

Profiling the pharmacology of GPCRs using time-resolved impedance monitoring of mammalian cells immobilized on thin-film electrodes

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G-protein coupled receptors (GPCRs) are among the most heavily addressed drug targets. About 40 % of all prescription pharmaceuticals target GPCRs. Screening for new agonists or antagonists has been largely based on optical endpoint assays that often require genetic engineering and do not reveal the time course of the cell response. Lately, non-invasive impedance analysis of cells directly grown on thin film electrodes has attracted considerable attention in the field as it allows monitoring the response of target cells with endogenous receptor expression in real time and label-free. The electrodes are integrated into regular cell culture dishes up to 96well multi-well plates. The talk will introduce the measurement principle and demonstrate impedance-based profiling of GPCR pharmacology.