



Showcasing work from the research group of Dr. Karen Lemke's laboratory, Institute for Bioprocessing and Analytical Measurement Techniques e.V., Thuringia, Germany.

Droplet-based cell viability assay for analysis of spheroid formation, proliferation and high-resolution  $IC_{50}$  profiling

The highly flexible droplet-based *pipe-based bioreactors (pbb)* technology enables the CellTiter-Blue® cell viability assay for drug screening of 3D cell cultures. The precise adjustment of a continuous flow rate profile allows the reproducible generation of droplets with defined cell concentrations and linearly increasing drug concentrations. A time-efficient and high-resolution determination of the  $IC_{50}$  value for HEK-293 spheroids is realized. In summary, the *pbb* technology surpasses the state of the art and proves to be a useful tool for disease modelling. Image designed and illustrated by Robert Römer (iba e.V.).

As featured in:



See Mario Saupe *et al.*,  
*Lab Chip*, 2025, 25, 6138.