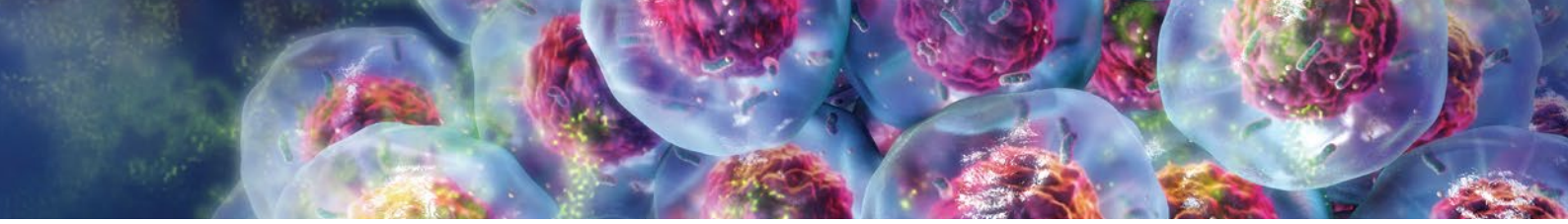

InSphero

Increasing biological relevance in vitro: From single microtissues to micro-physiological systems.

Speaker: Sumeer Dhar

Cell-based assays have become an inherent part in drug discovery and development to predict the in vivo response to biologicals and chemicals. Cells are used throughout the whole developmental chain as a test system: (i) drug target validation, (ii) primary and secondary screening set up's, (iii) lead optimization and (iv) toxicological profiling. Current standard technology is based on the culture of mammalian cells, either primary or cell lines, as monolayers in plastic dishes. However, to gain the maximum benefit of in vitro cell cultures for drug de-risking, cells have to be maintained in a format which
reflects in vivo cellular functionality, either animal or human, as closely as possible. To further increase in the value of in vitro models, technologies which allow direct cell-cell and inter-tissue communication are essential. Therefore, advanced 3D cell culture models are gaining momentum as the development of new therapeutics is a time and cost intensive process profiting from better drug de-risking. With this objective, scalable and automation-compatible tissue engineering strategies are being exploited to further improve the predictive power of cell-based assays. Here microtissue technology is being presented which allows on the one hand high throughput efficacy and safety testing and on the other flexible design of microphysiological systems.

Promega

Cell-Based Assays to study cellular health and responses.

Speaker: Dr. Jan Adam

The assessment of cell health and cellular responses after experimental manipulation continue to be a very important aspect of experimental biology. In this context cell-based assays are highly valuable tools to study different cellular responses in an "add-mix-measure" format. The seminar provides an overview of the most sensitive and easy-to-use cell-based assay formats to study cell-viability, cytotoxicity and cellular pathway activation with focus on the fascinating luciferase technology. Furthermore, practical tips and tricks to avoid pitfalls will be discussed in more detail.

BD Biosciences

Flow Cytometry: Analyse cellular status and responses on single cell level and sort individual cells for molecular biology assays.

Speaker: Dr. Andrea Engel

The balance of various processes in the lifecycle of a cell is important for both development and normal tissue homeostasis. Depending on the initial trigger or the time point of the analysis cells show a slightly different pattern of marker expression or protein phosphorylation in cell signaling pathways. The result of each experiment gets as more significant as more parameters can be analyzed simultaneously. This presentation illustrates tools and techniques to explore various indicators for cellular responses on a single cell basis. The way to make flow cytometry analysis and sorting easy-to-use and practical tips on the assays will be covered.

We kindly invite you to discuss individual questions at the end of the seminar talks with our experts.

REGISTRATION
For planning purposes we appreciate your binding registration.
Please visit our website for registration: www.promega.com/seminar

Beverages and snacks will be served.