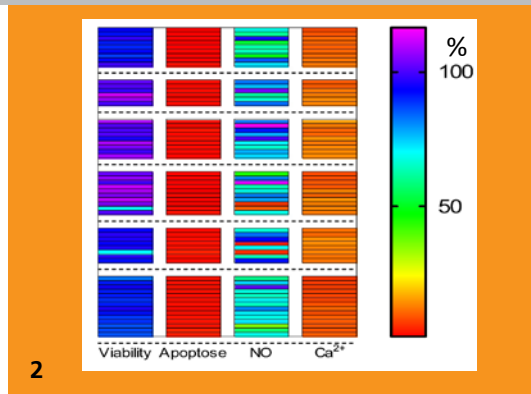
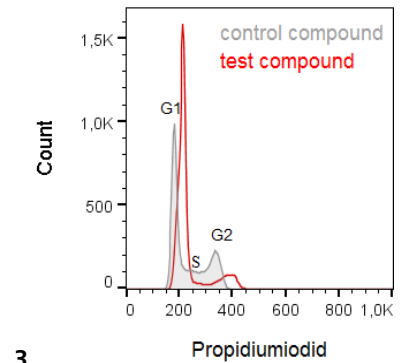


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2



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- 1 Apoptosis Assay @ Fraunhofer IME /
Thomas Ulshöfer
- 2 Heat Map @ Fraunhofer IME / Susanne
Schiffmann
- 3 Cell Cycle Assay @ Fraunhofer IME /
Marina Henke

TOXICITY TEST SYSTEMS

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A wide variety of toxicity test systems are available. Emphasis is laid on toxicity tests with various cell lines (colon epithelial cells, liver epithelial cells, oligodendrocytes, neuronal cells, macrophages, T-cells) and primary human immune cells (monocytes, T-cells, B-cells). To test cytotoxicity, the effects of compounds on viability, cell cycle and apoptosis are investigated. Besides cytotoxicity assays, we also offer second messenger assays, since compounds that interact with the release of second messengers are very likely to be associated with side effects.

Cytotoxicity Assays

- Viability Assay
- Apoptosis Assay
- Cell Cycle Assay
- Mitochondrial Toxicity Assay
- Oxidative Stress Assay

Second Messenger Assays

- Ca²⁺ Imaging

- Nitric oxide (NO) and prostaglandin E₂ (PGE₂) Assay
- cAMP Assay
- Inositol triphosphate (IP₃) Assay

The second messenger assays are used in the agonist mode to test whether the drug candidates induce the release/synthesis of the second messenger. In the antagonist mode they are used to test whether the drug candidates inhibit the release/synthesis of the second messenger.

Used Cell Systems

- Primary immune cells (monocytes, T-cells, B-cells, monocyte derived macrophages/dendritic cells, M1-macrophages, M2-macrophages, activated dendritic cells, activated T-cells)
- Murine cell lines (i.e. RAW264)
- Human cell lines (i.e. HCT116, MCF-7, HepG2, HEK293, THP1, SH-SY5Y, HOG)