



Grenoble, France, July 5, 2012:

CYTOO SA, a company that specializes in cell-based assays, is pleased to introduce **2D+: A Transformational Cell Culture Platform**.

Cytoo 2D+ Cell Culture Platform is based on the use micro-patterns on plates to drive/control the behavior and localization of cells in cultures.

“It has been realized only recently that modifying cell shape can be a very efficient way to modify cell functions, including cell fate and differentiation. Cells are exquisite mechano-sensing systems and adapt permanently to their boundary conditions. Thus, contrary to the frequent opinion that classical 2D culture on infinite adhesive substrates are more representative of cell behaviour (as cells are ‘free’ to spread and move), these conditions introduce a considerable, and unnoticed, variability in cell functions. 2D+ Technology controls the 3D shape of cultured cells: by controlling the 2D topology of cell adhesion, it also sets the cell shape in the z axis. Global and local actin contractility, cell polarity, organelle positioning, cell division axis, can be precisely controlled in non migrating cells, a situation more similar to that in tissue than the classical 2D culture where cells spread and move in an uncontrolled manner. Similarly, the so-called 1D cell migration on thin adhesive motility tracks is much closer to 3D migration in collagen fibrils network because the thinness of the tracks imposes a very small adhesive contact, favoring cell shape in the z axis and precluding cell spreading. It is a 2D+ cell migration. When the width of the motility tracks enlarges and allows full cell spreading, a 2D cell migration is observed in a rectilinear direction” said **Michel Bornens, Ph.D, CYTOO Chief Scientific Officer & CNRS Emeritus Research Director at Institut Curie, Paris**.

CYTOO 2D+ Technology generates predictable and reproducible optimized assays. Also, since each micro-pattern is identical (several hundred per well), cells perform in a reproducible and consistent manner. Thus, fewer of precious primary cells and less replicates per data point are needed. In addition, the tightness of the data may enable resurrection of assays that were previously not acceptable due to poor z' (**Increasing Assay Performance**). Thanks to its unique features, 2D+ Cell Culture Platform is not only a cost-saving technology but also allows scientists working with difficult and complex assays to redesign those assays in a standardized, quantitative and simplified manner.

CYTOO 2D+ platform brings **major improvements in culturing cells**, to increase **cell-based assay reproducibility/reliability** and improve the capacity to achieve a **more physiological phenotype** in cells cultured on 2D surfaces without resorting to a 3D culture system.

In short, 2D+ Culture Platform enables a new generation of innovative assays portfolio.

About CYTOO

CYTOO is a distinctive Life Sciences Systems/ Tools enabling company that currently offers a disruptive solution that brings robustness, sensitivity and powerful quantification to cell-based assays and High Content Screening (HCS). The technology offers exquisite control over the cells' microenvironment, leading to normalized cell morphology and behavior. CYTOO is engaged in developing, manufacturing and commercializing innovative products to the Life Sciences research community (industry and academia). The company has tailored a portfolio of innovative products using its proprietary cell adhesive micropattern technologies to target first its fast growing High Content Screening and Analysis segment within the large cell biology market. CYTOO is headquartered in Grenoble, France. Its US subsidiary, CYTOO Inc., is located in Beverly, MA.

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