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Fluorescence lifetime based assays in drug discovery

High-throughput assays for drug screening applications have to fulfill particular specifications. Besides the capability to identify even compounds with low potency, one of the major issues is to minimize the number of false-positive hits in a screening campaign in order to reduce the logistic effort for the subsequent cherry picking and confirmation procedure. In this respect, fluorescence lifetime (FLT) appears as an ideal readout parameter that is supposed to be robust against autofluorescent and light-absorbing compounds, the most common source of systematic false positives. The extraordinary fluorescence features of the recently discovered [1,3]dioxolo[4,5-f][1,3] benzodioxole dyes were exploited to develop FLT-based binding assays for several bacterial and human isoforms of the histone deacetylase (HDAC) family.

Biography

Franz-Josef Meyer-Almes has completed his PhD at the University of Goettingen. He has 10 years of experience in biotech and pharma companies. He is a Professor for Physical Biochemistry and has published more than 40 papers in reputed journals and holds more than 10 patents and patent applications.

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