

High-content high-throughput microscopy for the assessment of toxicological potential of nanomaterials

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Category:
D. In-vitro toxicity studies

Institute:
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Short technology description/Overview (approx 300 words):

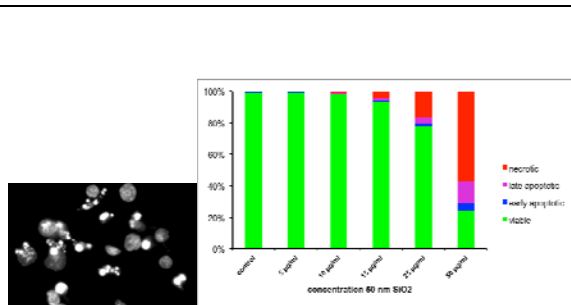
To study systematically the effects of chemicals in different cell lines and zebrafish embryos we provide a partly automated assay system using computer-based image analysis. The transparency of zebrafish embryos is ideal for microscopic analysis to screen for phenotypic changes, developmental defects and more specific read-outs such as reporter gene expression. Cellular assays include viability, cell death and immunofluorescence studies to monitor for e.g. perturbations in signaling pathways.

Main Features (Equipment Capabilities):

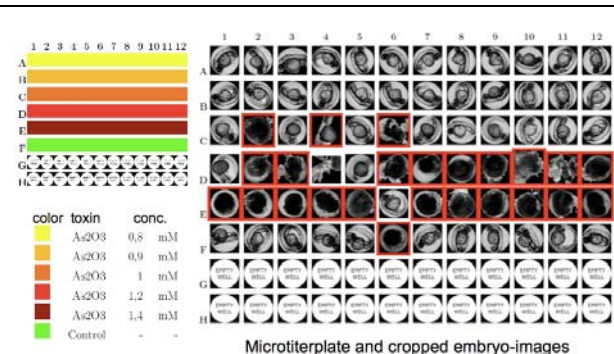
- **Olympus ScanR systems**
(http://www.microscopy.olympus.eu/microscopes/Life_Science_Microscopes_scan_R.htm)
- **Bioinformatics and Bioimaging platform**
(http://liebel-lab.org/liebelwiki/index.php/Main_Page)

Typical Samples & Images:

Cell assays (e.g. automated detection of cell death):



Zebrafish toxicity assays (e.g. automated coagulation assay):



Any further Information: