused on creating and sharing the world's largest, public cell imaging data set to help scientists determine the mechanism of action of new therapeutics before they are introduced into patients in clinical trials.

When completed, the dataset will feature information from over one billion cells responding to more than 140,000 small molecule and genetic perturbations. A current lack of comprehensive and open access to this type of valuable data - including compound activity and toxicity reactions and disease matching insights - has been a major bottleneck in drug discovery, leading to longer development cycles.

Using the PerkinElmer PhenoVue kit, which features validated, preoptimized fluorescent-probes, consortium scientists will benefit from the convenience and simplicity of its ready-to-use format and compatibility with high-content screening applications. This will help save the researchers both time and resources.

Dr. Alan Fletcher, senior vice president of Life Sciences at PerkinElmer, Inc. said, "One of the key challenges for drug discovery today is anticipating how potential new drugs will act when they enter the human body. Cell Painting is an exciting new way to combine cell and computational biology to conduct more predictive drug discovery which can help accelerate time to market for novel therapies while reducing late stage failures at clinical trial. We are delighted to be playing a role in this groundbreaking research and dataset development."

Cell Painting is proving to be a powerful data source for identifying phenotypic patterns in cells that have been impacted by compounds, gene alterations, or disease. Members of JUMP-CP Consortium have come together to help create the world's largest public gene/compound Cell Painting dataset which will benefit drug researchers around the globe.

The PhenoVue kit is part of PerkinElmer's complete workflow solution for Cell Painting and relevant disease-related cellular models, including CellCarrier™ Ultra microplates, Horizon Discovery Edit-RTM CRISPR and Dharmacon™ RNAi Reagents and Libraries, the customized explorer™ G3 Cell Painting workstation, the Opera Phenix® Plus and Operetta CLS™ high content imaging systems, the Harmony® and Columbus™ high-content analysis and storage software systems, and the PerkinElmer Signals™ Screening data and workflow management and visualization platform with TIBCO Spotfire® analysis.